NUKUS INNOVATION INSTITUTE

"SAMARQANDDA ILMIY RENESSANS. META OPTIKA. ILM-FANDAN TEXNOLOGIYAGACHA"

XALQARO ILMIY ANJUMAN

8–11-OKTYABR 2024-YIL

"SAMARKAND SCIENTIFIC RENAISSANCE. META-OPTICS. FROM SCIENCE TO TECHNOLOGY"

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«НАУЧНЫЙ РЕНЕССАНС В САМАРКАНДЕ. МЕТА-ОПТИКА. ОТ НАУКИ ДО ТЕХНОЛОГИИ»

МЕЖДУНАРОДНАЯ НАУЧНАЯ КОНФЕРЕНЦИЯ

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O‘ZBEKISTON RESPUBLIKASI OLIY TA’LIM, FAN VA INNOVATSIYALAR VAZIRLIGI

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МИНИСТЕРСТВО ВЫСШЕГО ОБРАЗОВАНИЯ, НАУКИ И ИННОВАЦИЙ РЕСПУБЛИКИ УЗБЕКИСТАН

НУКУССКИЙ ИННОВАЦИОННЫЙ ИНСТИТУТ

Сборник материалов международной научной конференций
«Научный Ренессанс в Самарканде. Мета-оптика, от науки до технологии»
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O‘zbekiston Respublikasi Prezidentining 2019-yil 8-oktabridagi PF-5847-sonli “O‘zbekiston Respublikasi Oliy ta’lim tizimini 2030-yilgacha rivojlantirish Konsepsiyasini tasdiqlash to‘g‘risida”gi hamda 2023-yil 11-sentabridagi PF-158-sonli “O‘zbekiston-2030” strategiyasi to‘g‘risidagi Farmonlarida belgilangan oliy ta’lim tizimini ijtimoiy soha va iqtisodiyot tarmoqlari ehtiyojlaridan kelib chiqqan holda, fan, ta’lim va ishlab chiqarishning mustahkam integratsiyasini ta’minlash asosida ta’lim sifatini yaxshilash, raqobatbardosh kadrlar tayyorlash, ilmiy va innovatsion faoliyatni samarali tashkil etish, xalqaro hamkorlikni rivojlantirishdek ustuvor vazifalarni amalga oshirishga hissa qo‘shish maqsadida Nukus innovatsion instituti tomonidan Samarqand shahrida Oliy ta’lim, fan va innovatsiyalar vazirligining 2024-yil 18-yanvardagi 16-son buyrug‘iga asosan Moskva fizika va texnologiyalar instituti hamda Sozlanuvchi optik nanostrukturalar xalqaro laboratoriyasi bilan hamkorlikda 2024-yil 8-11-oktabr kunlari “Samarqandda ilmiy renessans. Meta optika, ilm-fandan texnologiyagacha” mavzusida xalqaro ilmiy-amaliy konferensiya o‘tkazildi va ushbu konferensiyaning materiallar to‘plami e’lon qilinmoqda. To‘plamga Qoraqalpog‘iston, O‘zbekiston, Yevropa, Avstraliya, AQSH va boshqa ilg‘or davlatlarning tabiiyiy, shuningdek gumanitar fanlar sohasidagi ilmiy muammolarni yangicha nuqtai nazardan tadqiq qilishga qaratilgan jahon olimlari bilan tadqiqotchilarining materiallari kiritilgan.

Konferensiya materiallari tabiiyiy va gumanitar fanlarni o‘rganishda qo‘lga kiritilgan tajribalarni namoyon qilishga, shuning bilan birga ushbu fan sohalarida o‘rin olgan zamonaviy ilmiy masalalarni tahlil qilishga, mualliflarning nazariyadan amaliyotga, fandan texnologiyaga o‘tishda qo‘shgan hissalarini e’tiborga o‘zatishga qaratilgan. To‘plam ilmiy xodimlarga, talaba, magistrant, doktorant yoshlarga va umuman tabiiyiy va gumanitar fan sohalariga qiziquvchi keng ommaga bag‘ishlangan.

TASHKILIY QO‘MITA A’ZOLARI

1	A.M.A’zamov	Rektor, rais
2	A.S.Shalin	Moskva ilg‘or tadqiqotlar markazi professori, rais
3	A.T.Yuldashev	Ilmiy ishlar va innovatsiyalar bo‘yicha prorektor, rais o‘rinbosari
4	Sh.X.Madraximov	O‘quv ishlari bo‘yicha prorektor
5	I.I.Yusupov	Yoshlar masalalari va ma’naviy-ma’rifiy ishlar bo‘yicha birinchi prorektor
6	N.E.Xudayqulov	Moliya va iqtisod ishlari bo‘yicha prorektor
7	A.T.Saparniyazov	Xalqaro hamkorlik bo‘limi boshlig‘i
8	D.Q.Jumaniyazov	Ilmiy-tadqiqotlar, innovatsiyalar va ilmiy-pedagogik kadrlar tayyorlash bo‘limi boshlig‘i
9	A.M.Dosimbetov	O‘quv ishlari bo‘limi boshlig‘i
10	G‘.A.Sultanov	Yoshlar bilan ishlash, ma’naviyat va ma’rifat bo‘limi boshlig‘i
11	D.J.Janabayev	Yoshlar ittifoqi boshlang‘ich tashkilotining yetakchisi
12	N.O.Duysenbaev	Raqamli ta’lim texnologiyalar markazi boshlig‘i
13	S.U.Izmatova	Hisob-kitob bo’limi xisobchisi
14	K.M.Bekimbetov	Innovatsion texnologiyalar va biznes fakulteti dekani
15	J.T.Berdiyev	Tarix va ijtimoiy fanlar kafedrasi mudiri
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19	A.A.Yusupov	Filologiya kafedrasi mudiri
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24	K.B.Kenesbaev	Pedagogika va psixologiya kafedrasi dotsenti v.b.

Mas’ul muharrirlar:

N.Murachova, A.Saparniyazov, D.Jumaniyazov, G.Jumabayeva

Xalqaro ilmiy konferensiya O‘zbekiston Respublikasi Oliy ta’lim, fan va innovatsiyalar vazirligining 2024-yil 18-yanvardagi 16-son buyrug‘iga asosan tashkillashtirildi hamda Nukus innovatsion instituti Kengashining 2024-yil 28-sentyabrdagi 2-sonli bayonnomasiga asosan nashrga tavsiya qilindi.

УЧИНЧИ РЕНЕССАНС – ЯНГИ ЎЗБЕКИСТОН: ИННОВАЦИОН ТЕХНОЛОГИЯ ВА ИЛМ-ФАН

Аъзамов Анвар Музаффарович
Нукус инновацион институти ректори

“Таълим сифатини ошириш - Янги Ўзбекистон тараққиётининг якка-ю ягона йўлидир”.
Ўзбекистон Республикаси Президентининг Олий Мажлис ва Ўзбекистон халқига Мурожаатномасидан.

Мамлакатимизда 2019 йилнинг октябрида **Ўзбекистон Республикаси олий таълим тизимини 2030 йилгача ривожлантириш концепцияси** қабул қилинди. Ушбу ҳужжатга интеллектуал тараққиётни жадаллаштириш, рақобатбардош кадрлар тайёрлаш, илмий ва инновацион фаолиятни самарали ташкил этиш ҳамда халқаро ҳамкорликни мустаҳкамлаш мақсадида фан, таълим ва ишлаб чиқариш интеграциясини ривожлантириш сингари вазифалар асос қилиб олинди.

Концепция мазмуни мамлакатимиз олий таълим тизимини ислоҳ қилишнинг устувор йўналишларини акс эттиради. Унда олий ўқув юртларида қамров даражасини кенгайтириш ҳамда таълим сифатини ошириш, рақамли технологиялар ва таълим платформаларини жорий этиш, ёшларни илмий фаолиятга жалб қилиш, инновацион тузилмаларни шакллантириш, илмий тадқиқотлар натижаларини тижоратлаштириш, халқаро эътирофга эришиш ҳамда бошқа кўплаб аниқ йўналишлар белгилаб берилган. Буларнинг барчаси таълим жараёнини янги сифат босқичига кўтариш учун хизмат қилади.

Ўзбекистон Республикаси Президенти Шавкат Мирзиёевнинг “Ўқитувчи ва мураббийлар куни”га бағишланган тантанали маросимдаги даъваткор нутқи ҳам ана шундан далолат беради. Давлатимиз раҳбари таъкидлаганидек, **биз кенг кўламли демократик ўзгаришлар, жумладан, таълим ислоҳотлари орқали Ўзбекистонда янги Уйғониш даври, яъни учинчи Ренессанс пойдеворини яратишни ўзимизга асосий мақсад қилиб белгиладик.**

Бугунги кунда юртимизда таълим соҳасида олиб борилаётган ислоҳотларни чуқурлаштириш, таълим ташкилотлари фаолиятини илғор хорижий амалиётлар асосида ташкил этиш, педагог кадрларни тайёрлаш тизимини такомиллаштириш, нодавлат таълим ташкилотлари фаолиятини қўшимча қўллаб-қувватлаш мақсадида бир қанча ижобий ишлар амалга оширилмоқда.

Хусусан, Ўзбекистон Республикаси Президентининг **“Халқ таълими тизимига бошқарувнинг янги тамойилларини жорий этиш чора-тадбирлари тўғрисида”** 2018 йил 5 сентябрдаги ПҚ-3931-сон қарори ижросини таъминлаш, Ўзбекистон Республикасида таълим хизматларини кўрсатиш бўйича нодавлат секторнинг салмоғини кенгайтириш борасида тадбиркорлик субектларига қулай шарт-шароитлар яратиш ҳамда нодавлат

таълим ташкилотлари фаолиятини янада такомиллаштириш мақсадида бир қанча ижобий ишлар амалга оширилди.

Муҳтарам юртбошимизнинг хусусий таълимга кенг имкониятлар яратиб бериши натижасида Ўзбекистоннинг энг шимолий минтақаси, Оролбўйи ҳудуди, Қорақалпоғистон Республикасида Нукус инновацион институти ўз фаолиятини йўлга қўйди. Бугунги кунда институтимиз жамоаси ҳамда профессор-ўқитувчилари томонидан қорақалпоғистонлик ёшларни олий маълумотли, етук мутахассис-кадрлар қилиб, уларга таълим-тарбия бериш ишлари жадал равишда олиб борилмоқда. Замонавий тенденсиялар жамиятдаги барча ривожланишлар билимли, юқори интеллектуал салоҳиятга эга олий маълумотли мутахассислар билан чамбарчас боғлик эканлигини ҳар тамонлама исботламоқда. Шунинг учун, юртимизда олий таълим тизимида етук мутахассисларни тайёрлашга алоҳида эътибор қаратилмоқда.

Давлатимиз раҳбари томонларидан яратиб берилаётган юқоридаги кенг имкониятлардан келиб чиқиб, **Олий таълим, фан ва инновациялар вазирлигининг 2024 йил 18 январдаги 16-сонли буйруғига асосан** Нукус инновацион институти томонидан “шарқ гавҳари” дея таърифланадиган Самарқанд шаҳрида халқаро илмий-назарий анжуманнинг ўтказилиши сабаб ушбу илмий тўплам нашрдан чиқарилди.

Мазкур тўплам мақсади ҳам анжуманнинг мақсади каби юқори малакали олий маълумотли мутахассислар тайёрлашнинг долзарб муаммолари ва инновацион йўналишларини муҳокама қилиш асосида соҳага замонавий илм-фан ютуқларининг илғор тажрибаларини амалиётга жорий этиш бўйича таклиф ва тавсияларни ишлаб чиқишдан иборатдир.

Қадрли халқаро илмий анжуман иштирокчилари, барчангизнинг илмий фаолиятингизга омад ва зафарлар тилаб, анжуман ишини очиқ деб эълон қиламан!

SECTION 1. NANOPHOTONICS

MACHINE LEARNING FOR OPTICAL SENSORS

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Sensor data processing is an important task. In optical sensors, output signal often contains multiple features, which are treated with various methods: nonlinear regression typically based on a theoretical model and advances machine learning (ML) algorithms. Due to the complexity of the analyzed system and the transmission spectrum itself, it is not always possible to create an accurate theoretical model.

ML algorithms can automatically find features in experimental data and predict parameters with higher accuracy than theoretical model. Machine learning algorithms can extract the most informative features of the data, reduce the dimensionality of the data and increase the signal-to-noise ratio. It allows both raising the sensitivity to a physically achievable limit and solving the problem of poor selectivity. The machine learning algorithms are able to analyze all changes in the spectrum and automatically highlight the most significant features. Machine learning algorithms are used to increase sensitivity, solve problems of weak selectivity, and automatically calibrate sensors.

We applied the machine learning approach to two different types sensors. The first one is Bragg grating made of a gasochromic oxide (WO_3) and catalyst (Pd) [1]. The Pd film above Bragg grating was as thin as 1 nm that allowed a significant decrease in the optical absorption. A guided-mode resonance was observed in a transmission spectrum at normal incidence and was utilized for hydrogen detection. The spectra were measured at 0–0.12 % of hydrogen in a synthetic air (≈ 80 % and 20 %). The detection limit below 100 ppm of hydrogen was demonstrated for WO_3 sensor with Al_2O_3 grating. Hydrogen was detected in the presence of oxygen, which provides the sensor recovery but suppresses the sensor response. Sensor response was treated by the principal component analysis (PCA), which effectively performs noise averaging. Influence of temperature and humidity was measured and processed by PCA, and elimination of the humidity and temperature effects was performed. Square root dependence of the sensor response on the hydrogen concentration (Sievert's law) was observed.

The second sensor is plasmonic tilted fiber Bragg grating sensor, which is sensitive to the refractive index of the environment [2]. It has a complex spectral response containing a large number of features, which makes use of analytical model difficult. Machine learning algorithm determined the refractive index with variance of RIU for spectra, which were not used for the determination of the algorithm parameters. In addition, we have shown that the trained algorithm is applicable to spectra obtained with another similar but non-identical sensor. The changes in the refractive index predicted by the algorithm qualitatively coincide with the theoretical values of the refractive index with the resolution of about RIU.

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VECTORIAL FIELD CONTROLLING METASURFACE FOR ON-DEMAND TRANSVERSE SPIN GENERATION

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Spin and orbital angular momenta are fundamental properties of light that have garnered significant attention in recent decades. In the past ten years, transverse spin has been demonstrated in various physical systems. However, transverse spin angular momentum (t-SAM) and its characteristics remain a relatively unexplored research area.

Transverse spin angular momentum (t-SAM) refers to a spin vector perpendicular to the direction of light propagation, which naturally occurs in tightly confined electromagnetic waves. However, it has been shown that the net t-SAM in the focal plane is zero for all examined polarizations, and no t-SAM is present at the spatial point of peak intensity. So far, the far-field generation of t-SAM at the maximum intensity point of focused light has not been achieved. In this study, we use an asymmetric metasurface with complete phase and polarization control to bridge this gap and generate an electromagnetic field that supports t-SAM at a focal point.

Our theoretical and experimental results demonstrate that the transverse spin distribution in a focused light beam can be controlled by the specifically created

metasurface. For the first time, we have designed and experimentally tested a metadevice capable of producing significant transverse spin at its focus. Furthermore, we show that both electric and magnetic transverse spins can be manipulated. For instance, the same device can generate a strong magnetic spin at a focal point when illuminated with the opposite polarization.

We numerically confirm that the proposed metalens can add torque functionality to optical tweezer devices while still producing enough optical trapping force. Before, transverse torque manipulation could not be reliably achieved by conventional optical tweezers and our findings pave the way to new types of particle optical manipulation. Other potential applications of the proposed innovative approach include quantum optics, nanometrology, and directional scattering.

SINGULAR AND CHIRAL NANOPHOTONICS WITH ANISOTROPIC VAN DER WAALS MEDIA

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Material anisotropy plays a pivotal role in modern optics, providing access to a wide range of phenomena, ranging from the well-known birefringence to more exotic ones. However, optical anisotropy of natural materials is relatively weak, which limits the range of observable anisotropy-related optical effects. The use of structures with artificial anisotropy, as well as recently discovered van der Waals materials with prominent natural anisotropy [1,2], can significantly expand the range of observable phenomena.

In this talk, I will discuss a series of novel optical phenomena emerging in structures incorporating highly anisotropic van der Waals media and discuss the potential of these structures for practical applications.

The common wisdom states that the presence of absorption violates perfect transmission of a p-polarized light into the dielectric at the Brewster angle and leads to a non-vanishing reflection. Yet, incorporating anisotropy may recover perfect transmission of p-polarized light into the absorbing medium [3, 4]. Unlike the ordinary “lossless” Brewster angle, perfect transmission in this case is accompanied by a topologically protected phase singularity of the reflection amplitude. We theoretically analyze phase singularities and the associated topological charges emerging in the wavelength-incidence angle space upon perfect transmission into an absorbing uniaxial dielectric, and illustrate the feasibility of this phenomenon with available optically anisotropic materials [5].

Next, we experimentally demonstrate this effect in atomically thin films of van der Waals media and illustrate its application for sensitive molecular detection [6].

Finally, we switch to van der Waals media possessing an in-plane optical anisotropy. We show how their in-plane anisotropy can be utilized to assemble highly

controllable helical super-crystals with chiral optical response [7]. The approach is demonstrated by engineering helical homostructures based on films of As2S3 (arsenic trisulfide). Our results pave the way to the creation of novel chiral systems composed of achiral crystals without the need for additional nanopatterning used in the creation of metasurfaces.

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NON-ABELIAN GEOMETRIC PHASES IN INTEGRATED PHOTONIC WAVEGUIDE STRUCTURES

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A promising paradigm for the design of intrinsically stable quantum computers is holonomic quantum computation [1], i.e. the notion of implementing quantum gates as non-Abelian holonomies, a class of topologically protected unitary operators $\Gamma(C)$. The geometric phase accumulated by a quantum system propagating through Hilbert space depends exclusively on its path C (see Figure). As a result, in contrast to dynamical phases, which record the passage of time, geometric phases cannot be made to disappear by a gauge transformation. The purely geometrical nature of these entities is ensured by restricting the propagation to an N-fold degenerate subspace, thereby generating a geometric phase that belongs to the U(N) group.

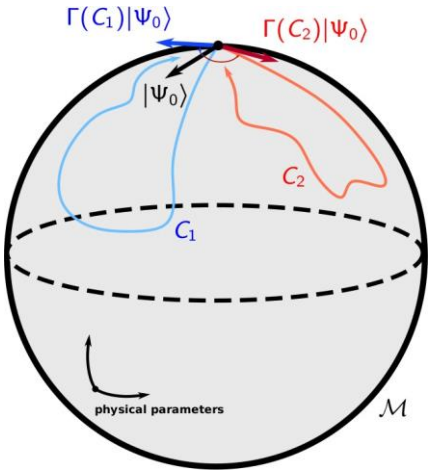

FIG. 1: Adiabatic change of physical parameters on a manifold M causes a quantum state $|\Psi_0\rangle$ to traverse Hilbert space on a path *C*. After a cyclic evolution, the quantum state has changed to $\Gamma(C)|\Psi_0\rangle$, thus implementing a unitary operation.

Quantum optics constitutes a particularly versatile platform for the implementation of holonomic quantum computing. In this talk, I will present an all-optical setup allowing for the generation of nonAbelian geometric phases in large degenerate dark subspaces [2], implemented in integrated photonic waveguide structures.

I will discuss the experimental implementation of U(2)-valued [3] and U(3)-valued non-Abelian geometric phases using indistinguishable photons [4] injected into a tripod arrangement of fs laser-written photonic waveguides.

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SINGLE HELA CELL TRAPPING AND OPTICAL DETECTION IN 3D PAUL TRAP

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The rapid development of electrodynamic trapping techniques has led to the appearance of novel methods for charged micro-object manipulation. One of the hottest topics is the trapping of biological objects in 3D Paul traps. In the Paul trap, the localization process occurs due to the interaction of charged objects with fast-oscillating electric fields. On the one hand, electric field configuration in a Paul trap is determined by electrode design and electrical supply parameters. On the other hand, the dynamics in a Paul trap are highly sensitive to charge and mass distribution as well as the shape and size of the trapped object. In the simplest case of atomic ions, their dynamics in a Paul trap is easily described by a charged material point approximation. In the context of microparticles characterized with rotational degrees of freedom, the described approximation is no longer valid. Moreover, the real biological object is elastic and may deform through the localization process.

In the present work, we numerically simulate the dynamics of a single HeLa cell trapped in the 3D quadrupole Paul trap under atmospheric pressure. For the HeLa cell dynamic simulation, we propose the non-rigid body projection method. The surface of the cell is described by the system of interconnected charged dots with charge and mass distribution that are equivalent to the real HeLA cells. The cell size and shape can be defined by the interdots' elastic interaction.

In the result of simulation, we have shown that the cell localization is achieved close to the center of quadrupole 3D Paul Trap. We have shown that the dynamic of a cell can be described as translational oscillation of the center of mass and rotational dynamic of the cell along the general rotational axis. The translational oscillation of center mass is rather trivial and corresponds to the case of rigid microspheres trapping. The frequency of translational oscillation is equal to the AC field frequency. At the same time, we have shown that the frequency of rotation along the general axis is defined by the shape, size, and mass distribution of the cell. Moreover, in the present work we have developed a concept of a photonic circuit integrated into the trap to study the rotational dynamics of a cell. For these purposes, the cell is proposed to be illuminated by a Gaussian laser beam. As a result of non-spherical cell rotation, the intensity of laser scattering is time-dependent and strictly conjugated with cell dynamics features. Thus, the detection of scattered light intensity time-dependence allows to shed light on the internal structure of studied cells and may provide new opportunities for comprehensive studying of single cells.

This study was supported by the Russian Science Foundation (project 22-42-05002).

SUPERSCATTERING EMERGING FROM THE PHYSICS OF BOUND STATES IN THE CONTINUUM

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We study the Mie-like scattering from an open subwavelength resonator made of a high-index dielectric material when its parameters are tuned to the regime of interfering resonances [1]. We uncover *a novel mechanism of superscattering*, closely linked to strong coupling of the resonant modes and described by the physics of bound states in the continuum (BICs). We demonstrate that the enhanced scattering occurs due to constructive interference described by the Friedrich-Wintgen mechanism of interfering resonances, allowing to push the scattering cross section of a multipole resonance to exceed the currently established limit. We develop *a general non-Hermitian model* to describe interfering resonances of the quasi-normal modes, and we study subwavelength dielectric nonspherical resonators exhibiting avoided crossing resonances associated with quasi-BIC states. We have observed superscattering originating from an electric super dipole moment, being almost two times stronger than the currently established limit. In resonators without spherical symmetry, this effect arises when breaking the quasi-BIC condition by tuning some parameter. Then, power exchange between the scattering channels allows to engineer both *Q*-factors and multipolar contents of the resonances, while maintaining a high scattering cross-section. The new super multipole resonances are more robust to Ohmic losses than their conventional counterparts. Furthermore, we have shown how the enhancement can be boosted even further when quasi-BICs associated with high order multipoles are involved. This enables the formation of super magnetic dipole moments with a cross section equivalent to almost three magnetic spheres. Besides their fundamental interest, such exotic scattering can be employed in biosensing or energy harvesting devices. In the near future, strongly scattering dielectric nanoantennas, operating in a selective polarization regime, can replace their plasmonic counterparts as ultra-compact demultiplexers for on-chip circuitry.

Furthermore, the ability to selectively enhance the scattering pattern of a given multipole can unlock new degrees of freedom for optical manipulation. Beyond optics, we expect super-multipoles to also arise in acoustics and other areas of wave physics, paving a way to a venue of applications in strong forward or backward scattering, shielding, energy harvesting, etc. We confirm our theoretical findings by a scattering experiment conducted in the microwave frequency range. Our results reveal a new strategy to boost scattering from non-Hermitian systems, suggesting important implications for metadevices.

The authors gratefully acknowledge the financial support from the Ministry of Science and Higher Education of the Russian Federation (Agreement No. № 075-15-2022-1150).

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CHERENKOV SYNCHRONISM AND ITS ROLE IN THE FORMATION OF ULTRASHORT RAMAN SOLITONS IN SILICA MICROSPHERES

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The talk deals with the dynamics of dissipative optical solitons nesting on whispering gallery modes of silica microspheres pumped by coherent CW light. The solitons are supported by the Raman gain produced by the CW pump, and thus the phases of the solitons are normally not locked to the phase of the pump.

It is also known that in the presence of high order dispersion, optical solitons can be synchronized with dispersive waves and then a tail of Cherenkov radiation appears behind or in front of the solitons. This effect results in the appearance of a narrow line in the spectrum of the field.

It can happen that the frequency of the Cherenkov radiation is close to the frequency of the coherent pump. In this case, the interference between the wave generated directly by the pump and the Cherenkov radiation becomes important. In particular, in this case the inverse Cherenkov effect becomes possible, leading to phase locking and to coherent energy transfer from the resonant CW wave to the soliton.

In this talk, we consider the dynamics of the solitons in the framework of Lugiato-Lefever with the term accounting for Raman effect. The numerical simulations of the equations are performed for the parameters corresponding to the whispering gallery modes of silica microspheres of 140 μm diameter. Using the

phase-matching conditions, we show that the solitons can be in Cherenkov resonance with the pump. It is shown that both synchronized and non-synchronized solitons can exist in the systems discussed.

We consider the case where the solitons are probed with a weak CW pump and show that this can be used to control the parameters of the solitons, in particular their phases with respect to the pump.

The reported results can be used to optimize and control the generation of frequency combs in optical micro-resonators.

SUBWAVELENGTH-SCALE FIELD PATTERNS AT RESONANT LIGHT SCATTERING BY NANOPARTICLES

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Keywords: Mie resonances; Fano resonances; giant field concentration; nanolaser.

Resonant light scattering by nanoparticles provides a unique opportunity to concentrate a high-amplitude electromagnetic field in a subwavelength area of space as well as to tailor and control its pattern. In addition to purely academic interest, this is extremely important for numerous applications ranging from medicine and biology to telecommunication and data processing. Despite more than a hundred years of extensive study, the problem is still far from completion. In this contribution, the author presents a review of his recent results in this field. In many cases, despite the smallness of the scattering particles, their light scattering has very little in common with the conventional Rayleigh case. New, counterintuitive effects, especially those related to the violation of the quasi-static description of the scattering occurring at the action of (ultra)short laser pulses, are pointed out and inspected, discussed, and classified [1-7].

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ELECTROMAGNETIC SYMMETRY, OPTICAL MAGNETISM AND QUANTUM CONDUCTIVITY FOR NANOSCALE NONLINEAR PLASMONICS

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Keywords: Nonlinear optics, plasmonic nanophotonics, electromagnetic asymmetry, optical magnetism, quantum tunneling, plasmonic nanocavities, molecular electronics.

In general, symmetric plasmonic nanocavities, such as a pair of two closely spaced metal nanospheres of the same size and constituting material, support only symmetry-allowed bright modes under light illumination. Breaking the structure symmetry of a cavity introduces mode hybridization between its bright and dark modes, leading to new plasmon modes like Fano-type resonance modes and bound states in the continuum.

In this talk, I will go on to discuss three “dark” aspects of symmetry-broken plasmonic nanocavities, including 1) light-induced electromagnetic asymmetry for enhancing the surface second-harmonic generation (SHG) of noble metals (Nature Communications 2021, 12, 4326; Nanophotonics 2024, 13, 3337), a mechanism completely beyond conventional near-field enhancement strategies, 2) plasmon-induced optical magnetism in an asymmetric nanoparticle dimer-on-mirror cavity as a new second-order nonlinear source (ACS Nano 2017, 11, 3067; Laser & Photonics Reviews 2020, 14, 200068), and 3) photon-assisted tunneling induced second-order nonlinear optics in conductive molecular nano-junctions (ACS Nano 2018, 12, 6492, Nano Letters 2023, 23, 5851; Progress in Quantum Electronics 2024, 95, 100517), potentially constituting an entirely new paradigm for single-molecule quantum sensing at the interface of quantum plasmonics, nonlinear optics and molecular electronics.

MIE-RESONANT METASURFACES AND METAPHOTONICS WITH COLLECTIVE EFFECTS

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Keywords: Mie resonances, nanoantennas, multipolar response, lattice resonances, periodic array.

We explore the excitation and scattering properties of multipolar resonant responses within subwavelength nanoantennas and optical metasurfaces based on them. Through tailoring of nanoantenna dimensions, shapes, and compositions, complex resonant phenomena are induced, facilitating the confinement and manipulation of electromagnetic fields at subwavelength scales. The careful selection of dielectric materials, characterized by minimal optical losses, is harnessed in the design of nanoantennas with high-refractive-index dielectrics. Metasurfaces and metasystems based on these nanostructures support both electric and magnetic multipolar resonances. Crucially, the inherent tunability of these resonances enables us to engineer scattering properties and achieve its directionality control with the metasurface. By introducing a substantial refractive index difference between the nanoantenna and the surrounding medium, we design nanostructures with the excitation of multipolar resonances, thus engineering their controlled interplay. These properties manifest as a distinctive unidirectional scattering pattern, which has potential for nanostructure applications in different fields, including sensing, imaging, and communication. This highlights the transformative capabilities of manipulating multipolar resonances, emphasizing the important paradigm shift in optical technologies. This work was performed, in part, at the Center for Integrated Nanotechnologies, an Office of Science User Facility operated for the U.S. Department of Energy (DOE) Office of Science by Los Alamos National Laboratory (Contract 89233218CNA000001) and Sandia National Laboratories (Contract DE-NA-0003525).

CHIRAL RESONANT METAPHOTONICS: WHY WEAK SYMMETRY BREAKING BECOMES EFFECTIVE

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Keywords: Optical chirality, metasurfaces, resonances, bound states in the continuum.

Geometric chirality is an attribute of objects not identical with their mirror images. Contrary to common intuition, it fundamentally lacks a quantitative measure: a continuous transformation of a left enantiomer into the right one does not necessarily pass through an achiral configuration. Therefore, handedness (left or right) cannot be uniquely defined by geometry, and it depends on a particular interaction of an object with other chiral entities.

Optical chirality is defined as different response to waves of different helicity. Maximum optical chirality occurs when the interaction is ultimately selective: an object remains transparent to waves of one helicity and blocks (absorbs or reflects) waves of the opposite helicity. This naturally requires geometric chirality, but it does not prescribe a particular type or degree of mirror-symmetry breaking. According to the recent advances in chiral metaphotonics, even fairly weak symmetry breaking can result in maximum optical chirality.

Here, we aim to overview different types of mirror-symmetry breaking perturbations transforming achiral metasurfaces into maximally chiral. Particularly useful is the concept of bound states in the continuum (BICs) because different BICs can be converted into chiral quasi-BICs by small rotations, tilting, lifting, or height variation introduced to arrays of otherwise identical achiral nanoscale meta-atoms.

From the practical point, breaking the out-of-plane symmetry is challenging for modern lithography-based nanotechnology perfected for cutting nanoscale holes and slits with vertical walls in layers of constant thickness. On their own, the fabricated structures retain a mirror symmetry plane bisecting them through the middle. It can be broken though by a refractive index variation through the meta-atom thickness and we discuss relatively simple designs including a perforated bilayer meta-membrane and an array of bilayer particles.

Finally, a transparent substrate also formally breaks the out-of-plane symmetry of a planar metastructure. This is rarely recognized of importance for metasurface design: conventional substrates made of low-index transparent materials only subtly affect metasurface optics. We propose a general strategy for achieving large (and even nearly maximum) substrate-induced optical chirality. It is based on strong coupling of planar metasurface eigenstates of different spatial parity, as the arising hybrid states can possess very strong optical chirality. We demonstrate this by an example of dielectric membrane perforated with a rotation-symmetric array of vertical holes, which exhibits a pair of chiral transmission resonances of opposite handedness when placed upon a glass substrate.

We also will discuss how those approaches can be implemented with different material platforms for various types of planar structures, as well as for their stacks. The corresponding optical devices are desired for chiral sensing, multiplexed telecommunication and quantum optics, as well as for chiral photochemistry.

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EXCITON-POLARITONS IN MIE VOIDS

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Spherical nanoparticles are certainly one of the most traditional subjects of interest in photonics for which no fundamental questions were believed to remain unanswered [1, 2, 3]. However, a structure such as spherical vacuum voids in dielectric materials did not attract researchers' attention until recently [4]. Mie voids – as they can be perfectly described by Mie theory [5] – demonstrate the typical resonant properties of dielectric cavities, and they depend on the materials in which they are formed. In the present work, we theoretically investigate these dependencies and the corresponding coupling occurence for various systems, Fig. 1.

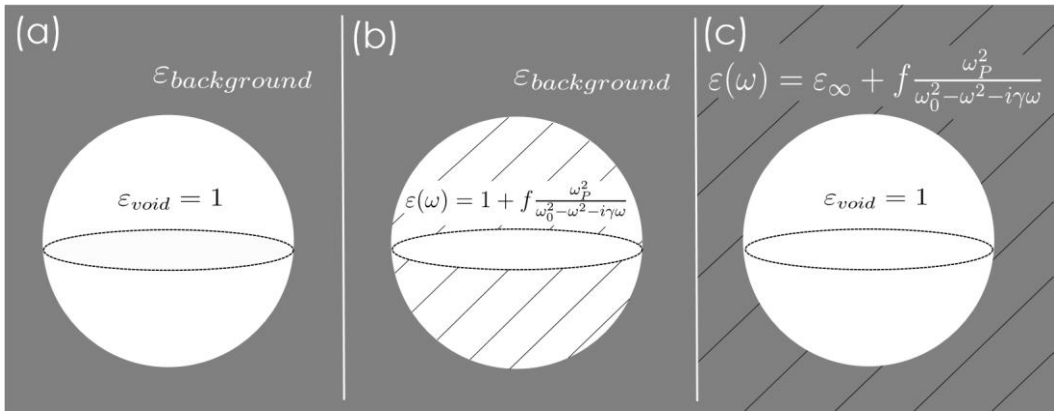

Figure 1: Schematics of the three classes of systems analyzed in the work. (a) an empty Mie void in a dielectric of constant permittivity; (b) a Mie void filled with a resonant medium; (c) an empty Mie void in a resonant dispersive medium.

We focus on the analysis of hybrid states - polaritons. For the case of Mie voids filled with a resonant medium, Fig. 1(b), we observe different types of coupling and develop analytical criteria of polariton formation. We also examine these states for Mie voids in dispersive materials, Fig. 1(c), seeing both strong and weak coupling, and characterize the resonant increase of quality factor depending on the environmental parameters. The results will open new prospects for material design and control of electromagnetic radiation in nanostructures.

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NON-LOCAL RESPONSE IN PLANAR METAMATERIALS: GIANT ANGULAR GOOS-HÄNCHEN SHIFT

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Keywords: Planar metamaterials, non-local response, angular Goos-Hänchen shift.

Over the last decade the concept of artificially engineered media has revolutionized the field of optics, pushed the boundaries of microfabrication and stimulated the development of novel characterization techniques. Recent demonstrations of anomalous reflection and refraction of light by metasurfaces opened another exciting chapter in optical engineering [1]. Non-local metasurfaces are an emerging sub-class of metasurfaces supporting collective resonant excitations of metamolecules [2, 3]. The non-locality of their response is underpinned by diffractive coupling between metamolecules and, therefore, on a fundamental level, such metasurfaces operate as diffractive optical devices that differ very little from trivial photonic crystal slabs, resonant waveguide gratings or sophisticated diffraction gratings. Unlike metasurfaces, planar metamaterials do not re-shuffle light into various diffraction orders but modify the characteristics of specular transmission and reflection instead, which effectively renders them as very thin slabs of some exotic materials. While such a regime of operation of artificial photonic media remains more desirable for applications in wavefront manipulation, optical imaging, image processing, spatial filtering and emission control, the engineering of non-local response in planar metamaterials is challenging due to the lack of mechanisms enabling long-range coupling among metamolecules. In this talk we are going to present and discuss a recently discovered planar metamaterial operating in he visible part of the spectrum, which can support strong collective excitations of its metamolecules not found in metasurfaces. One of the distinct features of the supported non-local mode is that it’s virtually dispersionless yet ensures high sensitivity of the metamaterial response to the angle of incidence. The latter enables the engineering of nonresonant giant angular Goos-Hänchen shift (up to 1.5°) in

specular transmission and reflection, thus, making the application of the effect for steering and manipulation of light beams a practical proposition.

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METALENSES AS COMPACT PLATFORMS FOR SINGLE MOLECULE FLUORESCENCE MONITORING

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Keywords: Single-molecule spectroscopy, dual-wavelength metalens, fluorescence correlation spectroscopy, compact optical sensors.

Dielectric metalenses represent a type of optical metasurfaces that focus and collimate light via phase control within its two-dimensional surface. Due to micrometer-size thickness, this nanophotonic structure appears a compact planar analogue of refractive optical elements. Metalenses find their applications in multi-functional and miniaturized high aperture optical devices for visualizing biological objects, however, detection of single-molecule fluorescence, which is a key element in molecular biology and medicine, requires the use of high-quality and costly optical and optoelectronic components with high collection efficiency of fluorescence photons. Finding a trade-off of high focusing efficiency, achromatic operation with polarization insensitivity, and high NA has been challenging to achieve for such an application. We present a metalens made of nanofins of amorphous silicon, which has numerical aperture of 0.6 and high focusing efficiency, and two-wavelength operation [1]. The metalens working distance is maintained above 300 μm to focus light through the glass substrate with the confocal microscopy configuration. This metalens is experimentally shown to enable single fluorescent Alexa647 molecule detection validated with fluorescence correlation spectroscopy. Moreover, the time resolution of the methods allows determining size of fluorescent nanoparticles with

nanometer accuracy. The demonstrated optical device greatly reduces the footprint of the refractive lens and practically does not compromise the efficiency of collecting photons at the same values of the numerical aperture. While the proposed metalens operates as a transmissive device, we discuss further opportunities to deposit a metalens device on a waveguide chip using numerical methods to collect sufficient signal from single Alexa647 molecules. The proposed nanophotonic platform will make it possible to create single molecule fluorescent biosensors of ultimate compactness for medicine and point-of-care diagnostics and for screening environmental pollution.

The research received financial support from the Ministry of Science and Higher Education of the Russian Federation (Agreement № 075-15-2024-622) and from the Priority 2030 program.

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EXCEPTIONAL POINTS IN ALL-DIELECTRIC METASURFACE WITH ONLY IN-PLANE SYMMETRY BREAKING

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Keywords: Exceptional point, Metasurface, All-Dielectric Nanophotonics.

Currently, there is a tremendous interest in studying the optical properties of dielectric systems. Such systems expand the possibilities in designing various devices and allow for the improvement of existing technologies. Due to their resonant properties, such as low losses and high efficiency, these structures contribute significantly to the development of nanoantennas, nanolasers, sensors, metamaterials, metasurfaces, and other applications.

Non-Hermitian systems (in other words, open systems) deserve special attention due to their ability to support exceptional points (EP). This effect occurs when both the eigenvalues and eigenstates of the investigated system coincide. The main feature of this phenomenon is the sudden increase in the system's sensitivity to small changes in the characteristics of the surrounding environment. One such characteristic can be, for example, the refractive index. As a result, this provides undeniable advantages in designing various sensors based on this effect. Additionally, this effect is utilized in laser gyroscopes, optical amplifiers, and other systems.

To achieve an exceptional point, one can use a single particle with a non-spherical shape or a structure with symmetry breaking. Recently, many studies have been conducted on various geometric structures for observing and controlling exceptional points. However, it is often experimentally challenging to control and adjust such a system.

Therefore, we propose a new geometry for investigating the exceptional point: two silicon parallelepipeds on a glass substrate with a varying angle between them (Fig. 1a). One of the significant advantages of this structure is the simplified experimental approach to designing, observing, and controlling the exceptional point.

The effect of the exceptional point in a single silicon particle has been extensively studied previously [1]. We extend the approach proposed in the mentioned work to the described geometry (Fig. 1). The main result of the study is that the reflection spectrum of the metasurface (numerical calculation in the COMSOL Multiphysics), tuned to the EP (Fig. 1b). This also indicates the possibility of using such a system in sensor applications.

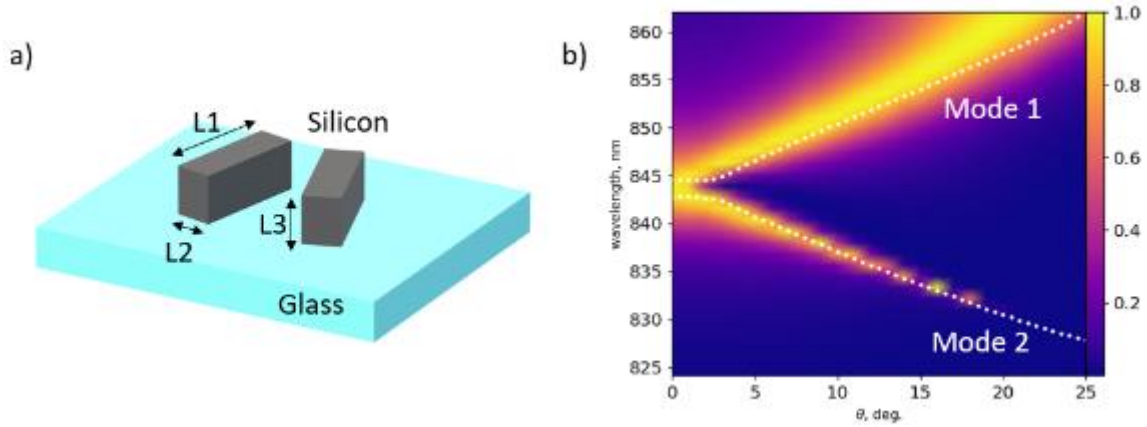

Fig. 1. An exceptional point in All-dielectric two-rectangle metasurface. (a) Geometry of an elementary domain (L1 = 304 nm, L2 = 100 nm, L3 = 240 nm). (b) Reflection spectrums of metasurface, which has built with domains (a).

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QUASI-BOUND STATE IN THE CONTINUUM WITH A HYBRID ANAPOLE STATE IN A SINGLE ALL-DIELECTRIC NANOCONES

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Keywords: Hybrid anapole state, quasi-bound states in the continuum, truncated nanocones.

In this work, we show the possibility of simultaneously obtaining a high-Q quasi-bound states in the continuum (quasi-BIC) on a silicon conical nanoparticle at the wavelength of the hybrid anapole regime. Based on such particles, a metasurface was developed that has a high sensitivity to the refractive index of the environment, which opens up the possibility of creating ultra-compact sensors.

All-dielectric nanophotonics opens up new horizons in the creation of various new generation devices that surpass existing analogues in terms of efficiency and compactness. In particular, various forms of nanoscatterers are of great interest, due to the non-standard geometry of which it becomes possible to obtain a number of new effects due, for example, to breaking the symmetry of an object. Based on such nanoscatterers, it is possible to create metasurfaces, with the help of which controlling the light at the nanoscale can be achieved. For example, using quasi-bound states continuum (quasi-BIC makes it possible to create high-Q resonances in devices. To describe the properties of nanoscatterers, a multipole decomposition is used. It has become possible to develop various effects based on different multipoles combinations, such as a hybrid anapole regime, which can be used to control the phase of the radiation passing through the structure, and there is no strict restriction on the position of the meta-atoms and the substrate material.

In this work, we demonstrate the possibility of obtaining a high-quality state, called quasi-BIC, on magnetic quadrupole at a frequency coinciding with the recently discovered hybrid anapole regime (one multipole in quasi-BIC regime and others are negligible because of the hybrid anapole state) on truncated cone silicon particles.

Due to the unique combination of several effects, it is possible to obtain a metasurface, the optical properties of which change significantly when the refractive index of the environment changes. By changing the refractive index of air from 1 to 1.05, the transmission resonance shifts to the red region of 10 nm, and the transmission coefficient at the resonance wavelength changes by about 60%. Based on such a structure, it becomes possible to create an ultrathin sensitive sensor for changing the refractive index of the medium.

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A LARGE LANGUAGE MODEL FOR METAMATERIAL DESIGN

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Keywords: Deep learning, metamaterials, metasurfaces, artificial intelligence, inverse modeling.

Introduction. Deep learning has impacted numerous areas of science and engineering and has recently been shown to aid in the design of electromagnetic metamaterials, metasurfaces, and nanophotonics. Large language models (LLMs) are a type of deep learning that consists of tens of billions of parameters and are trained in an unsupervised manner on enormous multi-modal datasets. LLMs essentially make predictions of the next word, given an input string of text – termed tokens. We show that LLMs can be used to design metamaterials when fine-tuned on ground truth simulation data.

Methodology. We use OpenAI's API to fine-tune a ChatGPT LLM with data simulated with CST microwave studio. The metasurface being studied operated in the infrared regime and is a 2x2 lattice of elliptical resonators. The fine-tuned LLM is then asked to give the expected absorption spectra of a metasurface when fed the geometry. We compare results of the LLM on metasurface predictions to those of a conventional deep neural network, and several machine learning algorithms.

Summary of main findings. We find that using the mean absolute relative error metric, the LLM achieves the lowest error on all datasizes tested, including achieving better performance than the deep neural network. We explored two different prompts and four different LLM temperature settings.

Conclusion. Although LLM only performs next word prediction we find that they can be fine tuned to predict metasurface absorptivity spectra given a text input of the geometry. The results achieve lower error than all base models compared to. including a deep neural network.

ULTRACOMPACT AND DYNAMICALLY CONTROLLABLE CIRCULAR POLARIZATION LASING BASED ON CHIRAL METAMATERIALS

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Keywords: Chirality, lasing, metamaterials, nanophotonics, active metamaterials.

Circularly polarized emission lasers have garnered significant attention in recent years due to their extensive applications and potential impact across various fields. These applications include sensing, spectroscopy (particularly molecular chirality sensing), chemistry, biophysics, and even quantum optics

The most straightforward method to achieve circularly polarized laser emission is by combining a gain material with a chiral response. Chiral metamaterials, which exhibit a significantly stronger chiral response than natural chiral materials, are among the most promising candidates for this purpose. Recent studies have shown potential in creating ultra-compact lasing configurations of a high degree of circular polarization; however, these structures have been unable to produce purely circularly polarized laser light and, more crucially, lacked a controllable polarization response.

This study addresses these limitations by presenting a bi-isotropic chiral metasurface structure that, through detailed numerical simulations, demonstrates nearly pure circularly polarized lasing emission with dynamic tunability via pump-wave polarization. By rotating the polarization of a linearly polarized pump-wave, the laser emission can be tuned from nearly pure left-handed circularly polarized light to right-handed.

The proposed structure consists of pairs of mutually twisted metallic crosses embedded in a gain-bearing dielectric host, of nm thickness. The emission is optimized when the gain material's resonance aligns with the structure's magnetic resonance.

Our findings demonstrate the feasibility of creating ultra-compact and controllable circularly polarized emission lasing structures using chiral metamaterials and metasurfaces. Such structures hold significant potential for applications that rely on or are influenced by chiral light-matter interactions.

Acknowledgments: The work is supported by the EU Project CHARTIST.

TRANSITION OSCILLATIONS IN THE DYNAMICS OF QUANTUM DOTS WITH A LARGE RAMAN SCATTERING CROSS SECTION

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The dynamics of an incoherently pumped quantum dot (QD) is considered. The Hamiltonian of such a system has the following form:

$$\hat{H}_{\mathrm{QD}} = \hbar\omega_\sigma \hat{\sigma}^\dagger\hat{\sigma} + \hbar\omega_\mathrm{v}\hat{b}^\dagger\hat{b} + \hbar g\hat{\sigma}^\dagger\hat{\sigma}\left(\hat{b}^\dagger + \hat{b}\right), \quad (1)$$

where $\hat{\sigma} = |g\rangle\langle e|$, $\hat{\sigma}^\dagger = |e\rangle\langle g|$ – operators of transitions from the excited state of the QD $|e\rangle$ to the ground state $|g\rangle$ and vice versa, $\hat{b}^\dagger$ and $\hat{b}$ are the operators of phonon creation and annihilation, g is the interaction constant of the electronic and vibrational subsystems of the QD, ω_σ is the frequency of the QD transition (exciton), ω_v is the photon frequency.

The Hamiltonian of the interaction between the QD and the external field with Rabi constant Ω in the rotating wave approximation has the following form:

$$\hat{H}_{\text{QD-field}} = \frac{\hbar\Omega}{2}\left(\hat{\sigma}e^{i\omega t} + \hat{\sigma}^\dagger e^{-i\omega t}\right). \quad (2)$$

We found the eigenstates and eigenvalues of the QD Hamiltonian (1):

$$|g,n\rangle, \omega_{\mathrm{gn}} = \omega_\mathrm{v}(n+1/2), n = 0,1,..., \quad (3)$$

$$\left|e,\tilde{n}_{\frac{g}{\omega_\mathrm{v}}}\right\rangle, \omega_{e\tilde{n}} = \omega_\sigma\left(1 - \left(\frac{g}{\omega_\mathrm{v}}\right)^2\right) + \omega_\mathrm{v}(\tilde{n}+1/2), \tilde{n} = 0,1,...,$$

where $\hat{D}\left(\frac{g}{\omega_\mathrm{v}}\right) = \exp\left(\frac{g}{\omega_\mathrm{v}}\left(\hat{b}^\dagger - \hat{b}\right)\right)$, $\left|\tilde{n}_{\frac{g}{\omega_\mathrm{v}}}\right\rangle = \hat{D}\left(\frac{g}{\omega_\mathrm{v}}\right)|n\rangle$ – displacement operator and displaced Fock states.

To describe the relaxation processes, we use the master equation for the density matrix in Lindblad form. It looks like [2]–[4]

$$\dot{\hat{\rho}} = \frac{i}{\hbar}[\hat{H},\hat{\rho}] + L_{\mathrm{diss}}[\hat{\rho}] + L_{\mathrm{pump}}[\hat{\rho}] + L_{\mathrm{deph}}[\hat{\rho}] + L_\mathrm{v}[\hat{\rho}], \quad (4)$$

where $L_{\mathrm{diss}}[\hat{\rho}]$, $L_{\mathrm{pump}}[\hat{\rho}]$, $L_{\mathrm{deph}}[\hat{\rho}]$, $L_\mathrm{v}[\hat{\rho}]$ are the Lindblad superoperators describing the non-radiative relaxation of the exciton, incoherent exciton pumping, exciton dephasing and phonon relaxation.

In the dynamics of the dipole moment, which was found numerically, collapses and revivals are observed. The reason for the collapses is related to the structure of the eigenstates of the system (3) that can be divided into two subsets: the first is the direct product of the ground electronic state and the Fock states of phonons and the second subset is the direct product of the excited electronic state and the shifted Fock states of nuclear vibrations. The presence of an external monochromatic field leads to Rabi oscillations between the ground and excited electronic states, during which the system doesn't change the vibrational state. As a result, after half a Rabi cycle starting for instance from the ground electronic state and the Fock vibrational state, the system finds itself in an excited electronic state and a Fock vibrational state which is not an eigenstate and the system begins to transition into the eigenstates of the second subset – shifted vibrational states, that leads to collapse. Since the frequency differences between the shifted Fock vibrational states are equal to each other a revival of transient vibrations occurs. Collapses and revivals appear in the emission spectrum as splitting of the spectral line near the exciton transition frequency.

Acknowledgment

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GENERATING OPTICALLY TUNABLE QUANTUM ENTANGLEMENT IN METASURFACES

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Controllable biphoton quantum entanglement is essential for advanced quantum communication, sensing and computing applications. Optical metasurfaces, incorporating sub-wavelength thick nonlinear materials, are emerging as a new platform for generating quantum entangled photon pairs at the nanoscale through the process of spontaneous parametric down-conversion (SPDC) [1], motivating research on their unique functionalities and physics beyond existing photon-pair sources based on bulky nonlinear crystals. The recent developments in flat optics open new opportunities in asymmetric control of light [2,3], yet the applications of such concepts in the quantum regime remained unexplored with metasurfaces. The potential of asymmetric control application to control photonic quantum entanglement with SPDC has also not yet been investigated in any nonlinear platforms.

Here we predict theoretically and demonstrate experimentally a new mechanism for generating optically tunable biphoton entanglement by leveraging the symmetry breaking of a nonlinear current in a quadratically nonlinear metasurface. We achieve continuous tuning of polarization-entangled states ranging from a Bell state to a less entangled state by engineering symmetry via the pump wavelength in a

fabricated semiconductor metasurface incorporating <110> InGaP nanostructures. We also observe robust biphoton spatial correlations and theoretically confirm the generation of optically tunable hyper-entanglement. Furthermore, we demonstrate an ultra-high coincidence-to-accidental ratio of 7×104, outperforming existing semiconductor flat optics by three orders of magnitude. With this unique tunability unattainable with unstructured nonlinear crystals, this ultra-compact and low-noise entanglement source can be further developed to monolithically integrate with lasers, modulators and detectors enabled by InGaP platforms, offering novel functionalities to revolutionize quantum technologies.

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BOUND STATES IN THE CONTINUUM AND EXCEPTIONAL POINTS IN ALL-DIELECTRIC REZONATORS

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Resonances that remain localized for a long time, i.e., have a high-quality factor, in the ideal case, infinite, are called bound states in the continuum (BICs) [1]. BICs are useful for many applications, such as lasers [2], sensors [3], etc. BICs can be created by the interference of two resonances located in the same radiation channel [1]. For example, in a dielectric ring resonator when its height changes, the azimuthal (TE110) and axial (TM111) modes exhibit different spectral shifts and, since both resonances are in the same radiation channel, they form a single BIC in the avoided crossing region [4]. A new degree of freedom, the ratio of the inner to the outer radius, allows changing the coupling parameter between the two modes, which can lead to an extremely interesting state - exceptional points [5].

According to the works [6,7], the spectrum of the ring is divided into separate galleries, each of which begins with a wide transverse Fabry-Perot resonance between two pairs of opposite walls of the ring and continues with a set of equidistant longitudinal (azimuthal) resonances of high-quality [6]. And when changing the

height of a resonator with a rectangular cross-section, the azimuthal and axial galleries demonstrate different spectral shifts, forming avoided crossing regions. In these regions, the first cascades of the BIC were observed. This effect was experimentally demonstrated in the anechoic chamber of ITMO University.

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TOWARDS CHIRAL LIGHT-MATTER INTERACTIONS WITH MACHINE-LEARNING-OPTIMIZED NANO-PHOTONIC METASURFACE

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Chirality of light in the simplest case is given by the handedness of circular polarization, for which handedness preserving or nonpreserving optics can be developed [1]. Chiral photonics has been receiving increased attention due to prospects of delivering tailored metamaterials with strong ‘chiroptical’ responses at predesignated wavelengths [2], as interactions between chiral light and matter could be attractive for applications ranging from chemistry to information processing.

Circularly polarized electromagnetic waves incident on a nanopatterned metasurface can experience frequency-dependent filtering effects in reflection and/or transmission geometry. Such structures can be produced in thin-film dielectrics or metallic sheets. In a comparison of two machine learning optimization approaches, the predicted chiral patterns (here in GaP) feature an increased circular dichroism [3],

which resulted in a stronger reflectivity of right circularly than left circularly polarized waves compared to a simpler human-designed pattern (Fig. 1). Outcomes from the multi-epoch design improvement procedure – through an evolution- and neural network-based algorithm – are discussed for a frequency-range-neutral comparative consideration promising for both (nano)printing or ablating of surface patterns, and indicating further improvements potentials with more advanced algorithms.

(a)

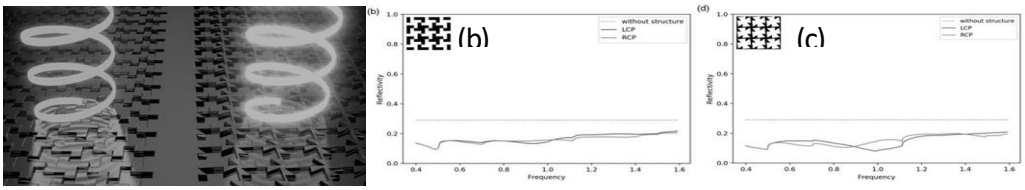

Figure: Artists' interpretation of two chiral photonic metasurfaces, © O. Mey and A. Rahimi-Iman, 2022 (a). Corresponding plots of simulated reflectivity over normalized frequency (b, c) for the two example structures (cf. insets), reused from Ref. [3], CC-BY-4.0 license, © The Author(s), 2021.

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STUDYING ELECTRO-OPTICAL AND OPTICAL-ELECTRIC CONVERTING FEATURES OF INALGAASP/INP VERTICAL-CAVITY SURFACE-EMITTING LASER

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At present, the progress in fiber-optic telecommunications, optical measurement, photonics neural networks of artificial intelligence, and other photonics-assist industrial areas is mainly following behind the progress in low cost

and power-efficient semiconductor laser source (SLS) and photodetector (PD) that are used as an electro-optical converter (EOC) in a transmitting optoelectronic module (TOM) or an optical-electric converter (OEC) in a receiving optoelectronic module (ROM), respectively. Up-to-date, two classes of SLSs, such as edge emitting one and surface emitting one are predominantly exploited in modern fiber-optic telecommunication systems (FOTS) functioning in the third transparency window of a silica fiber. The first class is typically represented by a distributed feedback (DFB) laser; the second one is represented by a vertical-cavity surface-emitting laser (VCSEL). The currently used and prospective technical and economic advantages of a long-wavelength VCSEL (LW-VCSEL) compared to a DFB laser are an order of magnitude lower threshold current, lower power consumption, better insertion efficiency into single-mode fiber, significantly lower temperature dependence of the threshold current and energy characteristics, cost-effectiveness due to the possibility of on-the-wafer testing during production. On the other hand, a pin-structured PD is the most important active element of world-spread FOTSs, where it performs the functions of a high-responsivity detection of optical signals in a ROM.

In the presentation, a detailed review of the proposed approach is made, associated with the use of the LW-VCSEL in transmitting or receiving mode, or in the both modes due to optical injection locking effect, as well as the new results that allow extending the modulation bandwidth to millimeter range, are presented and discussed.

What will audience learn from your presentation?

The audience will be able to get acquainted with a new approach to the development of advanced laser emitters and to use it in the development of new prospective semiconductor laser designs.

The presentation will help the audience in their research and development of new optoelectronic modules that could find effective application in developing cellular telecommunication systems of 5G and 6G generations.

This presentation will help educators and scientists from related fields to broaden their knowledge of emerging trends in modern optoelectronics.

METASURFACE MICROVEHICLES AND MICROROTORS DRIVEN BY OPTICAL FORCES

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High-index dielectric metasurfaces that deflect light or alter its polarization state experience photon recoil forces and torques due to conservation of linear and angular momentum. We utilized this effect to construct miniature ultrathin "metavehicles" able to navigate across a surface in water under plane-wave illumination while being steered through the incident polarization [1]. The control

scheme does not involve gradient forces, in contrast to the vast majority of previous optical manipulation studies, yet the forces generated are strong enough to let the metavehicles work as transporters of microscopic cargo, such as biological cells. Recently, we extended these studies to microrotors, in which two or more metasurfaces deflect light such that orbital angular momentum is created. When two or more such "metaspinners" are confined in a single laser focus, they not only spin around their own axis, but they also collectively orbit around the optical axis of the incident laser beam. However, they orbit in the "wrong" direction – if they spin clockwise, they orbit counter-clockwise, and vice versa, which is opposite to what is expected and what has been previously observed for systems of hydrodynamically coupled microrotors. It turns out that the effect can be explained by an anomalous transverse optical gradient force that acts in concert with the traditional gradient force, utilized in, for example, laser tweezers [2]. These studies suggests that microparticles with encapsulated optical metasurfaces can be optimized for a variety of behaviors and functionalities, thereby opening the door to novel fundamental studies and applications in fields like microrobotics, micromachines, and active matter.

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LASER-ASSISTED SYNTHESIS OF MICRO/NANO STRUCTURED 2D-TMDS FOR THE PRODUCTION OF DIFFRACTIVE OPTICAL ELEMENTS

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Keywords: Transition metal dichalcogenides, laser processing, diffractive optics, laser lithography.

Localised laser irradiation of single source precursors ([$(NH_4)_2MoS_4$], [$(NH_4)_2WS_4$]) have been shown to produce micro-structured films of 2D MoS_2 and WS_2, their alloys and heterostructures in ambient conditions [1]. This is due to laser-induced thermal dissociation of these precursors, which result in localized synthesis of the corresponding transition metal dichalcogenides (TMDs). Importantly, the non-irradiated precursor can be selectively removed, thus enabling the production of patterned films, in a photolithographic manner, which is beneficial for device fabrication.

The products of thermal decomposition of these precursors depend on the annealing temperature. At temperatures, close to 1000º C, polycrystalline $(Mo,W)S_2$

films can be produced. However, at temperatures between 155° C and 450° C, production of $(Mo,W)S_3$ (amorphous) and amorphous $(Mo,W)S_2$ takes place [2]. In the process of laser-induced thermal dissociation, it is the laser intensity that defines the local peak temperature and therefore the products of the dissociation process. Importantly, this amorphous phases, retains the removal selectivity as in the case of full TMD conversion at higher temperatures.

Here we present the decoupling of the patterning and synthesis steps, by low intensity laser pre-patterning of the precursor film followed by a step that completes the decomposition process, thus allowing for the optimization of each individual step. This approach is beneficial, as direct laser synthesis imposes some restrictions in the simultaneous optimization of material quality and patterning precision, as well as inhomogeneities in the thickness and quality of the synthesized material due to the Gaussian intensity profile of the laser beam.

In this implementation we have utilized a low intensity laser beam to create a patterned precursor template with high spatial resolution followed by a second processing step that completes the conversion of the precursor to the TMD. We demonstrate a pre-patterning step that utilises high resolution interferometric exposure with visible (532 nm) and UV (244 nm) laser sources. Full conversion of the prepatterned precursor to the desired TMD material was achieved by: i) a second laser irradiation step at higher intensity and irradiated area much larger than the pre-patterned features, and ii) conventional thermal annealing in a furnace. We have achieved the fabrication of large scale gratings, which consists of periodically arranged MoS_2/WS_2 nanoribbons with large aspect ratios (width ~140 nm, and length ~200 μm) onto SiO_2/Si and $LiNbO_3$ substrates. STEM and EDX analysis indicated the production of poly-crystalline periodic stripes with a thickness of ~2.5 nm and grain size of order 40 nm.

We will finally present optical diffraction measurements from such grating as well as pyroelectrically induced modulation of the diffraction efficiency for TMD grating, which have been synthesised directly onto the polar surfaces of ferroelectric lithium niobate substrates.

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FROM ELECTRICALLY DRIVEN SPIN-POLARIZED POLARITON LUMINESCENCE TO LASING WITH PEROVSKITE METASURFACES

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There is strong interest in generating exciton-polaritons with spin degree of freedom (σ=±1), because of their potential for applications in optics, spintronics and quantum information processing. The inherent charge neutrality of the exciton-polaritons, which are bosonic quasiparticles generated when excitons and photons are strongly coupled, makes the optoelectronic control of spin-polarized polariton devices challenging. Here we report electrical generation of spin-polarized exciton polaritons in dielectric perovskite light-emitting metasurface transistor, where the concurrent breaking of in- and out-of-plane symmetries allows to achieve spin-polarization while retaining high-Q factor resonances, a necessary condition to achieve strong coupling at photonic chiral points. Furthermore, by taking advantage of the unique architecture of the light-emitting metatransitor, we were able to electrically select the spin states and directionality of polaritons, generating asymmetric exciton distribution under different biasing conditions. Finally, the demonstration, on the same platform, of Bose-Einstein condensation and polariton lasing, allows us to discuss the steps needed for the realization of electrically pumped, inversionless spin lasers.

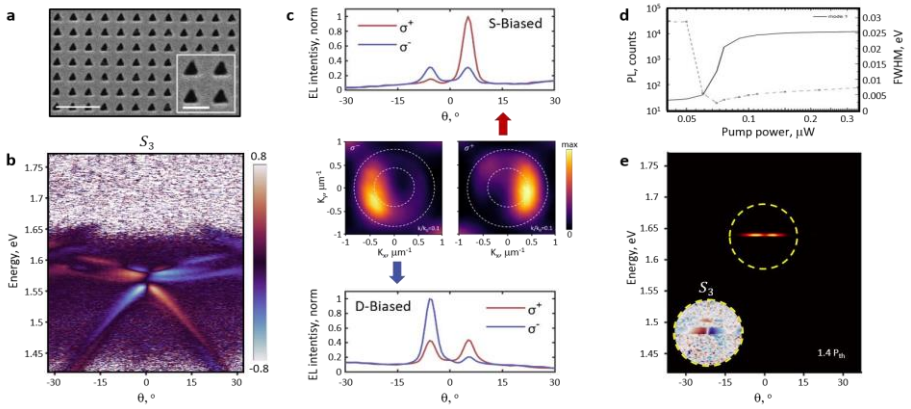

Fig. 1 a) Secondary electron image (top view) of a BIC perovskite metasurface with broken in-plane C2 symmetry, consisting of a square lattice of triangular holes; b) The normalized Stokes parameter S_3 of the electroluminescence (EL) dispersion map shows highly-pure spin-polarized exciton-polariton bands. c) Spin-polariton selectivity demonstrated by the angle-dependent electroluminescence intensity under the S-biased (top) and D-biased (bottom) condition of the light-emitting metatransitor. d) The photoluminescence (PL) intensity and linewidth, as function of off-resonant pump power, display a clear threshold lasing behaviour. e) The photoluminescence intensity dispersion map, under pumping power higher than the threshold ($P=1.4P_{th}$), show lasing around the C-points; the S3 indicates a very distinct spin-polarization of the condensate.

SWITCHING PLATFORM FOR TUNABLE METASURFACES BASED ON PHASE CHANGE MATERIALS

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Phase-change memory materials based on complex chalcogenides of the Ge-Sb-Te system are promising environments for tailoring metasurfaces of varios configurations [1]. Such structures can serve as a platform for the creation of new control elements for light flows by changing the phase state of the material under various external in fluencies. These elements can be realized using phase-change materials that undergo rapid reversible phase transitions between amorphous and crystalline states in response to laser radiation, electric fields, and thermal flux, which enables the precise control of the optical parameters of the interacting radiation. This work focuses on develop and fabricate a platform that enables reversible switching of laser-induced periodic structures and metasurfaces based on $Ge_2Sb_2Te_5$ (GST) thin films.

By femtosecond laser exposure on GST surface can be formed laser-induced periodic surface structures (LIPSS), whose characteristics, such as width and period of stripes, can be precisely controlled by adjusting the parameters of the laser irradiation. These periodic structures can be used to create tunable diffraction gratings and other optical devices [2]. However, the development of techniques for recording and erasing LIPSS with high precision and reliability remains a challenge. Here, we demonstrate a writing LIPSS on GST using fs-laser irradiation and their subsequent erasure using an external resistive heating element, enabling the creation of dynamically reconfigurable diffraction gratings with tunable properties.

The switching platform was formed on a glass substrate by contact lithography in three steps. The first step included the formation of marks and a metal heater; the second step is the formation of contact pads; the third step is the formation of a 30 nm GST layer, coated with a 20 nm SiO_2 film. The nickel layers with thicknesses of 150 nm and 250 nm were fabricated to create the heater and contacts, respectively. A 20 nm Ti film was used as an adhesive sublayer.

The formation of a LIPSS was carried out by fs pulsed laser exposure (λ = 1030 nm, 50 kHz, 250 fs) in scanning mode. As a consequence of uniform irradiation over the entire GST area, two-phase optical contrast amorphous-crystalline extended periodic stripes with a period of λ were formed.

The operating principle of the developed switching platform is the crystallization of the GST layer due to Joule heat generated by a resistive heater. Crystallization of the formed LIPSS was performed using a probe station with an Agilent E3647A power supply and a Keysight B2912A pulse generator (200 V, pulse mode). The structure was analyzed before and after switching using Raman scattering (λ=532 nm, P_{max}=10 mW).

As a result of applying U-shaped current pulses to the heater with a 450 ms duration and a 1.75 V amplitude, the LIPSS is erased and the periodic structure is no longer observed. After switching, the surface becomes optically homogeneous due to the disappearance of optical contrast. The crystallization of amorphous stripes is accompanied by a change in the spectral characteristics n(λ) and k(λ) at λ = 650 nm (Δn ≈ 1, and Δk ≈ 0.5) and the Raman spectra shape. So, the observed optical changes were produced due to the crystallization of the amorphous LIPSS stripes into the fcc structure. The identified structural changes correlate with the results of XRD analysis of thermally treated GST films.

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OPTICAL PROPERTIES OF SELF-ASSEMBLED PLASMONIC COLLOIDAL CLUSTERS

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Densely-packed spherical colloidal clusters of metallic or dielectric inclusions, also known as photonic balls, have garnered a lot of interest recently, owing to their remarkable scattering behaviors and potential applications [1]. Here, we focus specifically on a plasmonic balls that are made of dense spherical clusters of plasmonic nanoparticles. Using emulsion routes, we have been able to fabricate such systems and have shown that they act as resonant Huygens scatterers [2], where the intereferences of mutlipoles of even and odd parity lead to coherent forward scattering [3, 4]. They come in the form of suspensions of particles that can be deposited into dense metasurfaces and several recent designs as well as experimental realizations of such clusters have been proposed using self-assembly [5, 6]. There is a clear fabrication route and their optical properties are remarkable.

Describing the interaction of light with inhomogeneous spheres, such as these clusters, poses significant theoretical challenges. Even when the inclusions within the clusters act as small resonant electric dipoles, the collective behavior of the cluster differs markedly from that of the individual inclusions due to complex multiple scattering interactions. These systems are particularly intriguing because they feature localized resonant inclusions organized into a Mie resonator, offering substantial

experimental leverage in engineering the spectral scattering properties of the clusters. Recent numerical studies, resorting to high-precision T-matrix calculations, have provide new insights into the electromagnetic behavior of plasmonic spheres composed of numerous particles. These studies demonstrate that, even at high particle concentrations, such systems can be approximated as homogeneous spheres with a spatially-dispersive effective medium [7]. The range of effective parameters that can be achieved and used in the design of meta-atoms and metamaterials is expanded.

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ONE-DIMENSIONAL PHOTONIC CRYSTALS WITH EXCESSIVE OPTICAL LENGTH

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Photonic crystals with excessive optical length allow us to expand the variety of optical effects observed in one-dimensional Bragg multilayer structures. The results of experimental and theoretical studies of one-dimensional multilayer dielectric photonic structures are presented.

Photonic crystals (PCs) are periodic optical media with period of about the wavelength of visible light, which makes it possible to effectively control light emission and propagation by means of interference.

As a rule, PCs have a total length of several periods, which corresponds to the attenuation distance of waves whose propagation is forbidden within the photonic band gap (PBG). This propagation length determines the minimum required length of

the structure. Recent advances in the fabrication of PCs [1] have made it possible to create structures whose total length exceeds the minimum required length by a factor of hundreds. This excess length provides a great variety of opportunities to extend the range of optical effects observed in one-dimensional PCs.

The first way is the modulation of the spectral position of the PBG in space. Different parts of the large structure have different spectral positions of the PBG. The proposed method is known from chirped mirrors, but is not limited to them. Slow modulation of the PBG position allows to produce compact optical elements controlling and converting femtosecond pulses due to nonlinear chirp, as well as optical spectrometers and pulse sequence generators with specified parameters.

The second way is to combine several periodic PC lattices in one structure by an addition of spatial harmonics. Due to the excessiveness of PCs, the method makes it possible to summarize hundreds of harmonics within a single structure. This approach has demonstrated the possibility of solving the inverse problem of constructing the PC structure starting with its optical response in terms of amplitude [2], phase, reflection coefficient, frequency and angular spectrum. The possibility of optical information encoding and recording of information sequences into the spectral response of photonic crystals was demonstrated.

Experimental study of excessive PCs was carried out using the method of electrochemical etching of silicon, due to which it is possible to create one-dimensional structures with arbitrary refractive index in the range of 1.14-1.22 with an accuracy of up to 10 nm. The porous structure makes it possible to fill the samples with functional materials: fluorescent dyes, quantum dots, etc. The research was supported by the Russian Science Foundation, project №23-72-10008.

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ELECTRICALLY DRIVEN REPROGRAMMABLE METASURFACE FOR NIR BEAM-STEERING

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Wavefront control using metasurfaces has been demonstrated for a wide range of flat op cal components including for example lenses, mirrors and polariza on

converters[1]. Recent research has focused on routes to fully reconfigurable metasurfaces with con nuous dynamic tuning capability[2, 3]. Resonant op cal phased arrays offer many proper es suitable for the op cal and near-infrared (NIR) regimes with the promise of low energy consump on, low footprint, and high reliability. We consider a resonant plasmonic-vanadium dioxide nanoantenna array for con nuously tuneable beam-steering applica ons. Vanadium dioxide is a phase change material which can exhibit an insulator-metal transi on via thermal, electrical or op cal actua on. While resonant op cal structures o en present limited phase ranges, the amplitude-phase correla on, or extreme sensi vity, we demonstrate binary control as a mechanism to bypass these challenges.

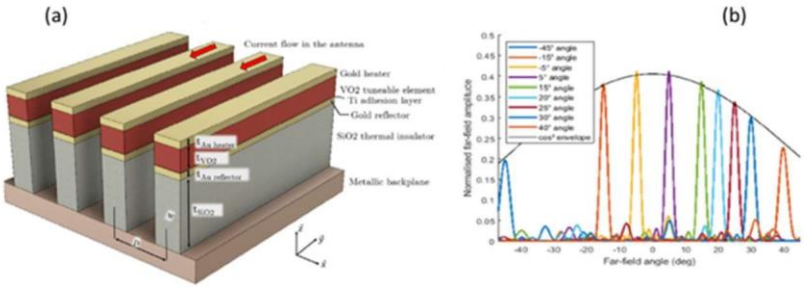

Figure 1: (a) 3D structure schema c with design variables, materials, and coordinate system. (b) Far-field pa ern calculated for a fixed angle of incidence θ_i = 45°, N = 64 antennas and using binary control to achieve various values of θ_r. The $\cos^2$ envelope corresponding to the antenna factor is shown to explain the lower amplitude at higher angles of anomalous reflec on.

Using inverse design a thermally realis c structure based on vanadium dioxide sandwiched in a metal–insulator–metal structure opera ng at 1550 nm is demonstrated to provide con nuous beam steering over a 90° range. Furthermore, a broadband response from 1500 to 1700 nm is achieved[4]. This simplified approach can be implemented to op mize tuneable nanophotonic phased array metasurfaces based on other materials or phase shi ing mechanisms for various func onali es. Routes to increase the reflectance and simplify the structure fabrica on are also considered. A metasurface of Au-VO_2 nanoantennae with a back dielectric mirror and SiC heatsink provides a 2-fold increase in reflectance. Careful design of the mirror layers is required to achieve op cal performance while maintaining thermal feasibility of the design. The improved structure maintains the wide-angle tuning range and broadband opera on[5]. The dielectric mirror and transparent SiC heat sink allow for control of the transmi ance and tuneable filtering applica ons.

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NANOGRATINGS IN SENSING AND NONLINEAR APPLICATIONS

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I will overview our results in sensing with one-dimensional periodic arrays of nanostructured silicon bars. To improve sensitivity we employed nonlocal resonances featured by the guided-mode resonances. We proposed two novel modifications of one-dimensional high-contrast gratings regarding either better index contrast or improved access of the analytes to the hot spots of the local fields [1, 2]. Fabrication of the devices is done by deep-UV lithography, optimized etching and atomic layer deposition with conventional materials: silicon, alumina, titania and BCB polymer. Characterization of the sensors reveals improved sensing parameters, consistent with requirements for modern clinical diagnostic applications [3, 4]. We applied also titanium nitride nanotrenches as a platform for mid-infrared chemical sensing, utilizing the plasmonic properties of TiN in this range of wavelengths.

Besides sensing, the nonlocal resonances in subwavelength gratings can lead to various nonlinear applications, where ultrafast modulation of reflectivity of devices under rather low fluence is required. Experiments demonstrated 30-50% changes in reflection experienced by the one-dimensional subwavelegth gratings due to photomodulation, accompanied with quite modest changes in the dielectric constant of silicon itself [5].

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CONTROLLING EXCEPTIONAL POINTS WITH ANISOTROPIC MEDIA

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Keywords: Exceptional points, PT-symmetric layered structures, anisotropic medium, scattering matrix.

Exceptional points are the spectral degeneracies specific for non-Hermitian systems where both eigenfrequencies and eigenmodes coalesce. The exceptional points proved to be useful for multitude applications – from enhanced sensing and chiral switching to lasing and strong light-matter coupling. In the PT-symmetric structures containing balanced loss and gain, the exceptional points have an additional meaning pointing to the conditions of symmetry breaking. However, most studies of the exceptional points consider systems with isotropic components. Therefore, it is of fundamental importance to study non-Hermitian systems containing an anisotropic medium and, in particular, answer the question: Can we control the position of exceptional points by changing the orientation of anisotropic medium’s optical axis?

In our work, we take an archetypal three-layer PT-symmetric structure consisting of loss, neutral and gain layers with the middle layer containing the anisotropic medium (liquid crystal). We apply the methods of transfer and scattering matrices to calculate the reflection and transmission properties of the structure taking radiation polarization into account. We analyze the properties of its scattering matrix

for both the isotropic and anisotropic cases and give the classification of PT-symmetry-broken regions. The introduction of anisotropy results in doubling the number of exceptional points, so that one cannot unambiguously associate these degeneracies with the usual condition of unity transmission due to mixing radiation of different polarizations inside the anisotropic medium.

We then study the influence of middle-layer optical axis orientation and show that it doesn't affect the position of exceptional points. However, we demonstrate that the positions of exceptional points can be changed in the system with the middle layered divided into two anisotropic sublayers, so that one can break PT-symmetry at a given wavelength by simply tuning the relative orientation of sublayers' optical axes. This can be done realistically, e.g., with an external electric field in non-Hermitian structures containing liquid crystals. In contrast to the usual approach implying variation of loss/gain level to reach an exceptional point, our results propose the radical simplification opening new avenues to controlling exceptional points.

Our findings expand the studies of exceptional points to the systems containing anisotropic media and propose a new approach to regulate and control them. Our results will advance the further development of non-Hermitian photonics and its applications in sensing and laser physics.

FUNCTIONAL WAVEFRONT ENGINEERING BASED ON MULTIDIMENSIONAL METASURFACE

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Metasurface as a novel and extraordinary platform has demonstrated intriguing electromagnetic properties by tailoring the artificial structures. Since its emergence, multidimensional modulation of light is proposed to improve information capacity and realize dynamic optical response at different incident conditions.

In this report, various functional metasurfaces are proposed and demonstrated. For example, our team demonstrate an all-optical parallel operation method based on the Dammann vortex metasurface, which realized the intuitive graphical expression of differential addition and subtraction operations. Meanwhile, we demonstrate a dielectric quasicrystal metasurface which enables dual functionality of diffraction pattern generation and hologram reconstruction. In addition, we propose and experimentally demonstrate a snapshot NIR spectral imaging system that combines diverse metasurface filters and a deep-learning-based algorithm to achieve image reconstruction with precise textures, minimal artifacts, and little crosstalk.

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METASURFACES AS A VERSATILE PLATFORM TO GENERATE AND CONTROL VECTORIAL LIGHT BERAMS

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Metasurfaces are ultra-thin metamaterials composed by artificial planar meta-atoms arranged in some specific macroscopic orders, which exhibit extraordinary capabilities to control electromagnetic waves [1]. Recently, much attention has been devoted to employing carefully designed metasurfaces to generate and control vectorial light beams, which exhibit not only non-trivial wavefronts but also freely tailored polarization distributions [2]. In this talk, I will present several recent examples of such studies. I will first describe how to design metadevices exhibiting (in principle) *infinite* wave-control functionalities based on coherent wave interferences [3], and then demonstrate an efficient meta-platform to generate vectorial THz beams with arbitrarily designed wave-fronts and polarization distributions under the excitations of surface waves [4].

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ROTATIONAL SUPERRADIANCE IN A QUANTUM-GAS–OPTICAL-CAVITY SYSTEM

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Superradiance is one of the most surprising and striking phenomena in quantum optics: If a collection of two-level atoms interacting with light is squeezed into a fraction of a wavelength, then the atoms interact collectively with light as a single giant atom (i.e., spin) and can emit light more efficiently. In this talk, after a

brief introduction of superradiance I will focus on steadystate '*rotational superradiance*' introduced recently in our work [1]. I will show how rotational superradiance emerges via breaking the time-reversal symmetry by, for example, rotation or an external synthetic magnetic field in a transversely-driven Bose-Einstein condensate coupled to a single mode of an optical cavity. I will then argue this phenomenon is very general and is even loosely related to the Penrose mechanism in black-hole physics.

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DEEP LEARNING ENABLED ON-DEMAND METASURFACES DESIGN AND ADAPTIVE METADEVICES

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Recent advancements in deep learning have ushered in an important tool for optics and photonics, recurring in various applications of material design, system optimization, and automation control. Deep learning-enabled on-demand metasurface design and automatic metadevices have been the subject of extensive expansion, as it can alleviate the time-consuming and experience-prone issues in conventional electromagnetic numerical simulations and non-independent working manner. In this talk, we will share the recent advances made in how to expedite the forward prediction, inverse design, and spectral correlation of metasurfaces, develop adaptive metadevices, and capture hidden physical knowledge that cannot be readily accessed. Examples include chameleon-like self-adaptive invisibility cloak, wireless channel management, and optical illusion.

PICOMETER PRECISE FABRICATION OF MICRORESONATORS AND RESONANT PHOTONIC CIRCUITS

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While the optical displacement measurement methods have achieved picometer precision, the latter is commonly considered elusive for the modern microphotonic fabrication methods which have achieved a precision plateau of several nanometers.

However, it has recently been recognized that the picometer precision may become a must for the fabrication of a range of emerging photonic microdevices promising to revolutionize computer, communication, and sensing technologies. Here, I review these applications as well as the developed and prospective approaches towards the achievement of this challenging goal.

SECTION 2: PHOTONICS FOR BIOMEDICINE, MATERIAL PROCESSING AND OTHER APPLICATIONS

OPTICAL IMAGING FOR STUDYING NEUTROPHIL ACTIVATION AND MIGRATION PROCESSES

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Functional optical imaging has considerably expanded our capacity to investigate biomolecular processes, particularly in the context of the cells of immune system. Optical imaging techniques allow, among other things, the tracking of immune cell types, lineage tracing, and monitoring of immune cell function, including the use of various fluorescent indicators and probes. Neutrophils constitute the primary defense mechanism of cell-mediated innate immune response to infections and tissue damage. The recruitment of these cells is critical during every phase of inflammation, particularly in the initial stages of non-specific recognition and eradication of pathogens, and their production of reactive oxygen species (ROS) serves as a crucial line of defense against infections and neoplasm. In this research, we employed fluorescence assays to evaluate the activation and migration of neutrophils in the presence of chemoattractants.

A chamber was modelled to observe cell migration, in which neutrophils moved under the action of a gradient of chemoattractants on the surface of a monolayer of endothelial cells. For this purpose, equipped with a membrane container with solutions of tumor necrosis factor α (TNFα) - 0.5 ng/ml, leukotriene B4 (LTB4) - 0.2 nM or lipoxin A4 (LXA4) - 0.2 nM was attached to the rim of a Petri dish (35 mm) on which a monolayer of endothelial cells of the Ea.hy926 line

was pre-grown. Neutrophils were isolated from the peripheral venous blood of healthy donors by using a double-gradient Ficoll-Trazograph ($\rho1$ = 1.077 g/m^3, $\rho2$ = 1.110 g/m^3). 2′,7′-dichlorodihydrofluorescein diacetate (H2DCFDA, Lumiprobe, Russia), an indicator of ROS production in living cells characterized by bright fluorescence in the green region of the spectrum (Ex 511 nm/Em 533 nm), was added to visualize cells using fluorescence microscopy and to assess ROS production. The microscopy was performed using an inverted microscope (Zeiss Axio Vert). A1 (Carl Zeiss, Germany) for 60 min at an interval of every 2 min. Image processing was performed using the ZEISS ZEN software (Carl Zeiss, Germany). To estimate the amount of reactive oxygen species produced by the cells, a BioTek PowerWave HT plate reader and Gen5 software (BioTek Instruments, USA) were used; H2DCFDA fluorescence intensity was assessed every 10 min for 60 min.

As a result, total vectors of neutrophil movement were established and assessed, and the efficiency of their movement in relation to the chemoattractant chamber was determined. Moreover, ROS production levels were estimated, revealing that upon exposure to all chemoattractants, neutrophils were activated, accompanied by the release of varying amounts of intracellular ROS.

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3D PRINTING WITH LIGHT

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Multiphoton Lithography is an advanced additive manufacturing technique that uses lasers to achieve remarkable fabrication resolutions as fine as just a few tens of nanometers. Employing the principles of nonlinear absorption, this method provides unparalleled resolution capabilities that surpass those of any other 3D printing technology. It is applicable across a range of materials, allowing for the creation of various components and devices, including metamaterials, biomedical devices, micro-optical systems (see Figure 1), and complex mechanical models (see Figure 2).

What sets Multiphoton Lithography apart is its ability to produce intricately designed, fully functional 3D structures. In this presentation, I will discuss recent advancements in materials processing and the functionalization of these 3D constructs. Additionally, I will explore the future applications and opportunities that this powerful technology presents.

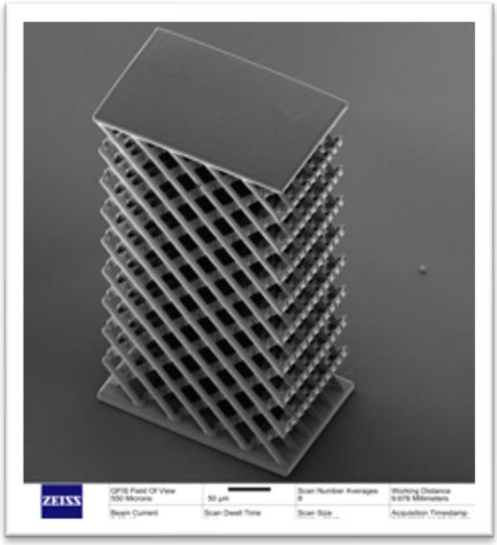

Figure 1: A complex micro-optical element. Figure 2: A micro-pantograph consisting of a cylindrical lens and a diffractive optical element.

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DUAL-ACTING NANOPLASMONIC DRUG CARRIERS FOR COMBINED PHOTOTHERMAL AND CHEMOTHERAPY

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Keywords: Gold nanorods, photothermal therapy, drug delivery, cancer, nanotechnology.

Nanotechnology-based cancer therapies offer promising methods to enhance treatment efficacy and reduce side effects [1]. Gold nanorods (GNRs), due to their tunable optical properties, are ideal candidates for photothermal therapy (PTT), where they convert light into heat to destroy tumor cells [2]. Functionalizing GNRs with chemotherapeutic drugs enables targeted delivery, allowing a combined photothermal and drug therapy approach for a synergistic effect [3]. This study developed GNRs coated with bovine serum albumin (BSA) and loaded with doxorubicin, methotrexate, or dacarbazine for dual therapy.

Gold nanorods with an absorbance peak near 650 nm were synthesized via a seed-mediated method and coated with cross-linked BSA to improve stability and

facilitate drug loading. Doxorubicin, methotrexate, and dacarbazine were loaded onto the GNRs, and drug loading efficiency was determined using UV-Vis spectroscopy. The structural integrity of the BSA-coated GNRs was confirmed through transmission electron microscopy (TEM) and dynamic light scattering.

TEM analysis revealed that the BSA-coated GNRs maintained their rod-like shape with an average length of 50 nm, width of 12 nm, and a 5 nm BSA shell. *In vitro* studies indicated no cytotoxicity to non-tumor cell lines, suggesting safety for further evaluation. Cellular uptake was confirmed using atomic emission spectroscopy after media digestion in aqua regia.

This study successfully developed a dual-functional GNR system for photothermal therapy and drug delivery. The high drug loading, stability, lack of cytotoxicity in non-tumor cells and optimal optical parameters for the red medical lasers used in PTT support the potential for an effective tumor treatment strategy. These findings offer a promising approach to improving cancer therapy by combining targeted heat and chemotherapy, potentially reducing side effects and improving treatment outcomes.

The work was carried out with the financial support of the Ministry of Health of the Russian Federation ‘Molecular design and creation of drugs based on conjugates of carbon nanostructures, vectors of targeted delivery and cytotoxic agents for inactivation of stem tumour cells and components of the tumour microenvironment’, No. EGISU:1022040700957-7-3.2.21;3.1.3.

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DEVELOPMENT OF MEDICAL PROBES, USED FOR LASER TREATMENT OF TISSUES. CERAMOPTEC SIA EXPERIENCE

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CeramOptec, known for manufacturing all-silica preforms and optical fibers, also develops medical solutions for laser surgery. These solutions include methods for treating specific diseases using laser irradiation and medical lasers with disposable probes. The company's lasers, which emit in the near-infrared range, are powerful enough for tissue coagulation or vaporization. More detailed information about the medical solutions of CeramOptec could be found on a mother’s company

website [1]. Initially, the Bonn division was the sole developer of medical products, but since 2019, the R&D group in Livani has been advancing medical probe designs. The focus has been on ensuring that the probes can effectively irradiate targeted tissues while maintaining mechanical strength during surgical manipulation.

The development has evolved from "bare fiber" probes to more advanced cylindrical diffusers to increase the treated area and homogenize output power [2]. However, probes can degrade under extreme conditions, especially when soft tissues carbonize and cause local overheating at the probe's distal end [3], leading to silica crystallization and reduced mechanical strength. This issue becomes critical when power density exceeds approximately 60W/cm², potentially causing changes in the probe's optical path due to silica softening (Fig.2).

At high power densities (estimated at several tenths of kW/cm²), along with overheating of the emitting part of a probe, conditions become suitable for the formation of a plasmoid within the light-guiding core of the probe. This plasmoid moves toward the radiation source at speed arond meter per second, which aligns with existing literature [4,5]. As the plasmoid moves, it leaves behind an open or collapsed capillary, which mechanically weakens or destroys the distal end of the probe. In tests with all-silica fibers with a core diameter of 600 micrometers, the plasmoid was observed to penetrate up to ten millimeters deep into the fiber.

The development of new fiber probes and modifications to existing medical solutions require optimizing the homogeneity of power density on the irradiated part of the probe, creating new mechanical and optical testing methods, and conducting thorough preliminary "In Vitro" studies. A major issue with these medical products is material degradation during use, which is best understood by subjecting probes to extreme operating conditions. Such operating conditions can lead to decrease of output irradiation, overheating place of irradiation output, changes in the shape of the probe and, in extreme cases, physical destruction.

The degradation process typically follows these steps: tissue carbonization, local overheating, silica crystallization on the probe's surface, and ultimately plasmoid formation. By considering these phenomena, CeramOptec aims to develop medical lasers and fiber optic probes that ensure fast and safe laser surgery procedures.

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BIEXPONENTIAL PHOTOLUMINESCENCE DECAY FOR MOLECULES NEAR PLASMONIC NANOSTRUCTURES AND CORTISOL MONITORING

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Keywords: Metal-enhanced photoluminescence, cortisol monitoring, super- and sub-radiant emission.

Metal-enhanced photoluminescence (PL) is widely used as a method for biomedical applications. This method is sensitive to the distance from a metal surface. Thus it can be applied to time-dependent monitoring of particular molecules. Here we consider a method for measuring a cortisol concentration and biexponential features of PL decay near plasmon supported surface.

Cortisol is a key modulator of energy metabolism, immune system, circulatory and central nervous system and also is a major stress response hormone. Levels of cortisol are required to be monitored for pharmacological corrections in metabolic disorders, chronic inflammation conditions, cardiovascular disease and psychiatric conditions. The procedure is based on the displacement of fluorescently labeled BSA-cortisol conjugate from the immune complex immobilized on the golden islands by free cortisol [1-2]. This competitive approach allows time-resolved monitoring of the fluorescent signal, surface-enhanced by the gold film. However, as soon as the fluorescently labeled BSA-cortisol conjugates are substituted by free cortisol, the fluorescence enhancement disappears while conjugates stay in the volume.

Polymer optical fiber surface with removed clad is modified with AuNPs for fluorescence enhancement. Immunofluorescent surface-specific assay is then formulated on the modified surface. Specificity is provided by functionalization of the Au surface with anti-cortisol immunoglobulins reversely bound to pur-posely synthesized tracer protein atto633-BSA-3-cmo-cortisol. This fiber-based substrate, being optically connected through waveguide to spectrometer, shows response in its PL intensity to cortisol concentration in the dose-dependent manner at physiologically relevant concentrations range. In-vitro experiments underpinning the possibility of real-time cortisol monitoring based on the implantable surface-enhanced immunosensor.

The PL properties, biexponential decay and photon statistics, depend on the plasmon supporting metal structure [3]. We will discuss an effect of super-radiant and sub-radiant radiation that demonstrate the bi-exponential decay of dye emitters near the metamaterial anisotropic mirror and in core-shell particles. All Dicke states can be exclusively divided into two groups. One set is the so-called super-radiant states. These states have transitions from the most excited state to the ground state. The second group of states is the sub-radiant states. They have weak transitions between each other. This second group has transitions to the ground state only if coupled to a

super-radiant group of states. These sub-radiant states can trap some population of excited states since the trapped population cannot reach the ground state. Relaxation from the sub-radiant states in the system occurs due to radiative coupling to the vacuum modes and interactions with phonons in the atomic matrix and the plasmonic structure.

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TAILORING THE ULTRAFAST NONLINEAR OPTICAL RESPONSE OF CARBAZOLE THROUGH CHEMICAL FUNCTIONALIZATION FOR EFFECTIVE PHOTOINITIATION IN MULTIPHOTON LITHOGRAPHY

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This work reports on the suitability of a series of D-π-A and D-A push-pull carbazole-based dyes for multiphoton lithography (MPL). Firstly, the ultrafast nonlinear optical (NLO) properties of the series were studied experimentally by two distinct experimental techniques, Z-scan and pump-probe optical Kerr effect (OKE), employing 246 fs laser pulses at 515 nm. The results indicate that chemical functionalization of the carbazole moiety with various strong electron-donating and/or electron-withdrawing groups, such as benzene, styrene, 4bromostyrene, nitrobenzene, trimethyl isocyanurate, and indane-1,3-dione, can result in a controlled and significant enhancement of the NLO absorptive and refractive responses. Once the NLO properties were established, the suitability of these photoinitiators (PIs) for MPL was demonstrated using the same laser system. Firstly, in the standard woodpile geometry, the results of chemically functionalized carbazole as a PI demonstrates improvements in both resolution and MPL efficiency compared to that using

unfunctionalized carbazole as a PI. The resolution achieved is comparable to that obtained with other widely used PIs in MPL applications. Furthermore, a more complex mechanically weak spiral structure was manufactured.

EFFECTIVE PROPERTIES OF DISPERSED RANDOM COMPOSITES

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Structurally disordered dispersed patterns and hidden relations between the geometrical random characteristics of composites and their physical properties arise in various branches of mechanics and physics. We are concerned with the problem of constructive quantitative description of chaos/regularity of structures. The macroscopic properties of randomly dispersed media, the degree of randomness, in particular, anisotropy, and clustering, are studied by the analytical theory of RVE based on the structural sums. We propose the computationally effective method of structural sums coinciding with the lattice sums for regular composites. In particular, the obtained results yield new high-order analytical exact and asymptotic justified formulas for the effective permittivity of dispersed composites with isotropic phases. We introduce and justify quantitative characteristics of randomness, clustering, degree of anisotropy for random composites, degree of interaction of two different components, etc.

METAMATERIAL FORMALISM APPROACH TO RECOGNIZE CANCER

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Early detection of a tumor makes it more probable that the patient will, finally, beat cancer and recover. The main goal of broadly defined cancer diagnostics is to determine whether a patient has a tumor, its location and histological type and severity. The characteristic of the cancer affected tissue is the presence of the glioma cells in the sample. The current approach in diagnosis focuses mainly on microbiological, immunological, and pathological aspects rather than on the "metamaterial geometry" of the diseases. The determination of the effective

properties of the biological tissue samples and treating them as disordered metamaterial media has become possible with the development of effective medium approximation techniques. Their advantage lies in their capability to treat the biological tissue samples as metamaterial structures. Here, we present, for the first time to our knowledge, the studies on metamaterial properties of biological tissues to identify pathological areas in the brain tissue. The results show that the metamaterial properties are influenced by the tissue type, if it is healthy or unhealthy. The obtained effective permittivity values are affected by various factors, like the amount of different cell types in the sample and their distribution. The identification of the cancer affected areas based on their effective medium properties was performed. These results prove the metamaterial model capability in recognition of the pathological areas. The presented approach can have a significant impact on the development of methodological approaches toward precise identification of pathological tissues and would allow for efficient detection of cancer-related changes.

SPATIAL INHOMOGENEITY OF 2D OPAL STRUCTURES FOR IMPROVED SELECTIVITY OF OPTICAL SENSORS FOR ALCOHOL INTOXICATION ASSESSMENT

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Real-time monitoring of exhaled breath for alcohol intoxication assessment still remains an important issue to target given its effect on human health and society. Here, one of the major problems to address is the selectivity of known sensors. It is often approached under a multisensor concept, when an array of not less than 3 cross-sensitive sensors, though, with at least slightly orthogonal characteristics, is utilized to obtain an analytical vector-signal [1]. This signal, processed by pattern recognition algorithms, is selective to individual analytes or odors. The multisensor concept presumes multivariate sensors, or smart sensors, adapting one sensor only to provide a selective vector-signal, e.g., under impedance spectroscopy method or cyclic voltammetry when considering electrochemical sensors, or processing the signal of a sensor under thermal cycling [2].

Here, we introduce a new sensor system based on a photonic crystal made of Ta_2O_5 / SiO_2 dielectric layers with a porous layer of submicron silica particles on the top. The effective refractive index changes related to the surface wave resonance position result from capillary condensation in pores [3,4]. While a monolayer of silica microspheres is desired, and its preparation is optimized in this study, we consider using spatial layer distortions as a basement to build a selective sensor system and approach the selectivity towards a particular analyte or smell.

As a result, we show the sensing performance towards such gaseous biomarkers of human diseases as acetone, ammonia, ethanol, and isopropanol, and probe alcohol intoxication using exhaled breath samples. Employing principal component analysis and time series analysis to the signals from 3 different regions on a photonic crystal surface, we show successful selective identification of the change point of the human state.

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PHOTOBIOMODULATION

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Light therapy, by exposure to light at controlled wavelengths has been used for millennia to treat a variety of medical disorders. Despite intensive investigations at multiple wavelengths the biological mechanisms and exposure modes for optimal light delivery remain largely unknown.

Reactive Oxygen Species have been recognised not only in relation to oxidative stress but as essential part of signalling pathways. NIR-water dynamics has also been proposed as a mechanism of PBM which precedes or coexists with as well as complement and facilitates energy transfer for increased efficiency in ATP production.

The basis for these hypotheses and the potential for PBM therapies will be discussed.

TOWARDS QUANTUM CONTROL OF PROTEIN VIBRATIONS

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Proteins are one of the fundamental building blocks of life, their motions and interactions drive numerous important biological functions, from gene transcription, to catalyzing chemical reactions, and our immune response. However, much still remains to be discovered in how they do this. For instance, protein mis-folding is thought to be the source of many disease, such as Alzheimer's Disease, Huntingtons Disease, and Cystic Fibrosis; but we don't fully understand how this happens. Similarly, natural enzymes – a class of proteins – can accelerate chemical reactions by many billions of times, but we are unable to engineer artificial enzymes with the same capacity. It is thought that long-range vibrations may play an important role in protein function, but current tools to probe these effects are severely limited.

Here, I will report on progress in my laboratory to extend quantum control techniques from quantum optomechanics to allow laser control of the vibrations of signal proteins. I will describe the nanoscale optical cavities we have engineered for this purpose, the ability they have – for the first time with a dielectric cavity – to trap single proteins, their ability to observe the dynamics of these proteins with sub-microsecond speeds, and their prospects for laser cooling and heating of long-range collective modes.

NOVEL NON-INVASIVE WEARABLE DEVICES FOR HEALTH MONITORING

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Continuous monitoring of human health and activity using wearable devices will be a key technology in the sensor network society for years to come. Recent advances in the development of the miniaturised optoelectronics components with low energy consumption have opened a new perspective for the implementation of non-invasive wearable sensors for health monitoring and personalised medicine. In this paper we will review our recent development of wearable sensors based on Laser Doppler flowmetry and Fluorescence spectroscopy and demonstrate potential applications for such devices.

SECTION 3: OPTOMECHANICS AND OPTICAL MANIPULATION

OPTOMECHANICS OF NON-HERMITIAN SYSTEM IN NON-SCATTERING REGIME

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Key words: Optical tweezer, multipole decomposition, hybrid anapole state, trapping.

Focused laser beams allow controlling mechanical motion of objects and can serve as a tool for assembling complex micro and nano structures in space. Introduction of additional degrees of freedom into optomechanical manipulation suggests approaching new capabilities. Here we analyze optical forces acting on a high refractive index silicon sphere in a focused Gaussian beam and reveal new regimes of particle's anti-trapping. Multipolar analysis allows separating an optical force into interception and recoil components, in particular, interplaying interception radial forces and multipolar resonances within a particle can lead to either trapping or anti-trapping scenarios and also introduce bending trajectories, depending on the overall system parameters. Multipolar engineering of optical forces paves a way to new possibilities in microfluidic applications, including sorting and micro assembly of nontrivial volumetric geometries.

Optomechanical manipulation, firstly demonstrated by A. Ashkin at the middle of 1980s, opened numerous venues in fundamental and applied science, e.g. While this classical configuration has been widely explored and used nowadays, introducing new degrees of freedom in optomechanical manipulation is the subject of intensive research.

Enlarging a number of optomechanical degrees of freedom can be obtained with three fundamentally different approaches. The first method is based on shaping a laser beam. One of the main experimental techniques here is to use holographic masks (spatial light modulators are typically employed in the latter case). Another approach to a flexible manipulation is to introduce auxiliary photonic structures, which assist configuring optical forces. For example, plasmonic substrate and hyperbolic metamaterials. The last method, to be mentioned in this context, is to shape a particle itself. Those are typically made of transparent low-index dielectric materials or plasmonic metals. In both cases, however, particles' polarizability is linked to its dipolar response and governs the interaction. However, high-index dielectric particles supporting a variety of Mie resonances introduce new interaction channels beyond simple dipolar polarizability terms. For example, coherent interaction between electric and magnetic responses of silicon particles in linear or

elliptically polarized Gaussian beam was shown to provide either pulling or pushing forces, depending on system's parameters.

Careful tailoring of multipoles interference can provide superior capabilities to control optical forces. Intuitively, a proper combination of multipoles can lead to quite different far-field scattering patterns. As a result, recoil forces can be flexibly engineered, though electromagnetic interactions in their complete form should be addressed – this is the goal of this report.

In this work, the effect of the HAS on the optical forces acting on a cylindrical silicon nanoparticle in the waist of a Gaussian beam was investigated.

It was shown that with a change in wavelength, the pressure force changes proportionally to the total scattering cross section and reaches a minimum in the HAS. When the anapole particle is displaced perpendicular to the beam away from the focus, the anapole state is destroyed, which affects the forces acting on the particle.

A fundamentally new pattern of transverse optical forces was discovered – particle capture outside the constriction region, which is realized only in the hybrid anapole state. The obtained dependence of optical forces on the size of nanoparticles can be used for high-precision particle sorting.

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GENERALIZED METHODS TO ACCURATELY CALIBRATE OPTICAL TWEEZERS

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Accurate and fast calibration of optical tweezers is of paramount importance in biophysics and non-equilibrium thermodynamics at the micro and nano-scale. This consists in determining the stiffness and the diffusion coefficient of the particle in the trap. Several methods have been developed in order to achieve this challenging task, basically based on statistical estimators that make use of the equilibrated thermal

fluctuations acting on the trapped particle by the surrounding medium. These are under the framework of passive calibration methods, such as the Equipartition, Autocorrelation and Power Spectrum Density [2]. New approaches such as the Force Reconstruction via Maximum Likelihood Estimator Analysis are also under this field of interest [1,2]. In this presentation we will introduce these methods in their standard form, discussing their principal aspects and their pros and cons, and later on we will show a new general framework based on Bayesian inference that allows us to overcome most of their limitations. In this context, we show that there are three important aspects that are commonly obviated or ignored in the standard approximations, namely the integration time of the detector, the finite time of the signal and the sampling frequency. The general framework takes these aspects into consideration, allowing to drastically improve the accuracy of the calibration and to minimize the amount of data needed [2].

As an example, Fig. 1 illustrates the calibration of the stiffness by two common methods using the standard methodology and the generalized form. In these plots the main variable approaches, particularly when samplingδ frequency is lower or of the same order than the of interest is the integration time (δ) which is one of the main sources of error in standard relaxation time of the trap [2]. We believe that these new developments will allow us to apply optical tweezers to systems where the approximations underlying standard approaches are not completely fulfilled either by the accessible devices or by the intrinsic properties of the systems of interest, for instance the systems that are out of equilibrium such as living matter.

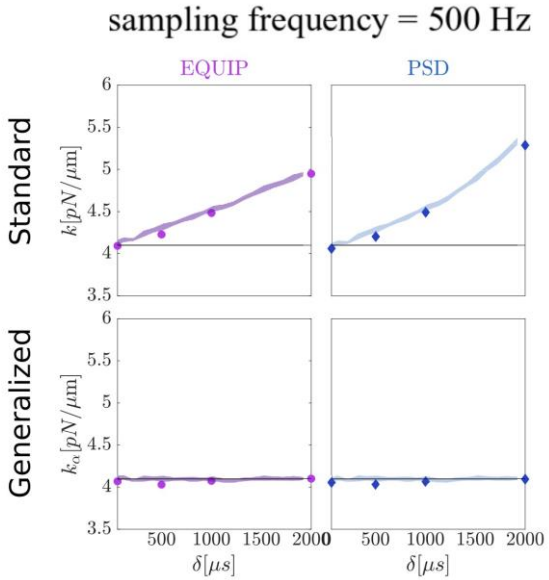

Figure 1. Performance of the standard and generalized methods. Estimation of the stiffness against the integration time for a low recording frame rate of 500Hz. Estimation of the stiffness using the equipartition and the PSD estimations following the standard approaches (upper row) and the Generalized form (lower row).

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OPTICAL TRAPPING AND MANIPULATION OF NON-SPHERICAL PARTICLES USING THE T-MATRIX METHOD

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Optical trapping represents a very useful tool to manipulate, probe, and characterize individual particles with well defined optical, mechanical, and thermal properties [1]. The range of applications is huge ranging from trapping of dielectric and metal nanoparticles to biological entities, from the investigation of micro and nano-plastics and their pervasive presence in the environment to the study of cosmic dust particles. Particle shape, composition, and aggregation state strongly affect the optical forces at the nanoscale. An accurate theoretical modelling is of key importance to address the experimental effort and to help in the correct interpretation of the results.

The Transition matrix (T-matrix) method has played a central role in optical tweezers modelling, proving to be particularly suitable to describe optical trapping of composite and arbitrary-shaped particles [2]. Such approach provides a compact and elegant formalism based on the multipole expansions of the electromagnetic fields. It can be applied to model the optical behaviour of many scatterer morphologies, from nano-shell particles to inhomogeneous spherical particles and clusters of particles. One of the most powerful aspects of this technique is that it offers both an analytical and numerical solution to the problems under study. It allows a rigorous description of the scattering processes, surpassing other commonly used techniques in terms of computational efficiency.

After a general introduction to the method, we will focus the discussion on some possible space applications related to the study of cosmic dust grains with a view on perspectives for future applications of optical tweezers in curation facilities for sample-return missions or in extraterrestrial environments [3,4].

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NONEQUILIBRIUM DYNAMICS OF LEVITATED NANOPARTICLES

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Keywords: Optical trapping, vacuum levitation of nanoparticles.

The recent experimental progress in control of the mechanical motion of a single levitated particle opens new ways to investigate more complex configurations in more dimensions or with more levitated and interacting objects. An optical levitation offers relatively easy tunability of the key system parameters (oscillating frequency, the strength of the optical coupling between particles, damping, effective temperature, etc.) over several orders of magnitude. Similarly, the forces acting upon the particles can be tuned between conservative and non-conservative, and various examples of nonequilibrium multidimensional dynamics can be demonstrated.

We provide a few experimental examples of nonequilibrium dynamics of a single optically levitated object with optically coupled degrees of freedom [1] and of more levitated objects where their optical coupling (referred to as optical binding) leads to the formation or synchronization of limit cycles [2,3]. Finally, we present a protocol of experimental amplification and squeezing of a motional state of an optically levitated nanoparticle in a stroboscopic sequence of switched potentials [4].

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MAGNETO-OPTICAL PARTICLES IN ISOTROPIC SPINNING FIELDS MIMIC MAGNETIC MONOPOLES

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Constant magnetic fields are known to interact with electrically charged particles inducing Lorentz forces that point in a direction perpendicular to the field. However, if the particle is electrically discharged, it is impossible to induce a force using a constant magnetic field. An exotic option is to mimic a magnetic charge on a neutral particle. This false magnetic monopole will interact with the magnetic field just as an electric charge would do with an electric field through the Coulomb interaction. Attempts to generate this magnetic charge have mainly relied on quasiparticles generated using condensed matter spin ice networks [1-3]. In this work we present another option based on neutral magneto-optical particles illuminated by a spinning monochromatic light field [4]. We will analyze the behavior of these particles under different isotropic optical configurations [5,6], and we will calculate the value of the induced magnetic charge [7].

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OPTOMECHANICAL SORTING OF NANOPARTICLES IN HYBRID ANAPOLE STATE

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Nowadays, anapole states [1], defined by the absence of far-field radiation from one of the multipoles excited in a particle, have emerged as a subject of significant interest within the field of nanophotonics. Due to the absence of scattering, anapole states are able to store energy, which allows their further use, for example, for laser generation [2]. The condition for the emergence of an anapole state is destructive interference of basic multipole moments in the particle and toroidal moments [1]. It has recently been discovered that it is possible to combine multiple multipoles at the same wavelength. This effect was called hybrid anapole state (HAS) [3, 4]. In this work, a hybrid anapole state arising in a cylindrical silicon nanoparticle placed in the waist of a linearly polarized Gaussian beam was investigated – Fig. 1.

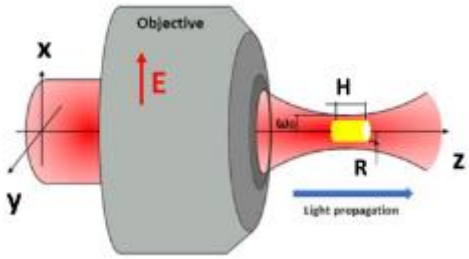

Fig. 1

The system was modeled in the COMSOL Multiphysics. To determine the parameters of the hybrid anapole state at an radiation wavelength of 1064 nm (corresponding to the YAG:Nd^{3+} laser), we applied the method of multipole decomposition of polarization currents to calculate the total scattering cross section of the particle [5]:

Keeping the wavelength and particle height constant, we performed calculations of the scattering efficiency and found the existence of regions with strongly suppressed scattering and overlap between the four anapoles, which corresponds to the hybrid anapole condition.

The system was found to be highly sensitive to changes in the particle radius, so 5 different radii corresponding to different scattering regimes were chosen for the study. The Fig. 2 shows a comparison of the plots of transverse force as a function of the particle coordinate at varying particle radii.

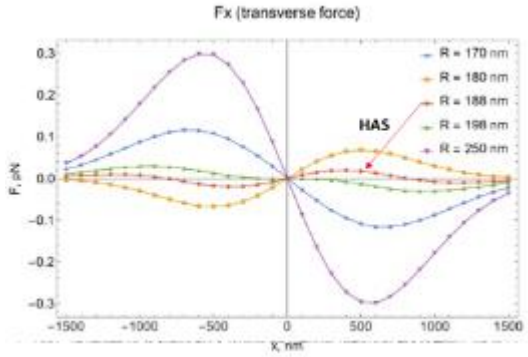

Fig. 2

We observed the emergence of optomechanical patterns such as particle trapping at the beam centre (R = 250 nm), repulsion from center (R = 180 nm), trapping in the zero force region (198 nm), and trapping at two points off-centre, which is only realised in the HAS (R = 188 nm). The discovered radius dependence of optical forces can be used for the high-precision sorting of silicon nanoparticles for all-dielectric photonics applications.

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Keywords: *Optomechanics, optomechanical manipulation, hybrid anapole state*

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THERMALLY DRIVEN OPTICALLY BOUND STRUCTURES: FUNDAMENTALS AND APPLICATIONS

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Optical micromanipulations typically use well-defined fields of optical forces, created by carefully shaped light beams, to confine and transport micron- and submicron-sized particles in liquid or gaseous environments. In contrast, dynamically varying landscapes of optical forces can arise due to multiple scattering of coherent light from a collection of simultaneously illuminated particles. Such optical binding interactions couple individual illuminated particles through gradient and scattering forces and can result in self-organization of intricate structures that depend on the shape, material, and internal structure of the constituent particles, as well as on the polarization and spatial distribution of the incident optical field [1].

Optical binding forces arise due to deflection of momentum carried by light and, thus, they generally have non-conservative components. This fact dramatically influences the motion of individual particles in the self-assembled structures that can display a rich variety of non-intuitive non-equilibrium dynamic behaviors. The stability of collective motion of optically bound structures inherently decreases with the growing number of their constituent particles that scatter the influx of the incident electromagnetic momentum with increasingly larger asymmetry [2].

We investigate longitudinal optical binding between multiple dielectric particles with nominally identical submicron diameters, confined in two noninterfering, counter-propagating (C-P) Gaussian beams with mutually orthogonal linear polarizations that form a dual-beam optical trap (see Fig. 1). In this highly symmetrical particle–light field configuration, the effects of non-conservative forces can be largely controlled and suppressed. Shaping of the transverse intensity profiles of the two trapping beams with a spatial light modulator then allows for examining the effect of the spatial distribution of optical intensity on the size, shape, and stability of optically bound structures. We study the dynamics of collective motion of the structures in the overdamped [3] (ambient medium water) and underdamped [4] (ambient medium air) regime, assess the nonlinearity of interparticle interactions for various configurations of the system, and map the onset of instability induced by increasing number of constituent particles.

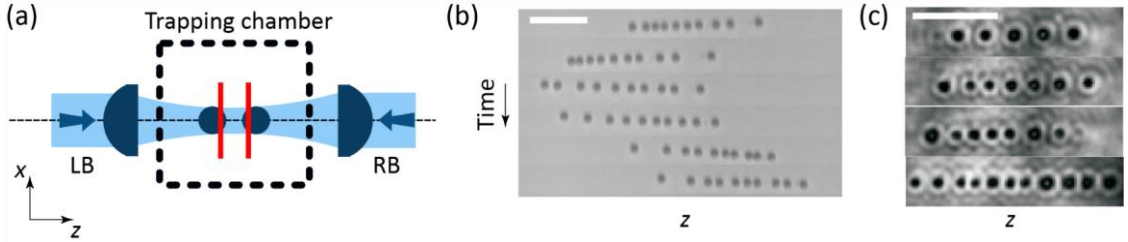

Figure 1: (a) Experimental setup of the dual-beam optical trap with two orthogonally polarized C-P laser beams (LB and RB). Optically bound particles, suspended in water or in air in the trapping chamber, are observed using a microscope oriented perpendicularly to the beams' axes. Examples of optically bound structures: (b) oscillating chain with a fixed particle number (polystyrene particles in water, diameter 990 nm) and (c) stably trapped chains with varying particle numbers (silica particles in air at ambient pressure, diameter 600 nm). Scale bars: 10 □m.

Our results pave the way to the development of an experimental toolbox for characterizing optomechanics of complex coupled systems with the level of coupling nonlinearity controlled by shaping of the incident optical field [4] for fundamental

experimental studies including, for example, mesoscopic entanglement. In addition, understanding of the dynamics of optically bound structures also provides the necessary basis for designing novel mesoscopic-scale photonic devices whose spectral or polarization response can be reconfigured in situ by light [3].

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OPTICAL VORTEX INDUCED FORWARD TRANSFER TECHNOLOGY

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Laser induced forward transfer (LIFT) has been widely studied in a myriad of fields, such as printable electronics and photonics, and bioprinting, as a nozzle-free, cost-saving and resource-saving printing technology, because it can remove all nozzle-associated negative effects, such as a narrow ink viscosity range.

Optical vortices possess a ring-shaped spatial intensity form, and an orbital angular momentum (OAM) associated from their helical wavefront with an on-axis phase singularity.

In recent years, we have proposed a novel LIFT technology using an optical vortex instead of a conventional Gaussian beam with a planer wavefront (referred herein optical vortex induced forward transfer (OV-LIFT)), in which the optical vortex can twist an irradiated donor material (even materials with high viscosity) to launch a picolitre-scale spinning droplet of the donor. This OV-LIFT technology enables the direct-print of micron-scale dots with high spatial resolution and high spatial definition even at a long working distance.

In this presentation, we review the current research achievements and prospectives of OV-LIFT, including the 2-dimensional direct-print of living cells (cyanobacteria cells) colloidal suspension with a high survival rate. The OV-LIFT

technology will also offer new research opportunities to fabricate freeform cell scaffolds towards bio-solar cells technology and tissues engineering.

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NON-HERMITIAN THEORY FOR OPTICAL TRAPPING AND BINDING

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Abstract

Intense light traps and binds small particles, offering unique control to the microscopic world. With laser illumination and scattering, optical forces are inherently non-Hermitian. Surprisingly, the incorporation of non-Hermitian physics into optical trapping and binding was missing for a long time. In 2021, we introduced non-Hermitian theory into this field and discovered several unexpected phenomena.

In contrast to conventional systems, the operator governing the time evolution of optically trapped and bound particles exhibits a non-Hermitian character. This inevitably gives rise to complex eigenvalues when the non-Hermitian force drives the system beyond the exceptional points, where the input of light energy eventually "melts" the optically-bound structures. Notably, unstable complex eigenvalues are ubiquitous in the many particle limit, typically, 10 is considered to be many. As a

consequence, optical forces alone are insufficient to maintain the binding of large clusters. However, this conclusion does not contradict the experimental observation of sizeable optically-bound clusters in fluid environments, where the ambient damping can dissipate the excess energy and restore the stability of the system. The non-Hermitian theory has profoundly reshaped our understanding of optical trapping and binding, while also unveiling the critical roles played by non-Hermiticity and exceptional points. This paves the way for large-scale manipulations in this field.

Our theoretical work adopts the highly accurate Mie Scattering Theory and the Maxwell Stress Tensor. This semi-analytical technique may be consider exact withinn classical electrodynamics and subject only to numerical truncation errors.

Keywords: Optical trapping, Optical Binding, Non-Hermitian Physics.

THE ENERGY SYMMETRY SPHERE – A SIMPLIFIED FRAMEWORK TO EXPRESS CHIRAL AND NON-RECIPROCAL OPTICAL FORCES ON DIPOLAR PARTICLES

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Abstract

The optical force acting on an isotropic dipolar particle in the most general case of chiral and non-reciprocal polarizabilities is a long expression with many terms. Understanding this force is crucial for applications like separation of chiral enantiomers. We present a mathematical framework which, by expanding electromagnetic fields into different bases in the electric-magnetic space, leads to a concise and intuitive expression for the force. The framework also presents interesting mathematical intuition about electromagnetism in general, such as the existence of an 'Energy Symmetry Sphere' which maps the energy density of any field into a sphere in the phase space of reactive energy, helicity and reactive helicity.

Main text: The total optical force (gradient, pressure, and recoil) acting on a dipolar particle with electric polarizability α_e, magnetic polarizability α_m, chiral polarizability α_c, and non-reciprocal polarizability α_t, illuminated by an electromagnetic field (**E**,**H**) is given by a long expression with many terms involving canonical momenta, Poynting vector, spins, energies, helicities, reactive helicities, and other electromagnetic quantities, and is hard to interpret. Here we introduce a framework which recognises that the usual representation of electromagnetic fields as an electric and a magnetic field is only one possible basis, among others. The electromagnetic bispinor $\boldsymbol{\psi}$ can indeed be seen as a combination of an electric and a magnetic field, but also a

combination of parallel and anti-parallel fields, and of right- and left-handed fields:

$$\boldsymbol{\psi} = \underbrace{\frac{1}{2}\sqrt{\varepsilon}\mathbf{E}}_{\mathbf{F}e} \otimes \hat{\mathbf{e}} + \underbrace{\frac{1}{2}\sqrt{\mu}\mathbf{H}}_{\mathbf{F}m} \otimes \hat{\mathbf{m}} = \mathbf{F}_p \otimes \hat{\mathbf{p}} + \mathbf{F}_a \otimes \hat{\mathbf{a}} = \mathbf{F}_R \otimes \hat{\mathbf{R}} + \mathbf{F}_L \otimes \hat{\mathbf{L}}$$

where $\hat{\mathbf{p}},\hat{\mathbf{a}} = (\hat{\mathbf{e}} \pm \hat{\mathbf{m}})/\sqrt{2}$ and $\hat{\mathbf{R}},\hat{\mathbf{L}} = (\hat{\mathbf{e}} \pm i\hat{\mathbf{m}})/\sqrt{2}$ are alternative basis vectors in electric-

magnetic space, and $\mathbf{F}_i$ are linear combinations of **E** and **H**. We can define the total energy density

W_{tot}, canonical momentum $\mathbf{p}_{\text{tot}}$, and spin $\mathbf{S}_{\text{tot}}$ of the electromagnetic field, as a decomposition into the two basis vectors in any basis as follows:

$$W_{\text{tot}} = W_e + W_m = W_p + W_a = W_R + W_L \quad \text{with} \quad W_i = \mathbf{F}_i^* \cdot \mathbf{F}_i,$$
$$\mathbf{S}_{\text{tot}} = \mathbf{S}_e + \mathbf{S}_m = \mathbf{S}_p + \mathbf{S}_a = \mathbf{S}_R + \mathbf{S}_L \quad \text{with} \quad \mathbf{S}_i = \mathcal{I}\{(\mathbf{F}_i^* \times \mathbf{F}_i)/\omega\},$$
$$\mathbf{p}_{\text{tot}} = \mathbf{p}_e + \mathbf{p}_m = \mathbf{p}_p + \mathbf{p}_a = \mathbf{p}_R + \mathbf{p}_L \quad \text{with} \quad \mathbf{p}_i = \mathcal{I}\{(\mathbf{F}_i^* \cdot (\nabla)\mathbf{F}_i)/\omega\}$$

with these definitions, the force on an isotropic dipolar particle acquires a form full of symmetrybased intuitions [*Phys. Rev. Res.* **6**, 023079 (2024) & *ArXiv* 2405.15718 (2024)]:

$$\mathbf{F}_{\text{int}} = \mathscr{R}\{\alpha_{\text{tot}}\}\nabla W_{\text{tot}} + (\sigma_{\text{tot}}^{\text{ext}})\frac{1}{2} c\mathbf{p}_{\text{tot}} - \gamma_0^{\text{sca}} ck\mathbf{S}_{\text{tot}}$$

$$+\mathscr{R}\{\alpha e - \alpha m\}\nabla(We - Wm) + (\sigma e\text{ext} - \sigma m\text{ext})\frac{1}{2} c(\mathbf{p}e - \mathbf{p}m) - \gamma 1\text{sca}ck(\mathbf{S}e - \mathbf{S}m)$$

$$+\mathscr{R}\{\alpha p - \alpha a\}\nabla(Wp - Wa) + (\sigma p\text{ext} - \sigma a\text{ext})\frac{1}{2} c(\mathbf{p}p - \mathbf{p}a) - \gamma 2\text{sca}ck(\mathbf{S}p - \mathbf{S}a)$$

$$+\underbrace{\mathscr{R}\{\alpha_R - \alpha_L\}\nabla(W_R - W_L)}_{\text{gradient force}} + \underbrace{(\sigma_R^{\text{ext}} - \sigma_L^{\text{ext}})\frac{1}{2} c(\mathbf{p}_R - \mathbf{p}_L)}_{\text{pressure force}} - \underbrace{\gamma 3^{\text{sca}} ck(\mathbf{S}R - \mathbf{S}_L)}_{\text{recoil force}}$$

where α_i are polarisabilities, σ_i^{ext} are power extinction cross sections, and γ_i^{sca} are helicity rate scattering cross sections for the various field projections.

PROBING OPTICAL FORCES IN FRONT OF EPSILON-NEAR-ZERO (ENZ) SURFACES

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Abstract

Optical tweezers [1] can be used to measure very tiny forces, in the order of few tens of fN, with a sensitivity one order of magnitude lower [2]. A micrometer or even a nanometer sized particle can be trapped and used as a very sensitive probe of the interaction with a surface, obtaining an all-optical scanning-force microscope [3], called 'photonic force microscope'. Short-range repulsive or attractive forces between the probe and the surface, due to electrostatic and Van der Waals interactions or Casimir effect, or even the limitation of the particle hydrodynamic due to the presence of the wall may be considered for the correct evaluation of the total force on the trapped particle. A careful calibration of the trap is necessary to precisely measure dynamic axial forces and surface force gradients [4, 5]. The optical properties of the surface may be the origin of additional forces. As an example, in front of Ag or Au surfaces the excitation of plasmonic resonances induces light absorption with a consequent heat production, causing convective and thermophoretic forces [6]. Epsilon-near-zero (ENZ) metamaterials are particularly interesting, since in front of them a repulsive force is theoretically expected on a point dipole, reminding the Meissner effect in superconductors [7]. In ENZs, the real part of the permittivity changes sign at a certain frequency, and around this value, several exotic properties have been theoretically proposed and experimentally observed [8]. Following our previous work [9], in this presentation we use photonic force microscopy to measure the forces in front of dielectric, plasmonic and metamaterial surfaces. We use a dielectric bead in liquid environment, trapped by a tightly focused near IR laser beam, as a probe. The trap is calibrated both in bulk and close the surface. The axial position of the trapped particle is perturbed by a second pulsed laser in the visible. We observe that the optomechanics of the particle depends on the type of surface in front of which it is trapped. Moreover, in front of ENZ surface a dependence on the wavelength of the probing beam is observed. The possible origin of these behaviour is also discussed.

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DYNAMICS OF A SINGLE LEVITATING MICROPARTICLE NEAR THE LAMINAR–TURBULENT TRANSITION POINT

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One of the important tasks of modern physics is to develop a deeper understanding of transient physical processes, such as laminar-turbulent transitions, transitions from classical to quantum interpretation, and phase transitions in solids. The main experimental approaches to study such processes are based on the investigation of isolated dynamical systems under strictly controlled conditions. To achieve a high level of isolation and control over a dynamical system from external influence, it is common to use single-particle optomechanical levitation techniques. There are several approaches to controllably confine and isolate a single particle in space, such as magnetic or acoustic traps, optical tweezers, as well as electrodynamic traps. In our research, we focused on the electrodynamic traps since they provide a potential depth sufficient to retain single objects up to microparticles. Meanwhile, an

electrodynamic trap allows precise control of amplitudes, motional frequencies, and spatial position of a levitating particle by varying trapping parameters, mainly the amplitude and frequency of the trap electric field.

In this work, we investigated the dynamics of a single microparticle near its laminarturbulent transition point in a quadrupole electrodynamic trap at atmospheric pressure. The laminar-turbulent transition in the prescribed system occurs due to the nonlinearity of the viscous drag force when a particle moves against air. As test particles, we used glass microspheres with sizes ranging from 5 to 50 μm. The dynamics of microspheres was investigated in a vertically aligned quadrupole electrodynamic trap with a sealed housing. Hence, the vertical orientation of the trap allowed to exclude the gravity impact on the particle radial oscillations. The sealed housing excluded the influence of atmospheric inhomogeneities on the particle dynamics. To trace the levitating microsphere motion, we focused a laser beam onto the particle, which caused timedependent scattering, and measured the transmitted light intensity time series. This allowed us to monitor microparticle oscillation amplitude as well as the power spectral density (PSD) of its oscillations. By gradually changing frequencies and amplitudes of the trap electric field, we were able to investigate a particle motion when approaching the laminar-turbulent transition point. As a result of the work, we have described the behavior of a single levitating particle when it is brought into the nonlinear dynamics regime in a controlled manner. The amplitude of the particle oscillations experiences a nonlinear reduction as the particle approaches the laminarturbulent transition point. At the same time, the PSD of particle oscillations shows an increase in higher frequency bands that indicates an increase in the trapped particle mean velocity. Moreover, we considered the moment of laminar-turbulent transition when the particle trajectory begins to take the form of an extended orbit. This study is an initial step into the physics of laminar-turbulent transient processes with trapped particles. The results of the work would be helpful for precision sensing of small forces and interactions.

This study was supported by the Russian Science Foundation (project 22-42-05002)

QUANTUM NON-GAUSSIAN OPTOMECHANICS

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Abstract

Optomechanics studies coherent interactions between electromagnetic photons and acoustic phonons. Motivated by early needs of interferometric gravitational-wave detectors, it evolved into a mature research field showing unprecedented results, in particular, in quantum sensing and transduction of quantum signals. To date,

experimental optomechanics operates primarily with quantum Gaussian states that can be obtained from thermal states by squeezing and classical driving. Preparation of quantum non-Gaussian states in optomechanics can bring further advantages in fundamental science, quantum sensing and computation.

Here, we outline strategies to achieve quantum non-Gaussian states of optically levitated nanoparticles, quantify the non-Gaussianity, and subsequently verity the nonGaussian character of the prepared state by optical measurement without full tomog-Raphy.

Keywords: quantum optomechanics; quantum information; quantum non-Gaussian states.

ON-THE-FLY PARTICLE METROLOGY IN HOLLOW-CORE PHOTONIC CRYSTAL FIBER

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Abstract

In this talk I will introduce a novel technique for airborne particle metrology based on hollow-core photonic crystal fiber. It relies on optical forces that automatically capture airborne particles in front of the hollow core and propel them into the fibre. The resulting transmission drop, together with the time-of-flight of the particles passing through the fibre, provide unambiguous mapping of particle size and refractive index with high accuracy. The technique can be directly applied to monitor air pollution in the open atmosphere and precise particle characterization in a local environment.

SECTION 4: NANOPHOTONICS FOR OPTOELECTRONICS

ANTI-STOKES PHOTOLUMINESCENCE OF GD2O3:YB NANOPHOSPHORS SYNTHESIZED BY POLYMERSALT METHOD

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Ytterbium-doped nanostructures emitting in the near-infrared (NIR) spectrum range are promising materials for bioapplications. Indeed, the luminescence of ytterbium ions lies in the range of 900–1100 nm, which corresponds to a tissue transparency window. On the other hand, chemical and thermal durability as well as

biocompatibility and paramagnetic properties make gadolinium oxide matrices prospective for biomedicine applications. However, the photoluminescence (PL) properties of gadolinium oxide nanophosphors doped with Yb ions have not been studied comprehensively. Here, we for the first time investigated the Stokes and anti-Stokes PL of Gd2O3:Yb nanophosphors synthesized with the polymer-salt method. The obtained results give a deeper understanding of the mechanism of PL excitation in such materials and open up new horizons for new potential applications.

Gadolinium nitrate hexahydrate, ytterbium nitrate pentahydrate, polyvinylpyrrolidone (PVP), and distilled deionized water were used as precursors for synthesis. Salts and PVP were dissolved in distilled deionized water under intense stirring until full dissolution. The amount of salts and PVP was calculated according to the stoichiometric ratio. Then, the solution was dried in a drying chamber at a temperature of 70 C. After that, the obtained uniform organic-inorganic composition was calcined in an electric muffle furnace at a temperature of 1000 C for 2 hours. The synthesized nanocrystalline powders consist of irregular sheet-like aggregates with a size of 10–100 um. Aggregates consist of nanocrystals with the size about 10–100 nm.

To excite Stokes PL (SPL), we used an unfocused 915 nm semiconductor laser with optical output power up to 20 W. The excitation of anti-Stokes PL (ASPL) was achieved with an unfocused 1035 nm laser with 10 W optical power. To measure PL, we used a PC-controllable portable spectrometer (R-Aero) equipped with an objective lens and fiber optics input. Here, we for the first time show both Stokes and anti-Stokes luminescence spectra of ytterbium-doped gadolinium oxide nanophosphors. SPL spectra are characterized by well-resolved bands at 953, 977, 1005, and 1028 nm and a spectral shoulder at 990 nm. On the other hand, ASPL spectra are characterized by peaks at 927, 953, 971, and 989 nm and shoulders at 1003 nm. We can conclude that the spectral position of observed peaks is almost independent of PL excitation conditions. However, the relative intensity of peaks in Stokes and anti-Stokes modes significantly differs.

Here we for the first time show the possibility to excite both Stokes and anti-Stokes PL on inorganic nanophosphorous doped with Ytterbium ions. The results obtained here are promising for bio-visualisation, photo-induced thermal therapy, and remote temperature control.

This study was supported by the Russian Science Foundation (project 22-42-05002)

LATERAL PHOTOELECTRIC EFFECT IN DIFFERENT HYBRID STRUCTURES

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Abstract

In this work, the lateral photovoltaic effect observed in metal-oxide-semiconductor (MOS) structures formed based on a strongly compensated silicon substrate is discussed. Research shows that the value of lateral photovoltage (LPV) in MOS structures made based on strongly compensated silicon substrates is about 6 times greater than in MOS structures based on initial silicon.

The lateral photoelectric effect (LPE) is considered to be very effective for detecting very small displacements and is one of the most promising phenomena in the creation of position-sensitive detectors. The dependence of LPE on the properties of metal and oxide layers, such as layer thickness and type, has been well studied (Wang., 2010). However, it is interesting that the properties of the semiconductor substrate, such as resistivity, and concentration of charge carriers, have not been sufficiently studied on this effect.

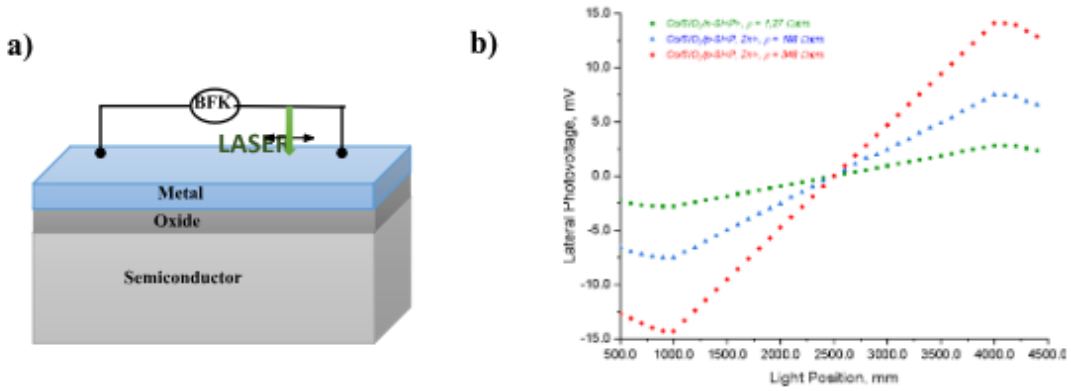

Figure 1. a) Scheme of MOS structures and measurement mechanism of LPE and b) Dependence of the value of LPV observed in MOS structures formed using Co on the based on different silicon substrates on the position of the spot laser.

In this work, it is discussed about the LPE observed in the MOS structures formed based on these substrates when the resistivity of p- and n-type silicon substrates and the type of charge carriers are changed by introducing them by diffusing Zn, and Ni. The resistivity of the n-type monocrystalline silicon substrate doped with phosphorus and its modification by diffusion of Zn is presented in (M.K. Bakhadirkhanov, 1991). The oxide layer was formed by chemical method on the surface of strongly compensated silicon substrates, and the metal layer was formed by electron beam evaporation. According to the results of the research, in MOS structures obtained based on a strongly compensated substrate with Zn atoms, LPV was observed almost 6 times higher than in structures formed based on initial n-type substrates without Zn atoms. Since the oxide layer and the metal layer are the same in all studied MOS structures, the increase in LPV can be explained by the increase in the concentration of electron-hole pairs generated under the influence of light on a strongly compensated silicon substrate. An increase in the electron-hole pair at the point of spot illumination increases the probability of electrons tunneling from silicon

to the metal layer, and the more electrons tunneling into the metal layer, the higher their influence on the Fermi level bending. LPV is equal to the difference of Fermi levels in two contacts.

Keywords: strongly compensated silicon, MOS, Schottky barrier, lateral photovoltaic effect.

PLASMONIC NANORODS FOR ELECTROLUMINESCENCE ENHANCEMENT IN LANTHANIDE-BASED OLED

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Despite the outstanding progress in the field of organic light-emitting diode (OLED) technology, several issues have not been solved yet. One of them is the narrowing of the luminescence spectrum in OLEDs, since they are of great importance for the wearable electronic sensors, including in tissue oximetry, where narrow-band luminescence simplifies the detection and fits into transparency window of biological tissues. The ultimate solution to this problem is the use of lanthanide (Ln) coordination compounds with extremely narrow luminescence bands (<10 nm). Lanthanide-based coordination compounds exhibit narrow emission bands, making them attractive candidates for high color purity OLEDs across the visible and near-infrared spectrum. However, OLEDs employing lanthanide-based emissive layers are hindered by their relatively slow recombination rates (in the range of ~ms). The plasmonic nanoparticles (PNPs) can significantly influence on photo- and electroluminescence parameters, including decreasing the lifetimes of excited triplet states. Here the plasmonic nanorods application for improving the lanthanide-based OLED was studied. Optimal deposition conditions of PNPs were determined. Three highly emissive lanthanide complexes were synthesized, their photoluminescence reached up to 63% in thin film (fig.1d and 1 e).

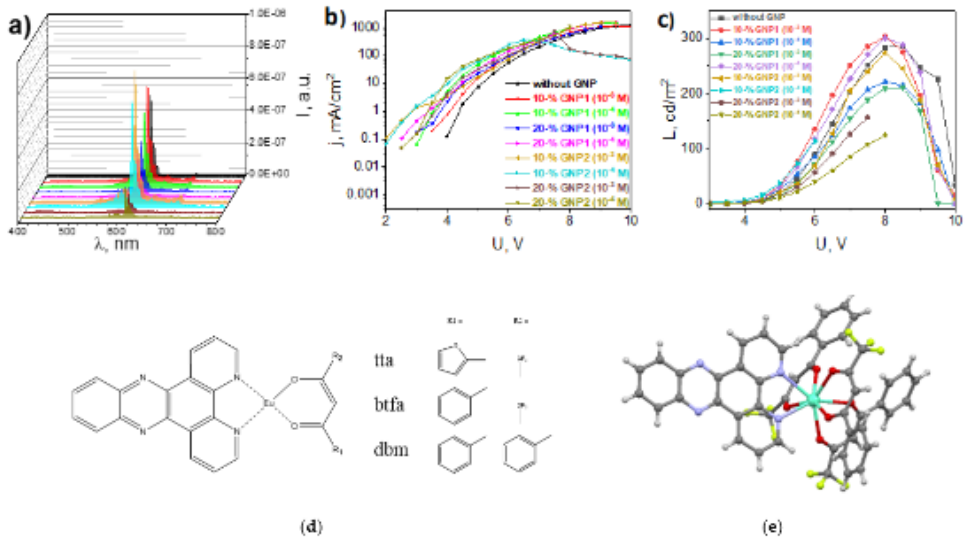

Fig.1 Electroluminescence: (a) of Eu-based OLED spectra at U=5 V, b) J-V curves with NRs, c) L-V curves with NRs;, (d) structures of Ln-based compounds, (e) Single crystal structure

The introduction of gold nanoparticles into the hole-injection layer has shown only slight affect the luminescence intensity, while gold nanorods introduction in the emission layer resulted in up to 50% increase of the OLED performance and up to 40-120% increase of the photoluminescence quantum yield (fig1a-c). Also Parcel factor was also calculated.

Keywords: plasmonic nanoparticles; plasmonic OLED; Parcel factor

P-I-N PEROVSKITE SOLAR CELL'S EFFICIENCY BOOST VIA A POLYELECTROLYTE LAYER

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Perovskite solar cells (PSCs) are attracting matter for scientific community due to their high-power conversion efficiency (PCE), simplicity of device preparation and flexible applications. In this research, we studied how polyethyleneimine (PEI) thin layer with pH = 2 of initial solution placed into a p-i-n type of PSCs improves their photovoltaic properties.

The perovskite solar cell has a following structure: ITO/PTAA/$MAPbI_3$/C_{60}/BCP/Ag. An intermediate layer of polyelectrolyte was added between the ITO and PTAA layers. To deposit of PTAA, PEI and MAPbI3 layers, a spin coating technique was applied. The layers of fullerene, BCP and silver were deposited by a vapor deposition method in an evaporator chamber. To study the

effect of polyelectrolyte on the PV performance of PSCs, we used PEI solutions of three different concentrations.

By applying PEI to the ITO substrate, a record efficiency was 20.029% that has been achieved for PEI with 0.3 mg/ml concentration (compared to 18.13% of PCE for the reference cell). In addition, photovoltaic characteristics such as V_{oc} and J_{sc} have been increased. The average photovoltaic data are presented in Table No. 1.

Table 1. Average photovoltaic data of PSCs

	V_{oc} (V) av.	J_{sc} (mA/cm^2) av.	FF(%) av.	PCE(%) av.
Reference	1.072	22.278	69.538	16.533
PEI (C = 0.3 mg/ml)	1.101	23.159	68.442	17.453
PEI (C = 0.5 mg/ml)	1.083	23.097	68.172	16.977
PEI(C = 1 mg/ml)	1.067	23.759	65.092	16.475

By analyzing the results table, we can conclude that all experimental data indicate that applying of PEI to an ITO electrode is an effective method for improving PV properties of PSCs. However, forming an interlayer of PEI at a concentration of 1 mg/ml and above leads to the opposite effect and does not improve the primary photoelectric properties. In this case, the optimal consentration of PEI was 0.3 mg/ml.

Keywords: solar cell; perovskite; PEI; polyelectrolyte

LASER ASSISTED DESIGN OF NANOSTRUCTURES FOR PEROVSKITE OPTOELECTRONIC DEVICES

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Nowadays various nanostructures are widely used to improve thin-film photovoltaics: from charge migration management between functional layers, band alignment engineering, or charge extraction or they can be utilized to increase light energy distribution to improve generation rate inside thin-film devices[1,2]. There are plenty of various methods of perovskite device nanostructuring performed with chemical engineering of nanoparticles, mechanical nanodeformation of surfaces,

focused ion beam patterning, laser - assisted techniques or combination of these methods.

Besides the high level of nanoengineering, it is important to additionally verify any improvement by multi-physical calculations to estimate the most optimal parameters for nanostructures in a current thin-film device.

In the present research we introduce our recent achievements in laser-assisted synthesis of resonant nanoparticles and nanotexturing of transport layer surfaces aimed to improve light absorption by perovskite thin-films with various chemical composition: CsPbBr3 quantum dots, CsFAMAPb(IBr)3 and MAPbI3.

Our developed Mie-resonant Si nanoparticles with low size distribution (150-170 nm) implemented above SnO2 electron transport layer help to increase perovskite solar cell efficiency from 18.99 % to 20.5 % for n-i-p planar architecture via improved light absorption which confirmed by external photoluminescence quantum yield boost from 1.35% to 2%. These Mie-resonant Si nanoparticles have been synthesized by the laser ablation method in a flow reactor where DI H2O was used as a solution and cooling liquid at the same time. After the separation of Si nanoparticles were separated in a density-gradient system with centrifugation approach and cleaned with DI H2O and EtOH from other impurities [3].

Next, fabrication of nanogratings of TiO2 transport layer was also conducted by single-step direct laser processing. To apply different structures a laser beam focused in 30 μm spot in diameter by F-theta lens scanned the surface line-by-line with the overlap between laser tracks over Y-axis. With the increase of scan speed or decrease of laser intensity the period of gratings dropped precisely from 310 to 290 nm. The gratings were formed due to the interference of the incident wave with the surface plasmon-polariton that gets excited on the air-TiO2 interface under UV laser irradiation. These nanotextures were used after for CsPbBr3 quantum dots and CsFAMAPb(IBr)3 thin film forming as a substrate. According to photoluminescence analysis under different angles, nanotexturing layer play function as a polarizer of light and can also improve charge extraction from CsFAMAPb(IBr)3 perovskite that is a perspective property for further perovskite solar cell development.

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TAILORING ELECTRONIC STRUCTURE OF SWCNTS FOR OPTOELECTRONIC APPLICATIONS

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Single-walled carbon nanotubes (SWCNTs) are among the strongest candidates for the replacement of commonly used transparent and conductive films (TCFs) based on doped metal oxides, such as indium tin oxide. SWCNTs possess unique multifunctional nature, which is based on their outstanding combination of mechanical strength and flexibility, chemical stability, exceptional electrical conductivity and optical properties. However, to fully utilize these properties in modern transparent electrode applications, SWCNT-based TCFs have to demonstrate the optoelectronic performance at the level of high-end ITO-based TCFs.

Using gold chloride as the most effective dopant for the SWCNTs, we improve their optoelectrical characteristics by optimizing the doping solvent and conditions. We examined various solvents to push the optoelectrical performance of the TFCs based on SWCNTs. As a result, we obtained the sheet resistance as low as 40 Ω/□ at the transmittance of 90% (at 550 nm) using 15 mM $HAuCl_4$ solution. This optoelectrical performance is better than that of ITO on PET substrates and satisfy most of the requirements for modern applications and relatively stable without additional protection over two years storing under ambient conditions. We propose a few interesting novel methods for SWCNT doping: aerosol doping and dip-coating methods will be discussed. Also, we propose a novel approach to enhance optoelectronic performance of SWCNTs using ionic liquid. The method provides fine and reversible tuning of optoelectrical properties of SWCNT films over a wide range of parameters. Using imidazolium-based ionic liquid with a wide electrochemical window (BMIM-PF_6), we achieved the film sheet resistance as low as 53 Ω/sq at the 90% transmittance, thereby shifting the SWCNT Fermi level up to 1.4 eV. We believe the results to promote collateral research of adjustable tuning of the electronic structure of carbon nanomaterials as promising components for future electronics, electrochromic devices, and ionotronics.

Although carbon nanotubes have been already demonstrated to be a promising material for bolometric photodetectors, the sensitivity enhancement while maintaining the speed of operation remains a great challenge. Treatment of carbon nanotube films with low frequency oxygen plasma allows fine tuning of electronic properties of the material. The temperature coefficient of resistance of our films is much greater than reported values for pristine carbon nanotubes, up to -2.8% K^{-1} at liquid nitrogen temperature. The bolometer prototypes made of the treated films demonstrate high sensitivity in a wide IR range, short response time, smooth spectral characteristics and low noise level.

And finally, we develop a novel transparent p-type flexible electrode based on SWCNTs combined with poly(3,4-ethylenedioxythiophene) polystyrene sulfonate (PEDOT:PSS), molybdenum oxide and SWCNT fibers. We achieved a record equivalent sheet resistance of 17 Ω/sq with a transmittance of 90% at 550 nm and a high degree of flexibility. We demonstrate that our solar cells based on the proposed electrode and hydrogenated amorphous silicon (a-Si:H) yield an outstanding short-

circuit current density of J_{sc} = 15.03 mA/cm^2 and a record power conversion efficiency of PCE = 8.8% for SWCNTs/a-Si:H hybrid solar cells.

This work was supported by the Russian Science Foundation (Project identifier: 22-13-00436).

DEFECT ASSISTED SUPPRESSION OF AUGER RECOMBINATION IN PEROVSKITE QUANTUM DOTS AND NANOCRYSTALS

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Abstract

Metal halide perovskites, with their exceptional optoelectronic properties, hold great promise for next-generation devices. While they've achieved efficiencies rivaling silicon, GaN, and GaAs in photodiodes, their application in lasers remains challenging. To realize high-performance perovskite lasers, optimizing the density of electronic states at band edges is crucial, along with suppressing non-radiative recombination pathways like deep defects and Auger processes.

The potential of perovskite materials for laser applications has been demonstrated with both single crystals and polycrystalline films within resonators, achieving amplified spontaneous emission (ASE) and laser radiation. However, polycrystalline films exhibit high lasing thresholds (~100-200 μJ/cm²), and direct laser writing for resonator (DLW) fabrication often results in structures that fail to generate laser radiation or ASE. While perovskite nanocrystals, particularly quantum dots, are attractive for their versatility in surface applications, they are generally unsuitable for ASE and laser generation due to detrimental processes like Auger recombination and exciton-exciton annihilation, which hinder population inversion.

This presentation focuses on overcoming these limitations by employing wet chemistry methods and femtosecond laser processing to introduce emitting defects within perovskite nanocrystal. These techniques facilitate population inversion, enabling the generation of ASE (with thresholds below 50 μJ/cm2) and laser radiation (when forming a resonator using the DLW). This approach presents a promising pathway for harnessing the unique properties of perovskite nanocrystals for efficient laser applications.

STRATEGIES FOR ACHIEVING HIGH-PERFORMANCE ORGANOMETAL HALIDE PEROVSKITE SOLAR CELLS

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Abstract

Organometal halide perovskite materials have attracted increasing attention due to their inherent excellent material properties, such as high absorption coefficients, tunable bandgaps, low exciton binding energies, long carrier diffusion lengths, and high charge mobilities. They are particularly promising for photovoltaic applications. Perovskite solar cells (PSCs) are one of the most prospective emerging photovoltaic technologies, with the most rapid improvement in energy conversion efficiency compared to other types of photovoltaics. Recently, single-junction PSCs and monolithic perovskite/silicon tandem devices have achieved power conversion efficiency records of 26.7% and 33.9%, respectively, which are highly comparable to commercialized photovoltaic technologies. However, the stability and lifetime of PSCs need to be significantly enhanced to allow these devices to operate for years (e.g. 25 years for silicon solar cells) under temperature cycling and full exposure to sunlight in the atmospheric environment. Highly reproducible large-scale manufacturing is another concern for future commercialization. Nowadays, increasing efforts from scientists and engineers have been devoted to the research of perovskite materials and solar cells, including material growth methods, crystallization dynamics, defect passivation, carrier transport properties, and interface engineering, to ensure high energy conversion efficiency and good stability of PSCs. In this talk, some effective strategies such as reproducible perovskite growth methods, passivation treatments, and interface engineering will be discussed. The experimental results and findings will provide guidance for achieving high-performance PSC fabrication in the community.

Biography:

Dr. Ng is an Associate professor in the Department of Electrical and Computer Engineering at Nazarbayev University (NU), Kazakhstan. She obtained her bachelor's degree from the City University of Hong Kong in 2009 and her Ph.D. from the University of Hong Kong in 2014. She was awarded a Postdoctoral Fellowship from Hong Kong Polytechnic University. In 2018, she joined NU as an

Assistant professor. Dr. Ng specializes in engineering advanced materials for energy devices. Currently, she leads a research group at NU focused on developing photovoltaics for building-integrated and indoor applications. To date, she has authored over 90 publications cited more than 3,000 times, comprising review articles, book chapters, and patents related to photovoltaic material and device engineering for next-generation energy technologies.

ROLE OF ENGINEERED INTERLAYERS-BASED DIRECT-GROWTH GRAPHENE, METAL–INSULATOR–SEMICONDUCTOR (MIS)-JUNCTION TYPE SOLAR CELL

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Abstract

Although, silicon-based solar cells are currently dominating the market and almost reached close to their theoretical limits. Therefore, new materials, especially 2D (Graphene), can be a breakthrough. Over recent years, graphene-silicon Schottky junction solar cells have received growing interest. To be precise, the metal–insulator–semiconductor (MIS)-type solar cells are one of the kinds that have an essential advantage of the cost as compared to the p-n/ Schottky junction solar cells. In fact, the high-tech progress in graphene solar cells created on the MIS junction is currently facing serious encounters, including aging, high surface recombination at the interface level, and numerous surface defects. To resolve these critical issues, a unique, costeffective method is developed herein for the interfacial single-component passivation by using high k dielectric Al_2O_3 with NH_3, H_2O_2, and co-passivation with NH_3 and H_2O_2. The sandwich layer between the silicon and the directly-grown graphene operates as an active electron-blocking layer, thus leading to curtailing surface recombination. Additionally, the NH_3-H_2O_2 co-passivated Al_2O_3 accomplishes a good platform for graphene's growth and the solar cell's performance. Thus the fabricated graphene-silicon (Gr/Si) MIS solar cells with an NH_3-H_2O_2 co-passivated Al_2O_3 interfacial layer achieve an efficiency of 9.49%, which is a dominant enhancement over that of the Gr/Si Schottky junction solar cell without sandwich layer (i.e., 3.19%). These results also provide evidence with the control of oxygen-related defects containing non-lattice oxygen in the Al_2O_3 dielectric layer significantly controls the charge transfer resistance and surface recombination processes. This work can be viewed as an approach for interface engineering by utilizing the co-passivation of Al_2O_3 for optoelectronic devices.

Keywords: Direct growth graphene (PECVD); Atomic layer deposition (ALD); Co-passivated Al_2O_3 sandwich layer; Solar cell; Passivation.

NANOPHOTONICS FOR PEROVSKITE OPTOELECTRONICS

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Abstract

Nanophotonics and meta-optics based on optically resonant all-dielectric structures is a rapidly developing research area driven by its potential applications for low-loss efficient metadevices. Many materials were applied to create advanced all-dielectric nanophotonic designs, including Si, GaAs, GaP, TiO2, and many others. Recently, the study of halide perovskites has attracted enormous attention due to their exceptional optical and electrical properties. As a result, this family of materials can also provide a prospective platform for modern all-dielectric nanophotonics and meta-optics. Moreover, previous concepts of all-dielectric materials with conventional semiconductor materials can be applied for improvement of perovskite optoelectronic devices.

VISUALIZATION OF CHARGE-CARRIER DYNAMICS IN CSPBBR3 PEROVSKITES

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Abstract

All optoelectronic devices work at certain excitation conditions that can be unified via related charge-carrier density. Typically, photodiodes need the generated charge-carrier excess to be small ($<10^{15}$ cm^{-3}), light-emitting diodes and solar cells need moderate charge carrier densities ($\approx10^{16}$ cm^{-3}), and lasers works at extreme conditions ($>10^{19}cm^{-3}$). The selection of proper materials is often not straightforward especially for laser applications and usually based on photoluminescence quantum yield (PLQY) values. But for better understanding of the material applicability for certain application we have to know exact parameter of the recombination processes that lie behind the charge carrier dynamics.

The investigation of charge carrier dynamics is the one of the most complicated and laborintensive approaches. The use of typical approach such as measurement of time-resolved photoluminescence (TRPL) or transient absorption leads to unnecessary long times for the reconstruction of total recombination rates and even longer times for the optimization of charge-carrier dynamics for certain application

thus making reasonable following seek for simple and more visual approaches of charge-carrier dynamics qualitative estimation.

In present work we demonstrate simple approach based on the best features of the PLQY and TRPL techniques for assessment of charge-carrier dynamics for selection of perovskite material for laser development.

NUMERICAL DIFFERENTIATION EFFECT ON THE CONVERGING OF THE DRIFT-DIFFUSION PROBLEM USING THE FINITE DIFFERENCE METHOD

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Abstract

Drift-diffusion models play a pivotal role in understanding and optimizing the performance of optoelectronic devices, such as solar cells, light-emitting diodes (LEDs), and photodetectors. These models are governed by a set of highly non-linear coupled partial differential equations (PDEs), necessitating robust numerical methods for their solution. Traditionally, the Newton method has been employed to tackle these equations; however, its effectiveness diminishes in scenarios characterized by extreme nonlinearity. In such cases, damping strategies are often introduced to enhance convergence, albeit at the cost of increased computational complexity and time. In this paper, we investigate a new approach to solve the drift-diffusion problem in a metal-semiconductor-metal structure. By applying numerical differentiation to the discrete continuity equation, we introduce a degree of freedom that facilitates convergence of the solver without resorting to damping techniques. Our findings demonstrate that this method accelerates the convergence process and maintains accuracy in the simulation. We provide a detailed analysis of the numerical implementation and validate our approach with commercial software and show that our numerical approach is found to be more time efficient. Through this study, we aim to contribute to the ongoing efforts in enhancing the reliability and efficiency of numerical simulations in semiconductor physics.

SECTION 5 : NOVEL LASERS: SOLID STATE, SEMICONDUCTOR AND FIBER LASERS

COMB GENERATION IN FIBER LASER WITH NESTED RING MICROCAVITY

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The optical comb generator is a device that produces a broad spectrum made up of narrow, evenly spaced lines, and it has numerous applications such as optical clocks, coherent communication systems, optical coherence tomography, and dual comb spectroscopy. Traditionally, mode-locked lasers serve as the source for these combs, with the spacing between the comb lines (FSR) determined by the resonator length, typically reaching several tens of MHz. An alternative method for generating combs involves using integrated microring resonators that possess a high quality factor exceeding 10^6. In this setup, the microring is excited by continuous wave (CW) light at one of its resonances, leading to comb formation through a four-wave mixing process. Although this type of comb can provide FSR values ranging from 50 GHz to 1 THz, it faces challenges such as low efficiency in converting CW light to the comb, the need for costly tunable lasers, and stability issues [1].

To address these challenges, one proposed the solution that involves integrating a microcavity into the fiber laser resonator [2]. By combining the characteristics of fiber lasers with microcavities, researchers have successfully demonstrated soliton combs with a spectral width of 150 nm and a pump-to-comb conversion efficiency of 75%. In this work, the authors employed a four-port ring resonator situated within the fiber laser's ring cavity. The output from the fiber laser was directed through one bus waveguide to the microcavity and returned via another drop-port waveguide.

We propose a significant simplification of this design by using a two-port integrated chip with a microcavity that functions as a reflective mirror within the fiber laser resonator. In this configuration, the laser resonator is formed by a gold mirror on one side and a microring resonator on the opposite side. Within the microring, the directly propagating comb generates a counter-propagating comb due to Rayleigh scattering, which then returns to the laser cavity, creating optical feedback. This method allows for robust self-starting generation of soliton combs with a spectral width exceeding 400 nm, significantly surpassing the erbium amplification window. We show that is approach is also applicable for a crystaline ring resonators integrated into cavity with a tappered fiber.

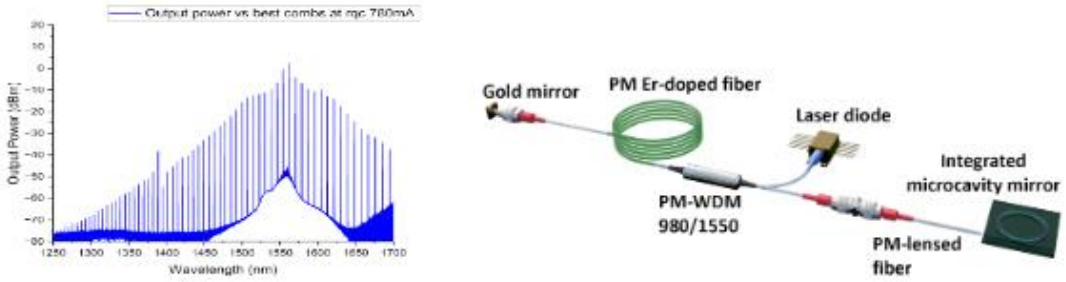

Fig. 1. (a) Scheme of the fiber laser with microring cavity (not in scale); (b) Spectrum of the optical comb on the output of laser.

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DOUBLE HARMONIC MODE-LOCKING IN SOLITON FIBER RING LASERS

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Passive harmonic mode-locking (HML) of a soliton fiber laser locked to optoacoustic resonance (OAR) in the cavity fiber ensures high-frequency laser operation, high pulse stability, and low timing jitter [1]. However, the pulse repetition rate (PRR) of such lasers is limited to ~1 GHz for standard fibers due to the available acoustic modes [2]. Here, we address these limitations by transforming the laser into an optomechanical oscillator, where laser light and the fiber's acoustic vibrations are strongly coupled. This not only increases PRR but also introduces a new laser operation regime called Double Harmonic Mode Locking (DHML) [3].

In our experiment, the laser adjusted to operate at 15-th harmonic of its cavity matching the OAR ($TR_{2,9}$ GAWBS mode) at ~200 MHz (Fig.1) could be driven to operate at a high harmonic of this particular OAR frequency, thus reaching ~12GHz (Fig.2, a). This breakthrough is made possible through controllable optoacoustic interactions in a short, 50 cm segment of unjacketed cavity fiber implemented through its stretching (Fig.1). We propose that the precise alignment of the laser cavity harmonic and fiber acoustic modes leads to a longlived narrow-band acoustic

vibration. This vibration sets the pace for pulses circulating in the cavity by suppressing modes that do not conform to the Vernier principle. The surviving modes, equally spaced by the OAR frequency, in cooperation with the gain depletion and recovery mechanism, facilitate the formation of stable high-frequency pulse sequences, enabling DHML. In this process, the OAR rather than the laser cavity defines the elementary step for laser PRR tuning (Fig.2, a). Throughout the entire PRR tuning range, the soliton fiber laser exhibits enhanced stability, demonstrating a better than ~40 dB supermode suppression levels (SSL), improved pulse timing jitter and relative intensity noise (RIN) (Fig.2, b-d).

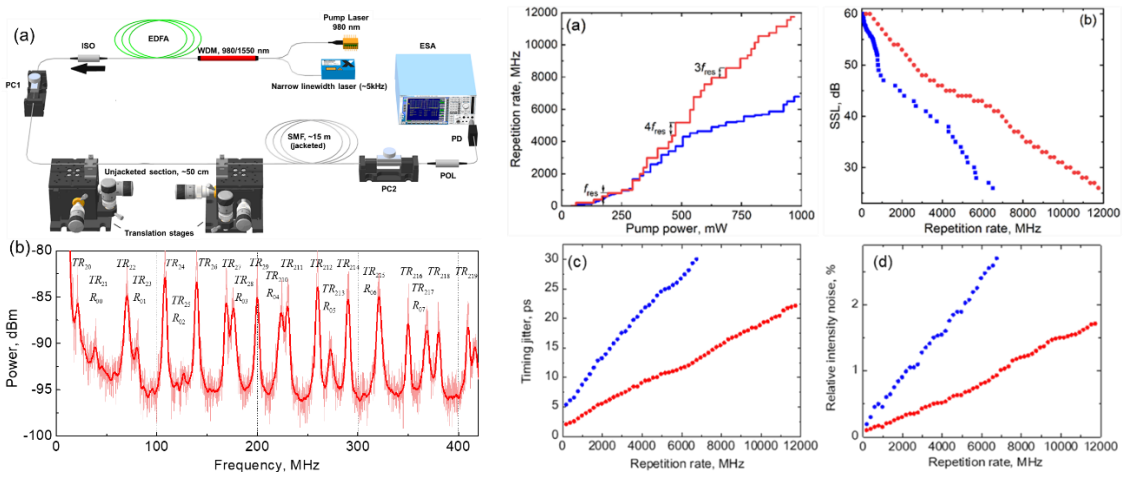

Fig. 1. Experimental setup of the soliton NPE laser (a); Guided Fig. 2. The PRR as a function of the increasing pump power (a) acoustic wave Brillouin scattering (GAWBS) spectra recorded and the SSL (b), timing jitter (c) and RIN (d) as functions of the with 1-km G.652.D fiber (Fujikura) (b). PRR measured in HML (blue) and DHML (red) regimes. The work was funded by the Russian Science Foundation (23-79-30017).

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WIDELY-TUNABLE VISIBLE LIGHT GENERATION IN PERIODICALLY-POLED NONLINEAR CRYSTAL WAVEGUIDES

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A remarkable number of cutting-edge applications, such as photomedicine, biophotonics and microscopy, to name a few, require compact continuous-wave and ultrashort-pulse laser sources that are widely-tunable across the entire visible spectral region. However, the visible region of the spectrum remains difficult to access with conventional tunable laser sources.

One particularly promising approach to develop a compact, efficient and widely-tunable visible laser source is the utilisation of second harmonic generation (SHG) in a periodicallypoled nonlinear crystal containing a waveguide. Such a waveguide not only allows highly efficient frequency conversion even at low pump power levels but also offers an order-ofmagnitude increase in the wavelength range for efficient SHG by using the multi-mode matching approach, which utilises a significant difference in the effective refractive indices of the high-order and low-order modes in multimode waveguides. This concept enables one to shift the difference between the effective refractive indices of the fundamental and SHG waves to match the period of poling in a very wide spectral range. In this way, a tunable visible laser source can be realised using a single laser and a single nonlinear crystal waveguide. In this respect, semiconductor lasers with their small size, high efficiency, reliability, low-cost and wide spectral range coverage are very promising for the realisation of compact tunable visible lasers. InAs/GaAs quantum-dot external-cavity diode lasers are of particular interest in this context due to the unique features of quantum dots.

In this talk, I report on the progress and some of our recent results in the development of novel, compact, widely-tunable continuous-wave and ultrashort-pulse visible laser sources based on SHG in periodically-poled nonlinear crystal waveguides pumped by quantum-dot laser diodes. This includes a discussion on the recent achievements in the development of widely-tunable InAs/GaAs quantum-dot external-cavity diode lasers and an overview of the advances made with SHG in periodically-poled potassium titanyl phosphate waveguides pumped by these lasers and utilising the multi-mode matching technique.

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RECONFIGURABLE OPTICAL DEVICES BASED ON PHASE-CHANGE MATERIALS

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Phase-change materials (PCMs) have attracted considerable attention in recent decades. One of the prominent features of PCM is that their phase transition can be induced by optical stimuli, which opens the opportunity for all-optical modulation and local in-situ engineering of the optical response. Their ability to quickly and reversibly switch between crystalline and amorphous phases, which are characterized by significant difference in electrical conductivity, refractive indices, extinction coefficients and other physical parameters [1], made it possible to implement various reconfigurable devices and applications.

Here, we report the results of fabrication and investigation of fully optical reconfigurable on-chip nanophotonic devices, including Mach-Zehnder interferometers, balance splitters and O-ring resonators. The e-beam lithography and lift-off process were used to fabricate PCM cells atop silicon nitride rib waveguides. Each sample included devices with different lengths of PCM thin coatings along the waveguide, which varied from 0.1 to 20 μm. By varying the pump pulse power, we were able to reversibly switch the fabricated devices. The 9 nonvolatile different levels (3 bits) for the nanophotonic samples based on the PCM thin films were demonstrated [2].

Next we considered the fabrication PCM thin films with a spatial pattern of amorphous and crystalline states written by using the direct laser writing technique. We propose a method to generate a vortex beam with post fabrication variable topological charge using inherently two-dimensional structures based on phase change materials. We verify that the mechanical rotation of the films leads to a

change in the topological charge of the output beam. We demonstrate an erase-and-rewrite modification of the pattern, that results in the change of the topological charge of the generated beam, when optical elements are fixed, i.e. no mechanical displacement takes place [3].

Also we demonstrate the direct laser patterning of phase change material films that leads to formation of laser-induced periodic surface structures (LIPSS). Due to the unique properties of PCM such fabricated structures provide strong spatial modulation of the optical properties. In stark contrast to LIPSS in standard materials, phase change LIPSS can be reverted to the original state using the same laser emission, which greatly expands the scope of their applications. We demonstrate reversible and re-writable formation of phase change LIPSS on different substrates and highlight possible application for active elements in integrated photonic circuits [4].

The fabrication and investigation of reconfigurable on-chip nanophotonic devices was supported by the Russian Science Foundation (№ 20-79-10322). The laser modification was supported by the Russian Science Foundation (№ 23-79-10309). The PCM were fabricated with contributions from the research laboratory "Materials and devices for active photonics".

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ACOUSTIC WAVE DRIVEN LIGHT AMPLIFIER

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Abstract

Usually, in Brillouin and Raman lasers, light is amplified with an input pump light which excites acoustic and molecular oscillations in the medium. However, can medium oscillations alone amplify light? Here, we demonstrate that modulating an optical resonator by a traveling wave at a frequency much smaller than the light frequency can result in dramatically large narrow-band light amplification. Our calculations show that the proposed light amplifier can be realized in a lithium niobate racetrack resonator with millimeter-scale perimeter, modulated by a surface acoustic wave with a surprisingly small practically achievable amplitude.

SECTION 6: 2D MATERIALS

REDUCTION OF GRAPHENE OXIDE FILMS USING SUPERCRITICAL FLUIDS

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The use of 2D nanomaterials as a base for nanocomposites can lead to the production of conductive thin films with sufficient flexibility and strength [1]. The most perspective 2D materials are materials of the graphene family (for example, graphene oxide or reduced graphene oxide). Graphene oxide (GO) is a sp^2/sp^3-hybridized two-dimensional lattice of carbon atoms, on the surface of which there are various oxygen-containing functional groups [2]. Unlike graphene, the GO structure does not have an extended π-bond system, which determines its dielectric properties. When graphene oxide is treated with strong reducing agents or heated to sufficiently high temperatures, oxygen-containing groups are removed and reduced graphene oxide (RGO) is obtained. RGO, in turn, is a material identical in structure and properties to multilayer graphene. Reduced graphene oxide and materials based on it can be semiconductors and conductors.

Isopropyl alcohol under supercritical conditions (SCI) is capable of transferring 2 mobile H atoms to a large number of substrates, including GO, which makes it promising for the reduction of surface functional oxygen-containing groups in GO structure [3]. In this work, it is shown that treatment of graphene oxide films in supercritical fluids based on water, acetone or isopropyl alcohol, does not destroyed the structure of the thin film and leads to the production of RGO. Also, it is shown that during the reduction, the surface of film is graphenized, and resulting materials reveal new properties. Film samples were characterized using CHNS analysis, XRD, FTIR and Raman spectroscopy, and TEM. The study of the films reduced in SCI showed that the temperature dependence corresponds to a narrow-gap semiconductor, and the specific resistance carried out by the 4-electrode method was ~ 3 Ohm·m/mm^2 at room temperature.

The developed method is preparative and allows for the simultaneous reduction of thin films based on graphene oxide and metal salts in order to prepare a composite

material based on reduced graphene oxide with metal nanoparticles on its surface. The properties of the resulting composites directly depend on the introduced into GO metal compounds and the nanoparticles type obtained on the RGO surface.

Keywords: graphene oxide, reduced graphene oxide, supercritical fluid.

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GRAPHENE-BASED ROOM-TEMPERATURE IR DETECTOR FOR PHONONENHANCED NEAR-FIELD MOLECULAR SENSING

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Abstract

Mid-infrared (mid-IR) spectroscopy is a powerful analytical tool for the label-free and nondestructive identification of materials through their unique vibrational fingerprints. However, conventional mid-IR spectroscopy faces challenges in

detecting minute amounts of molecules due to small infrared extinction cross-sections. Surface-enhanced infrared absorption (SEIRA) spectroscopy has emerged as a solution, exploiting strong local infrared field enhancement near specially designed surfaces or nanostructures to improve detection sensitivity. Phonon polaritons in polar materials, particularly in two-dimensional (2D) materials, offer unique opportunities for advancing SEIRA spectroscopy due to their strong field enhancement and high quality factors. Among various 2D materials, hexagonal boron nitride (h-BN) has garnered significant attention due to its ability to support hyperbolic phonon polaritons (HPhPs), which have already demonstrated potential in SEIRA spectroscopy, enabling the detection of nanometer-thin molecular layers. In this study, we demonstrate an ultra-compact on-chip SEIRA platform using a graphene-based detector. This detector consists of an h-BN/graphene/h-BN heterostructure on a metal split gate, creating a p-n junction in the graphene. By depositing a thin layer of organic molecules directly on top of this heterostructure, we exploit the strong field confinement of HPhPs to enhance both molecular vibrational absorption and photocurrent generation at the p-n junction. As a result, the photocurrent encodes the strongly enhanced molecular vibrational fingerprint of the layer compared to conventional far-field transmission experiments, especially for thin molecular layers. Furthermore, numerical simulations suggest that this method has the potential to detect subwavelength-scale areas with significantly increased sensitivity compared to diffractionlimited techniques. Our on-chip phononic SEIRA approach opens exciting possibilities for enhanced molecular sensing at the nanoscale, potentially paving the way for more sensitive and compact molecular vibration detection platforms in the mid-IR frequency range.

Keywords: SEIRA, phonon polaritons, graphene-based detector, mid-IR spectroscopy

TWISTED POLARITONIC CRYSTALS IN THIN VAN DER WAALS SLABS

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Polaritons – hybrid light–mater excitations – are very appealing for the confinement of light at the nanoscale. Recently, a particular interest has been focused on thin anisotropic slabs of van der Waals (vdW) materials supporting polaritons with

hyperbolic dispersion, which can exhibit ultrahigh momenta and strongly directional in-plane propagation and thus promise novel nano-optical applications in a planar geometry. However, the excitation and manipulation of in-plane hyperbolic polaritons have not yet been well studied and understood. Here, twisted polaritonic crystals (PCs) are introduced – lattices with periods comparable to the polaritons wavelength rotated with respect to the natural vdW crystal axes – to efficiently excite and control in-plane hyperbolic polaritons. A general analytical theory valid for an arbitrary PC made in a thin biaxial slab is developed and the excitation of Bragg resonances tunable by the twisting angle is demonstrated. The findings open novel avenues for both fundamental studies of PCs in vdW crystals and the development of midinfrared sensing and photodetection applications.

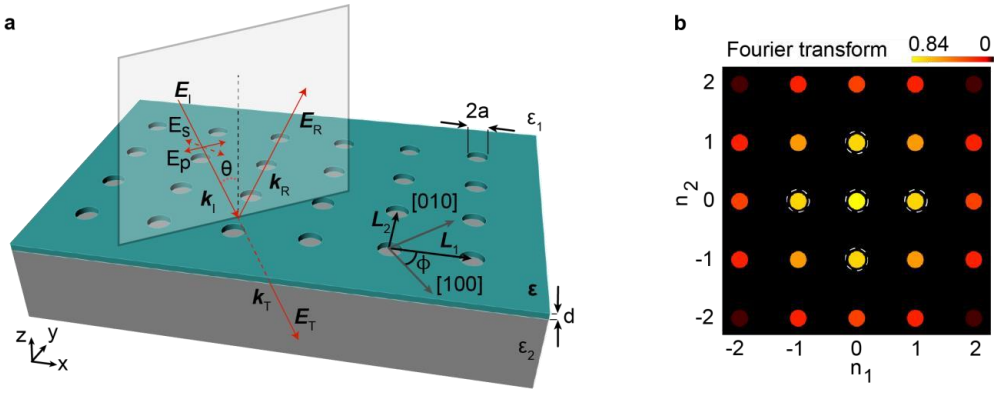

Fig.1 An example of a twisted PC. a, Schematic of a square HA in a biaxial slab with thickness d, permittivity tensor $\hat{\varepsilon}$, and circular holes with radius a. The HA is defined by its vector basis L_1 and L_2 (in the case shown their lengths are equal $L_1 = L_2 = L$). The HA is twisted at an angle ϕ with respect to the crystallographic axes in the biaxial slab. The HA is illuminated by an incident plane wave at an angle θ with respect to the z axis. b, Absolute value of the Fourier coefficients of the periodic HA (color plot). The dashed white circles highlight the Fourier harmonics considered in the studied harmonic lattices.

In the last decade, polaritons in 2D and van der Waals (vdW) materials[1, 2] have emerged as a promising means to manipulate light at the nanoscale[3]. In particular, some natural uniaxial and biaxial polar crystals (such as, for example, h-BN[4], MoO_3[5-7], V_2O_5[8], or calcite[9]) support phonon polaritons – lattice vibrations coupled to electromagnetic fields – (PhPs) with directional out-of-plane or in-plane propagation. In-plane anisotropic PhPs are particularly attractive because they manifest intriguing optical phenomena, such as light canalization[10, 11], topological transitions[12] or negative refraction[13], among others, which are directly accessible in real space by near-field nanoimaging techniques. PCs based on anisotropic vdW materials (such as h-BN) have shown interesting possibilities for enhancing light– matter interactions[14-16] and topological photonics[17]. On the other hand, PCs in inplane anisotropic materials, where polariton manipulation can exhibit more degrees of freedom, have not been addressed until now. Here we introduce the concept of PCs created in biaxial crystal slabs (supporting in-plane anisotropic polaritons), with the lattice vectors twisted with respect to the optical axes of the crystal. We demonstrate that the

polaritonic Bragg resonances arising in these PCs can be efficiently tuned, offering a new way to control light at deep subwavelength scales. We develop a simple theoretical approach to treat the diffraction of light by these twisted PCs and demonstrate its validity for realistic structures (e.g., hole arrays) by comparing analytical results with full-wave electromagnetic simulations.

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NEXT-GENERATION ULTRATHIN METAL FILMS: ENHANCED OPTICAL AND ELECTRONIC PROPERTIES ON SMOOTH COPPER SURFACES

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Abstract

The modern development of compact wearable electronic devices requires a significant reduction in the size of key components, including optoelectronic and photonic systems [1, 2]. Additionally, the development of new types of devices demands an expansion of the functional capabilities of the materials from which these devices are made. In this context, ultrathin metal films, especially those based on gold, have gained critical importance for various applications due to their high optical transparency, conductivity, and mechanical stability [3, 4].

The main result of this study is the development of a method for obtaining quasi-two-dimensional ultrathin gold films on ultrasmooth copper substrates using a graphene-inspired fabrication technique [5]. This method ensures high morphological uniformity and continuity of the produced films, which demonstrate unique optical and mechanical properties. The films, with a thickness of up to 3 nm, exhibit high optical transparency and flexibility, making them suitable for use in flexible transparent electrodes and plasmonic devices. The method involves the production of ultrasmooth copper foils using a template-stripping technique, which allows for achieving high surface quality and improved gold film growth.

The results are compared with previously obtained data on the growth of ultrathin gold films on transition metal dichalcogenides (such as MoS2, WS2, TiS2, and MoSe2). While the use of TMD materials as substrates also contributed to the formation of continuous and smooth films, the new method based on ultrasmooth copper substrates demonstrated higher uniformity and film quality, making it more promising for large-scale production. Thus, the proposed approach allows for superior optical and electronic characteristics compared to traditional methods, offering new opportunities for use in transparent electronics and epidermal devices.

Keywords: Ultrathin gold films, optoelectronic systems, transparent electrodes, graphene-inspired fabrication, plasmonic devices.

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THE EFFECTS OF CARBON NANOMATERIALS AS CONDUCTIVE ADDITIVES IN EDLC-BASED ENERGY STORAGE SYSTEMS

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Abstract

Effects of various carbon nanomaterials using as conductive additives (5 wt%) in activated carbon-based electrodes for electrical double layer capacitors (EDLCs) were investigated. A variety of carbon nanomaterials including carbon black (CB), single-walled carbon nanotubes (SWCNT), graphene nanoplatelets (GNP), fullerenes (C60), and activated carbon nanofibers (ACNF) are considered in this work as they provide a diverse combination of intrinsic properties such as specific surface area, conductivity, micro-mesoporous structures, and geometry of nanomaterials. The results show that each carbon additive has its own strengths and limitations for different performance parameters considered. A reduction in capacitance at high

current densities and material degradation during long-term cycling are observed for CB samples, which could be attributed to the high dispersibility of CB causing limited interparticle voids and thus increasing diffusion resistance. In contrast, the use of ACNFs significantly reduces the diffusion resistance and improves the cyclic stability compared with CB based samples due to the advantages of larger specific surface area and superior micro-mesoporous structures of ACNFs. In particular, EDLCs with ACNFs demonstrate an increase in specific capacitance and energy density by 99 % and 76 %, respectively compared to CB based EDLCs at a current density of 20 A/g [1].

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AGRESSIV O‘SPIRINLAR PSIXOLOGIYASI

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Annotatsiya. Ushbu maqolada agressiv o'spirinlik davrining psixologik xususiyatlari borasida, shuningdek, ilk o'spirinlar aql-idrokining xususiyatlari haqida atroflicha ma’lumotlar berib o‘tilgan.

Kalit so‘zlar. Agressiya, o'spirin, aql-zakovat, ma'naviyat, psixologik qiyofa, samimiylik, tashabbuskorlik, faollik, mehnatsevarlik, optimizm.

Аннотация. В этой статье подробно рассматриваются психологические особенности агрессивного подросткового возраста, а также особенности интеллекта ранних подростков.

Ключевые слова. Агрессия, подросток, интеллект, духовность, психологический имидж, искренность, инициатива, активность, трудолюбие, оптимизм.

Annotation. This article provides detailed information about the psychological characteristics of aggressive adolescence, as well as about the features of the intelligence of early adolescents.

Key words. Aggression, teenager, intelligence, spirituality, psychological image, sincerity, initiative, activity, hard work, optimism.

Kirish. Bugungi kunda shiddat bilan o‘zgarib borayotgan hayot oldimizga qo‘yayotgan bir-biridan murakkab va muhim masalalarni hal qilish haqida o‘ylar ekanmiz, uning yechimini aynan ta'lim va tarbiya bilan yoshlarni shakllantirishimiz kerak ekanligiga amin bo‘lamiz. O‘smirlardagi agressiya nafaqat pedagoglar va psixologlar, balki butun bir jamiyat uchun birmuncha o‘tkir muammolardan biri hisoblanadi. Inson hayotining ijtimoiy-iqtisodiy sharoitlari, hayotning yuqori ritmi, shaharlarning zichligi, ortib borayotgan axborot vositalari insonlar psixik holatiga o‘z ta'sirini ko‘rsatmoqda. O‘smirlar jinoyatchiligining o‘sib borayotgan oqimi va axloqning tajovuzkor shakliga moyil bolalar sonining ortishi bunday xavfli ko‘rinishlarni uyg'otuvchi psixologik sharoitni o‘rganishni birinchi darajali ahamiyatga ega bo‘lgan vazifa sifatida ilgari surdi. Agressiya atamasi lotin tilidan olingan bo‘lib, ‘‘aggredi’’ –‘‘tajovuz qilmoq’’ ma’nosini anglatadi. Psixologiyada ‘‘agressiya’’ atamasiga nisbatan turli yondashuvlar mavjud bo‘lib, X.Delgado, A.A.Bass, L.M.Semenyuk, G.Parens, A.Bandura, R.Uolters, Yu.Mojginskiylar tomonidan agressiya salbiy baholanadi. Shu bilan bir qatorda agressiyaga nisbatan ijobiy yondashuvlar ham mavjuddir. Jumladan, L.Bender agressiyani insonning o‘z-o‘zini namoyon qilishga intilishidir, deb ta’kidlaydi. Keyingi paytlarda yoshlar o‘rtasida tajovuzkorlik, agressiv xulq uchrab turibdi. Sababi yoshlarimiz telefon, ijtimoiy tarmoqlar orqali turli mentalitetimizga, milliy qadriyatlarimizga xos bo‘lmagan videoroliklar, materiallar, voqea hodisalarga guvoh bo‘lmoqdalar. Kattalar

ularning xattiharakatlarini nazorat qila olmayaptilar. O‘smirlik davri olimlar tomonidan eng qiyin davr, inqiroz davri, o‘tish davri deb e’tirof etiladi. Haqiqatdan bu davrga kiradigan bolalarga tarbiya-ta’lim berish ham qiyin bo‘lib qoladi. Ular qaysar, o‘zini boshqalar tan olishlarini xoxlaydigan, romantik bo‘lib qoladilar. Shuning uchun o‘smirlarni vaqtincha qo‘llab-quvvatlash juda muhimdir, ammo vaqt o‘tishi bilan uning fikrlari bilan yolg‘iz qolishiga imkon berilishi kerak. Agressiv xulq-shaxsning ma’naviy buzuqlikka asoslangan, boshqarishning ichki dunyosiga ochiqdan-ochiq salbiy ta’sir o‘tkazib, tajovuz qilib, uni izdan chiqarishga qaratilgan g‘ayriinsoniy xususiyat. Agressiv xulqning shakllanishi, kuchayishi va namoyon bo‘lishi ko‘pincha ijtimoiy muhit bilan bog‘liq holda yuz beradi. Shaxsning o‘ziga qaratilgan tajovuzkorlik “autoagressiya” (bunday holat shaxsdagi patologik o‘zgarishlarning ko‘rsatkichi bo‘lib xizmat qiladi) deb ataladi. O‘z joniga qasd qilish, o‘ziga tan jarohati yetkazish autoagressiyaning ko‘rinishlaridir. Jaholatga botgan, johillik va zo‘ravonlikni maqsadga erishishning asosiy va ustuvor vositasi deb biladigan shaxslarda agressiv xulq kuchli bo‘ladi.

Shaxsga doir individual taraqqiyot samarasini hamda shaxslararo munosabatlarni belgilovchi xulq-atvor va xatti-harakatlarning eng muhim xususiyatlaridan biri agressivlikdir. Agressiya – bu odamlar, odamlar guruhiga nisbatan jismoniy va ruhiy zarar yetkazishga qaratilgan individual yoki jamoaviy xatti-harakatlar majmui hisoblanadi. Bugun insoniyat tarixi ishonchli tarzda shuni isbotlamoqdaki, agressiya shaxs va jamiyat hayotining ajralmas qismiga aylanib bormoqda. Bundan tashqari, agressiya ulkan tortishish kuchi va yuqumlilik xususiyatiga ega – ko‘pchilik o‘zining agressiv ekanini inkor etadi, ammo o‘zining kundalik hayotida esa, uni keng namoyish qiladi. Aynan agressiv xulq-atvor shaxslararo nizolarning vujudga kelishiga va ularni hal etishning asossiz yo‘llari paydo bo‘lishiga olib keladi.

Ijtimoiylashuv – individning ijtimoiy tajribani o‘zlashtirish jarayoni va faolligi bo‘lib, bu o‘z navbatida muloqot va faoliyatda namoyon bo‘ladi. Ijtimoiylashuv jarayoni jamiyatdagi turli o‘zgarishlar va maqsadga yo‘naltirilgan tarbiya natijasida stixiyali tarzda kechadi. Ijtimoiylashuv jarayonini turli psixologik ilmiy maktablar turlicha tahlil qilganlar:

1) neobixeviorizm namoyandalarining fikricha, ijtimoiylashuv – bu ijtimoiy o‘rganishdir;

2) interaksionizm vakillarining fikricha, o‘zaro ta’sirlar natijasi;

3) gumanistik psixologiya vakillarining ta’riflashicha, «Men» konsepsiyasining namoyon bo‘lishidir.

Ijtimoiylashuv serqirra jarayon bo‘lib, yuqorida keltirilgan psixologiyaning ilmiy maktablari namoyandalari uning faqat bir tomonigagina asosiy urg‘u beradilar. Hozirgi kunda jahon psixologlari ijtimoiylashuv muammosini ijtimoiy xulq-atvorni boshqarishning dispozitsion konsepsiyasi nuqtai nazaridan ko‘rib chiqishga harakat qilmoqdalar. Bu konsepsiya shaxslararo munosabatlarga kirisha olish darajasiga bog‘liq ijtimoiy xulq-atvorni boshqarish tizimini tahlil qiluvchi dispozitsiyalar iyerarxiyasini o‘z ichiga qamrab oladi.

Insonlardagi shaxslararo munosabatlarda namoyon bo‘luvchi xulq-atvor tiplaridan biri agressiyadir. “Agressiya” tushunchasiga izoh berish qator

qiyinchiliklarni tug‘diradi, chunki bu atama ko‘plab xatti-harakat shakllarini ifodalaydi. Odamlar biron kimsani agressiv shaxs sifatida tavsiflaganlarida, uni boshqalarni haqorat qiluvchi yoki badfe’l, barcha narsani o‘zi istaganidek qilishni istaydigan yoki o‘z g‘oyalarini qat’iy himoya qiladigan, yechimi yo‘q muammolar girdobiga o‘zini giriftor qila- digan inson kabi ta’riflarni keltirishlari mumkin.

Insonning agressiv xatti-harakatlarga moyilligini turlicha tushuntirishga qaratilgan dastlabki nuqtainazarlar ichida U.Makdaugoll, Z.Freyd, G.Marrey va boshqa olimlarning «inson va hayvonlarda agressiyaning tug‘ma instinkti mavjud bo‘ladi», degan qarashlaridir. Agressiv xulq-atvor haqidagi fikr-mulohazalar XX asrning boshlarida frustratsiya nazariyasi bilan bog‘liq ravishda yuzaga keldi. Unga ko‘ra, agressivlik frustratsiyaning oqibatidir.

Bunday qarashni birinchi bo‘lib J.Dollard ilgari surdi. Ammo, ushbu ikki xil nuqtai nazar ham amaliyotda o‘z tasdig‘ini topmadi.

Agressiv xulq-atvor xususidagi yana bir nuqtai nazar L.Berkovichning ijtimoiy bilish nazariyasida bayon qilingan. Unga ko‘ra, maqsadga yo‘naltirilgan faoliyat davomida vujudga keladigan to‘siq shaxsda agressiv xatti-harakatlarni hosil qiladi. Nihoyat, agressiv xulq-atvorning kelib chiqish sabablari haqidagi eng zamonaviy nuqtai nazar bilishning kognitiv nazariyasi bilan bog‘liq holda ifodalanadi. Bu konsepsiyada agressiv harakatlar quyidagi jarayonlarning natijalari sifatida baholanadi:

1. Sub’yektning o‘z agressiv xulq-atvorini ijobiy deb baholashi;
2. Frustratsiyaning mavjudligi;
3. Affekt yoki stress tipidagi emotsional qo‘zg‘alishning kuchliligi.

R.Kratchfild va N. Livson agressiyaning bir-birini inkor etmaydigan va birday maqbul ikki tavsifini keltirganlar. Birinchisi, xulq-atvorning zohiriy (tashqi) alomatlariga asoslanadi: «Agressiya – kimgadir ziyon yetkazuvchi xulq-atvorning har qanday ko‘rinishidir». Ikkinchisi, odamning botiniy (niyatlari) bilan bog‘liq, ya’ni insonni harakatga undovchi kuchlar bilan mushtarak: «Agressiya – boshqa bir insonga ziyon yetkazishni maqsad qilib olgan har qanday xatti-harakatdir». Agressiyaning yuqorida zikr etilgan tavsiflariga monand tushunchalarga tayangan ko‘plab psixologlar agressiyani mavjudotning yashash uchun kurash bilan bog‘liq uzviy xususiyati deb hisoblaydilar.

D.Bass taklif etgan ta’riflardan biriga ko‘ra, boshqalar uchun xavf tug‘diruvchi va ularga ziyon yetkazuvchi har qanday fe’l-atvor agressiyadir.

Bir necha taniqli tadqiqotchilar tomonidan taklif etilgan ikkinchi ta’rif esa quyidagicha: u yoki bu harakatlar agressiya sifatida tasniflanishi uchun ular oxir-oqibat xafa qilish yoki haqoratlashga olib kelishi emas, balki xafa qilish va haqoratlarni maqsad qilib qo‘yishi lozim. Nihoyat, uchinchi nuqtai nazar X.Zilman tomonidan bildirilib, unga ko‘ra, agressiya o‘zgalarga tan jarohati va boshqa jarohatlar yetkazish demakdir. “Agressiya” tushunchasining talqinidagi kelishmovchiliklarga qaramay, ijtimoiy fanlar sohasidagi ko‘plab mutaxassislar uning ikkinchi nuqtai nazarda bayon etilgan ma’nosiga ko‘proq tayanadilar.

Agressiv o‘spirinlarning psixologik xususiyatlari yoshlar psixologiyasida muhim o‘rin tutadi va ularning ijtimoiy va shaxsiy rivojlanishiga jiddiy ta'sir ko‘rsatadi. Agressiya o‘zini namoyon qilish shakllari, sabablari va natijalari

psixologik tadqiqotlar va amaliyotchilar tomonidan keng o‘rganilgan. Quyida aggressiv o‘spirinlarning psixologik xususiyatlari haqida batafsil ma'lumotlar keltirilgan:

1. Agressiya turlari.

Fizik agressiya: O‘zaro jismoniy ziddiyat yoki zarar yetkazish orqali ifodalanadi. Bu o‘spirinlarning boshqa odamlarni jarohatlash yoki zarar yetkazishga intilishi bilan tavsiflanadi.

Verbali agressiya: So‘zlar va nutq orqali tajovuzkorlik. Ta’qib qilish, haqoratlash, kamsitish va so‘k-sho‘pati kabi xatti-harakatlar bu turga kiradi.

Passiv agressiya: Dolzarb vaziyatlarni to‘g‘ri hal qilish o‘rniga, yopiq-oydin yoki to‘g‘ridan-to‘g‘ri bo‘lmagan agressiv xatti-harakatlarni ko‘rsatish. Masalan, kechiktirish, norozilikni yashirish.

2. Psixologik sabablari.

Shaxsiy muammolar: O‘spirinlarning o‘z-o‘zini baholash darajasi, o‘zini qadrlash muammolari, va ichki noxushlik hissi agressiv xatti-harakatlarni kuchaytirishi mumkin.

Oila muhiti: Agressiya ko‘pincha oila ichidagi konfliktlar, bolalikdagi travmalar va ota-onalarning tajovuzkor xatti-harakatlari bilan bog‘liq. Oila muhitida xavfsizlik va qo‘llab-quvvatlash yetishmasligi o‘spirinlarning agressiv xatti-harakatlarini kuchaytirishi mumkin.

Ijtimoiy faktorlar: Jamiyatdagi zo‘ravonlik, tajovuzkor media, va guruh bosimi o‘spirinlarning agressiv xatti-harakatlarini kuchaytirishi mumkin.

3. Emotsional holatlar.

Stres: O‘spirinlar stressga duch kelganda, agressivlikni namoyon qilish orqali his-tuyg‘ularini boshqarishga harakat qilishlari mumkin.

Qasddan hislar: O‘spirinlar qasddan hislarni boshqarishda qiyinchiliklarni his qilishlari mumkin, bu esa o‘z navbatida tajovuzkor xatti-harakatlarni kuchaytiradi.

4. Kognitiv xususiyatlar.

Tuzilishi: O‘spirinlarning aggressivlik darajasi ularning qabul qilish va qarorlar qabul qilish tarziga ta’sir qiladi. Masalan, ularning vaziyatlarga negativ yoki o‘ta tanqidiy yondashishi mumkin.

Emotsional intellekt: O‘spirinlarning emotsional intellekti kam bo‘lishi, ya'ni o‘z his-tuyg‘ularini va boshqalarning his-tuyg‘ularini tushunish qobiliyatining pastligi, agressivlikni kuchaytirishi mumkin.

5. Ijtimoiy xususiyatlar.

Guruh Dinamikasi: O‘spirinlar guruh ichida tajovuzkor xatti-harakatlarni ko‘rsatishlari mumkin, chunki ular guruhdagi boshqa a'zolar tomonidan qabul qilinishni yoki kuchaytirishni xohlashadi.

Ijtimoiy rollar: O‘spirinlarning ijtimoiy rollari, masalan, liderlik yoki qabul qilinmaganlik hislari, agressiv xatti-harakatlarga sabab bo‘lishi mumkin.

6. O‘zini boshqarish qobiliyatlari.

O‘zini nazorat qilish: Agressiv o‘spirinlar ko‘pincha o‘zini boshqarish qobiliyatlariga ega bo‘lmaydilar, bu esa ularning agressiv xatti-harakatlarini oshiradi.

Muammolarni hal qilish strategiyalari: Ularning muammolarni hal qilish usullari tajovuzkor bo‘lishi mumkin, bu esa ularning o‘z-o‘zini boshqarish qobiliyatlariga ta'sir qiladi.

Tavsiyalar.

Psixologik yordam: Agressiv o‘spirinlarga psixologik maslahat va terapevtik yondashuvlarni taqdim etish. Agressiyani boshqarish va muammolarni hal qilish ko‘nikmalarini rivojlantirish.

Oila muhitini mustahkamlash: Oila ichidagi ziddiyatlarni kamaytirish va ijtimoiy qo‘llab-quvvatlashni oshirish. Ota-onalarga tajovuzkor xatti-harakatlarni kamaytirishga yordam berish.

Ta’lim va tarbiya: Maktab va boshqa ta'lim muassasalarida agressiyani boshqarish, emotsional intellektni rivojlantirish va muammolarni hal qilish ko‘nikmalarini o‘rgatish.

Guruh faoliyatlari: Guruh ichida ijtimoiy aloqalarni yaxshilash va tajovuzkor xatti-harakatlarni kamaytirishga yordam beradigan faoliyatlar tashkil etish.

Stressni boshqarish: O‘spirinlarga stressni boshqarish bo‘yicha metodlarni o‘rgatish va ularning hissiy barqarorligini oshirish.

Monitoring: Agressiv xatti-harakatlarni kuzatish va baholash, shu bilan birga, zarur bo‘lsa, aralashuv choralari ko‘rish.

Bu tavsiyalar agressiv o‘spirinlarning psixologik holatini yaxshilash va ularning ijtimoiy moslashuvini yaxshilashga yordam beradi.

Foydalanilgan adabiyotlar

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MAKTAB O`QUVCHILARIDA ILK NUTQIY-KOMMUNIKATIV KOMPETENSIYALARNI SHAKLLANTIRISH

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Annotatsiya. Ushbu tezisda boshlang`ich sinf o`quvchilarining kommunikativ qobiliyatlarini takomillashtirishda inferfaol usullardan foydalanishning metodologik jihatlari muhokama etiladi.

Kalit so‘zlar. Boshlang`ich sinf, kommunikativ kompetensiya, metod, so`zlashish, muloqot, pedagogika, ta`lim.

Kirish. Maktabga kelish arafasida bolaning so‘z boyligi o‘z fikrini bayon eta oladigan darajada ortadi. Bu yoshdagi normal rivojlanayotgan bola o‘z nutqida 500–600 so‘zni ishlatadi. Boshlang‘ich sinf yoshidagi bolalar nutqi, asosan, ot, fe’l, sifat, son va bog‘lovchilardan iborat bo‘ladi. Bu yoshdagi bolalar o‘z nutqlarida qaysi so‘zlarni ishlatgani afzalu, qaysilarini ishlatish mumkin emasligini farqlay oladilar. 6–7 yoshli bola o‘z jumlalarini murakkab grammatik tizimda tuza oladi. Bola butun bolalik davrida nutqni jadal ravishda egallab borib, nutqni o‘zlashtirishi ma’lum bir faoliyatga aylana boradi. 7–9 yoshli bolalarning o‘ziga xos bir xususiyati – bola nutqida o‘z fikrini bayon etibgina qolmay, balki o‘z suhbatdoshining diqqatini o‘ziga jalb qilish uchun ham gapiradilar [1].

Adabiyotlar sharhi. Insonlarda qadim zamonlardan xorijiy tillarni o‘rganishga bo‘lgan qiziqish mavjud bo‘lgan. Boshlang‘ich sinflarda xorijiy tilni o‘rganish – bu til haqida ma’lumot olish va uni o‘zlashtirishgina emas, balki o‘quvchining faol muloqotga kirishish jarayoni hamdir. Xorijiy tillarni o‘rganish pedagogikasini o‘rgangan olim I.A.Grishanovaning fikricha, xorijiy tilni o‘rganishda eng oddiy, eng sodda yo‘llarni izlash va qo‘llash muhimdir [3; 34 b.]. Boshlang‘ich sinflardan xorijiy tilni o‘rgatishdan ko‘zlangan maqsad o‘quvchilarni shu tilda muomalaga o‘rgatishdir. Xorijiy tilda muomala qila olish uchun o‘quvchilar shu tildagi so‘z boyliklarini egallashlari zarur.

Tadqiqot metodologiyasi va empirik tahlil. Boshlang`ich sinfda xorijiy til o‘qitilishining nazariy va amaliy jihatlari haqida gap yuritilganda quyidagi ma’lumotlarni aytish mumkin. Bola ta’lim jarayoniga kelib murakkab psixik o‘zgarishlarni boshidan kechiradi. Bolaning jismoniy va psixik faolligi o‘zaro bog‘liqdir. Chunki ruhan sog‘lom bola harakatchan bo‘ladi. Psixik faollik – bu normal rivojlanayotgan bolaning atrof- olamdagi predmetlarni, insoniy munosabatlarni bilishga nisbatan qiziqishidir. Psixik faollik deganda, bolaning o‘zini bilishga nisbatan ehtiyoji ham tushuniladi.

Maktabga birinchi bor kelgan bolada qator qiyinchiliklar yuzaga keladi. Bu qiyinchiliklar xorijiy tilni o‘zlashtirish bilan ham bog‘liqdir. Xorijiy tilni o‘zlashtirish muvaffaqiyatli bo‘lishi uchun tabiiy til muhitini yaratish lozim. Boshlang‘ich sinflarda xorijiy tillarni o‘rgatish metodikasida aynan shunday muhitni yaratish uchun mashqlar, o‘yinlar, multimedia resurslari jamlanishi zarur. Ular o‘ziga xos holda xorijiy tilni o‘zlashtirishga motivatsion muhitni yaratishga xizmat qiladi.

Kommunikativ kompetensiya - muloqot va munosabatlarning majmuiga ega bo‘lgan murakkab, ko‘p bosqichli tizim. U boshqa barcha kompetensiyalarningasosi bo‘lgani uchun haqli ravishda yetakchi va poydevori hisoblanadi, shuningdek, jamiyatda o‘zaro muloqotga kirishish uchun ona tilida yoki biror xorijiy tilni mukammal o‘zlashtirish hamda undan muloqot jarayonidasamarali foydalana olishdir [5; 387 b.].

Shunday qilib kommunikativ kompetensiya tushunchasi bir qancha quyidagi kompetensiyalar majmuiga asoslanadi:

Lingvistik kompetensiya (Compétence linguistique) - o‘z fikrini og‘zaki va

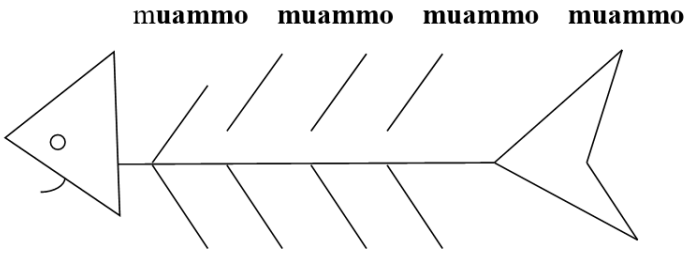
yozma tarzda aniq va tushunarli bayon qila olish, mavzudan kelib chiqib savollarni mantiqan to‘g‘ri qo‘ya olish va javob berish qobiliyatidir [2; 28-29 bb.].

Sotsiolingvistik kompetensiya (Compétence sociolinguistique) - ijtimoiy moslashuvchanlik, o‘zaro muloqotda muomala madaniyatiga amal qilish, jamoaviy hamkorlikda ishlay olish; muloqotda suhbatdosh fikrini hurmat qilgan holda o‘z fikrini himoya qila bilish, uni ishontira bilishdir [4; 7 b.].

Ushbu kompetensiyalarni shakllantirishda quyidagi interfaol metodlarni samarali deb topdik:

«Aqliy hujum» usuli. «Aqliy hujum» biror muammoni yeshishda guruh qatnashshilari tomonidan bildirilgan erkin fikr va mulohazalarni to'plab, ular orqali ma'lum bir yeshimga kelinadigan eng samarali usuldir. U to'g'ri va ijodiy qo'llanilganda shaxsni erkin, ijodiy va nostandart fikrlashga o'rgatadi. «Aqliy hujum» yordamida turli xil muammolarni hal qilishning yo'llari izlanadi.

Baliq skeleti.



Muammoni qo`yish va hal qilishning mazkur modeli bir qator muammolarni ta’riflash va yeshib ko`rishga imkon beradi.

Xulosa va munozara. Bugungi kunda xorijiy tilni Umumyevropa standartlari asosida o‘qitishda kompetensiyalarga alohida e’tibor qaratilgan. Bu kompetensiyalar ta’lim mazmuni, o‘quvchilarning xorijiy tilni bilishlari va ularni amaliyotda qo‘llay olish ko‘nikmalari bilan bevosita bog‘liqdir. Aytib o‘tish lozimki, mamlakatimizda boshlang‘ich sinfdan xorijiy tilni o‘rganish amaliyoti ko‘plab izlanishlar natijasidir. Xorijiy tilni kichik maktab yoshidan o‘qitish nafaqat ta’limiy, balki tarbiyaviy va informativ xarakterga ega. Bola umuminsoniy qadriyatlarni o‘zga til orqali o‘zlashtira boshlaydi. Xorijiy tilni ilk bolalikdan o‘rganish kimlargadir taqlid qilish emas, bu davr talabi va ehtiyojidir. Bu vaziyatda o‘qituvchining asosiy vazifasi xorijiy tilni o‘rgatish jarayonini bolaga qiziqarli qilib tashkil etish va uning shaxsini rivojlantirishdan iborat. Shunday ekan quyidagi tavsiyalarni kelgusida qo`llash uchun keltirish mumkin:

- Bolalarga nutqiy kompetentlikni singdirishda interfaol metodlardan foydalanish afzal;
- Aqliy hujum metodidan foydalanish boshlang`ich sinf o`quvchilar uchun yuqori samaradorlikka ega;
- Ilk kommunikativ kompetensiyalarni 7-9 yoshda yuzaga chiqarish maqsadga muvofiq.

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ENHANCING SPEAKING SKILLS THROUGH DIGITAL TECHNOLOGY

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Abstract. This thesis investigates the effectiveness of digital technologies - language learning apps, virtual reality (VR) platforms, and online speaking platforms - in improving speaking skills. The study evaluates these tools' impact on fluency, pronunciation, and confidence. Results indicate that online speaking platforms provide the most substantial improvements, while VR platforms enhance confidence and pronunciation. Language learning apps are effective for foundational skill development but less so for practical speaking. This research offers insights for integrating digital tools into language learning strategies.

Keywords. Digital Technology, Speaking Skills, Language Learning Apps, Virtual Reality, Online Speaking Platforms, Fluency, Pronunciation.

Introduction.

Background: Speaking skills are crucial for effective communication in diverse settings, from personal interactions to professional environments. Historically, these skills have been developed through traditional methods such as classroom instruction and face-to-face practice. However, the rise of digital technologies has introduced new methods for enhancing speaking abilities, offering interactive and flexible learning options.

Purpose: This study aims to evaluate the impact of digital technologies - specifically language learning apps, VR platforms, and online speaking platforms - on speaking skills. It assesses the effectiveness of these tools in improving fluency, pronunciation, and overall speaking confidence compared to traditional methods.

Significance: As digital tools become more integrated into educational practices, understanding their effectiveness in skill development is essential. This research provides valuable insights into how these technologies can be used to enhance speaking skills, offering guidance for learners and educators in selecting and integrating digital tools.

Literature Review.

Digital Tools in Language Learning:

- **Language Learning Apps:** Apps like Duolingo and Babbel provide interactive and gamified language practice. Research shows they are effective for building vocabulary and grammar but may have limitations in providing extensive speaking practice [5; pp. 45-46. 1; pp. 200-215].
- **Virtual Reality (VR) Platforms:** VR tools such as ENGAGE and vSpeech offer immersive language practice by simulating real-world scenarios. Studies suggest VR can significantly enhance pronunciation and speaking confidence [3; pp. 112-128. 6; pp. 189-205].
- **Online Speaking Platforms:** Platforms like iTalki and Preply facilitate real-time conversations with native speakers, which is beneficial for developing fluency and conversational skills. Research indicates these platforms provide substantial improvements in overall speaking abilities [4; pp. 78-93. 2; pp. 134-150].

Comparative Studies: Comparative studies have shown varying degrees of effectiveness among these tools. Online speaking platforms generally provide the most comprehensive improvements due to their interactive nature, while VR platforms offer valuable immersion experiences, and language apps build foundational skills but may not fully address practical speaking needs [4; pp. 78-93].

Results.

Quantitative Findings:

- **Language Learning Apps:** Participants showed a 20% improvement in vocabulary and grammar, with modest gains in speaking fluency.
- **VR Platforms:** Participants experienced a 30% increase in speaking fluency and confidence, with notable improvements in pronunciation.
- **Online Speaking Platforms:** The most significant improvement was observed, with a 40% increase in overall speaking skills, including fluency, pronunciation, and conversational ability.

Qualitative Feedback:

- **Language Learning Apps:** Participants found these apps engaging but noted that they lacked in providing sufficient real-world speaking practice.
- **VR Platforms:** Users appreciated the immersive practice and reported enhanced confidence and pronunciation.
- **Online Speaking Platforms:** Participants valued the real-time interaction with native speakers, which greatly improved their conversational skills and overall speaking proficiency.

Discussion.

Interpretation of Results: The findings indicate that online speaking platforms are the most effective for comprehensive speaking skill improvement, due to their real-time, interactive nature. VR platforms effectively boost confidence and enhance

pronunciation through simulated practice. Language learning apps are beneficial for foundational skills but less effective for practical speaking practice.

Implications: For learners aiming to improve their speaking skills significantly, online speaking platforms should be prioritized. VR platforms can serve as a supplementary tool for immersive practice, while language learning apps are useful for building a strong base of language knowledge. Integrating these technologies into a cohesive learning strategy can enhance overall language acquisition.

Limitations: The study's limitations include a small sample size and a short duration, which may affect the generalizability of the results. Individual differences in learning styles and prior proficiency could also influence the outcomes.

Future Research: Future studies should explore the long-term effects of these technologies on speaking skills and compare their effectiveness with traditional learning methods. Research could also investigate how combining multiple digital tools affects overall learning outcomes.

Conclusion.

This thesis has highlighted the effectiveness of digital technologies in enhancing speaking skills. Online speaking platforms were found to be the most effective for improving fluency, pronunciation, and conversational ability due to their interactive nature. VR platforms offer valuable immersive experiences that boost confidence and pronunciation, while language learning apps are useful for foundational skill development. A strategic integration of these technologies can optimize language learning. Further research is needed to explore their long-term impacts and potential for combining these tools with traditional learning methods.

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СОВЕРШЕНСТВОВАНИЕ ПРОФЕССИОНАЛЬНОЙ КОМПЕТЕНТНОСТИ БУДУЩИХ ИНЖЕНЕРОВ В ОБУЧЕНИЙ ИНФОРМАЦИОННЫМ ТЕХНОЛОГИЯМ В УСЛОВИЯХ ЦИФРОВОГО ОБРАЗОВАНИЯ

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Аннотация. В условиях цифрового образования в Узбекистане совершенствование профессиональной компетентности будущих инженеров в обучении информационным технологиям приобретает особую значимость. Цифровизация образовательного процесса, и интеграция ИТ в учебные программы инженерных специальностей способствует повышению качества подготовки специалистов, необходимых для успешного развития экономики страны. Данная статья анализирует методы и подходы, направленные на улучшение компетенций будущих инженеров, включая практическую подготовку, проектное обучение, повышение квалификации преподавателей и сотрудничество с ведущими ИТ-компаниями. Рассматриваются преимущества цифрового образования, такие как доступность знаний, гибкость обучения и персонализация учебного процесса. В результате реализации предложенных мер, будущие инженеры будут обладать необходимыми навыками и знаниями для эффективного применения информационных технологий в профессиональной деятельности, что существенно повысит их конкурентоспособность на рынке труда и внесет значительный вклад в развитие цифровой экономики Узбекистана.

Ключевые слова. Профессиональная компетентность, будущие инженеры, информационные технологии, цифровое образование.

Annotation. In the context of digital education in Uzbekistan, improving the professional competence of future engineers in teaching information technology is of particular importance. Digitalization of the educational process and the integration of IT into the curricula of engineering specialties contribute to improving the quality of training specialists necessary for the successful development of the country's economy. This article analyzes methods and approaches aimed at improving the competencies of future engineers, including practical training, project-based learning, advanced training of teachers and cooperation with leading IT companies. The advantages of digital education, such as accessibility of knowledge, flexibility of learning and personalization of the educational process, are considered. As a result of the implementation of the proposed measures, future engineers will have the necessary skills and knowledge to effectively use information technology in their professional activities, which will significantly increase their competitiveness in the labor market and make a significant contribution to the development of the digital economy of Uzbekistan.

Key words. Professional competence, future engineers, information technology, digital education.

Основные положения. Современный уровень развития нашего государства, общества, науки и производства на данный момент предъявляет высокие требования к специалисту-инженеру. Изменения в социально-экономической жизни общества обострили ситуацию на рынке труда. Высокий

уровень конкуренции между специалистами инженерных специальностей обозначил актуальность выявления возможностей высшего образовательного учреждения по формированию профессиональной компетентности у будущих специалистов. В системе вуза необходимо решать задачи профессионального образования в русле компетентностного подхода, акцентирующего внимание на формирование у будущего специалиста-инженера готовности к практическому применению знаний, умений и навыков в условиях решения реальных производственных задач в среде информационных технологий.

В этой связи информационной компоненте содержания обучения как фактору, во многом определяющему и обусловливающему использование компьютера и программных пакетов в конкретных производственных ситуациях, тем самым влияющему на формирование профессиональной компетенции, отводится особая роль. Настоятельной потребностью практики обучения в техническом вузе стало внедрение инновационных методов, основанных на информационных технологиях, обеспечивающих прикладные знания и личностно-ориентированный подход к обучаемому. В частности, необходимо обратить должное внимание на арт-технологии, которые могут оказать существенное влияние на формирование профессиональной позиции будущего инженера.

Введение. Введение раздела посвящено обоснованию актуальности темы совершенствования профессиональной компетентности будущих инженеров в области информационных технологий в условиях цифрового образования в Узбекистане. Описывается необходимость адаптации образовательных программ к изменяющимся технологиям и требованиям рынка труда, а также влияние цифровизации на процесс обучения и развитие будущих специалистов. Комбинирование различных методов обучения, включение метода асинхронного преподавания, введение части материалов по информационным технологиям профессионального назначения в основные учебные курсы, их развитие в рамках стандартных учебных дисциплин («Информатика», «Информационные системы», «Вычислительные системы, сети и телекоммуникации», «Вычислительные машины, сети и системы телекоммуникаций» и др.), на наш взгляд, поможет решению многих проблем и будет способствовать индивидуализации обучения, и, в конечном счете, формированию профессиональной компетентности будущих инженеров. Главным приоритетом в системе образования в контексте современных реалий являются не только определенные знания, умения и навыки, но и базирующаяся на них личная, социальная и профессиональная компетентность.

Некоторые из проблем данного исследования получили освещение в трудах Бешенкова С.А., Брановского Ю.С., Ваграменко Я.А., Гейна А.Г., Гершунского Б.С., Машбица ЕЛ., Роберт И.Б., Чистова Д.В., Яковлева Ю.Б. и др., в которых анализируются педагогические и методологические проблемы информатизации образовательной среды. Деятельностный подход к обучению активно разрабатывали: Алексеев Н.С., Беспалько ВЛ., Боголюбов В.И., Борисова В.Н., Давыдов В.В., Семенов И.А., Швырев В.П., Шевелева С.С. и др. Важным обстоятельством, обусловливающим необходимость данного

педагогического исследования, является ускоренное развитие информационных систем и появление соответствующих инженерных специальностей, способных компенсировать ограниченность сырьевых, энергетических, экономических и человеческих ресурсов владением информацией.

Описание материалов и методов. Обучение в вузах Узбекистана имеет свои специфические особенности и проблемы, которые могут влиять на развитие профессиональной компетентности будущих инженеров. Из основных проблем, с которыми сталкиваются студенты инженерных специальностей:

Учебные программы часто не успевают за быстро меняющимися требованиями рынка труда и научно-техническим прогрессом. Это приводит к тому, что выпускники не всегда обладают актуальными знаниями и навыками. Недостаточное внимание уделяется практическим занятиям и стажировкам. Без достаточного практического опыта студенты не могут полностью подготовиться к реальным условиям работы. Многие учебные заведения испытывают дефицит современного оборудования и лабораторий и цифровизации образовательного процесса что ограничивает возможности студентов для проведения экспериментов и практических работ.

Результаты. Внедрение новейших информационных технологий в учебный процесс и совершенствование профессиональной компетентности будущих инженеров в Узбекистане может привести к следующим положительным результатам:

Новейшие информационные технологии позволят своевременно обновлять учебные программы, включая последние достижения науки и техники. Это обеспечит соответствие образования требованиям рынка труда. Виртуальные лаборатории и симуляторы позволят студентам проводить эксперименты и моделировать различные инженерные процессы, что значительно повысит их практические навыки и готовность к реальной работе.

Использование онлайн-курсов, вебинаров и цифровых библиотек даст студентам доступ к актуальной информации и передовым исследованиям в области инженерии. Информационные технологии позволят интегрировать знания из разных областей, что способствует развитию междисциплинарных компетенций, необходимых для решения комплексных инженерных задач. Использование современных коммуникационных платформ и технологий для совместной работы над проектами поможет студентам развивать навыки командной работы и эффективного взаимодействия. Платформы для удаленной работы и сотрудничества позволят студентам участвовать в международных проектах и стажировках, не покидая Узбекистана. Использование больших данных и аналитических инструментов поможет студентам проводить сложные исследования и анализировать результаты, что важно для их будущей профессиональной деятельности. Таким образом, внедрение новейших информационных технологий в учебный процесс инженерных специальностей в Узбекистане приведет к значительному повышению уровня профессиональной компетентности будущих инженеров и сделает их более конкурентоспособными на международном рынке труда.

Заключение. Методика развития и «Профессиональное обучение будущего инженера в среде информационных технологий» рассматриваются организационные аспекты индивидуализации учебного процесса средствами информационных технологий, особенности преподавания в среде информационных технологий профессионального назначения как (AutoCAD, MathCAD), дидактическая система формирования профессиональной компетентности с применением информационных технологий, организован и проведен анализ результатов опытно-экспериментальной работы, в 1-курсе в специальности 60711400 – Автоматизация и управление технологическими процессами и производствами преподавания внедрен практикум MathCAD посредством сравнения, обобщения и интенсивной адаптации визуальных данных, анимационных изображений, веб-ресурсов студентов с особыми потребностями, степени общей подготовки и степени влияния возрастных особенностей на дидактические цели; усовершенствована модель развития как онлайн-платформы, телеконференций, блог-технологий, классификации процессов, мотивации совместного обучения интегративным задачам, пошагового определения содержание диагностических особенностей; усовершенствованы этапы развития профессиональной подготовки будущих инженеров адекватного обеспечения контрольных и диагностических заданий, а также информативности, гибкости, открытости технологических ситуаций обучения. Мы предполагаем, профессиональное обучение будущего инженера в среде информационных технологий (ИТ) открывает множество возможностей и приносит значительные преимущества. Вот основные из них:

Специалисты, обладающие знаниями как в инженерных, так и в ИТ-дисциплинах, крайне востребованы на рынке труда. Это открывает множество возможностей для трудоустройства и карьерного роста.

Технологи инженеры могут работать в различных секторах, таких как производство, энергетика, медицина, транспорт и многие другие, применяя свои знания для улучшения процессов и внедрения передовых технологий будут способствовать раскрытию творческих способностей будущих инженеров, креативному переосмыслению профессиональной деятельности, саморазвитию и, самое главное, повышению уровня профессиональной позиции.

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“XAVFSIZ SHAHAR”DA “SUN’IY INTELLEKT VA AQILLI CHORRAHALAR”NING O‘RNI

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Annotatsiya. Ma’lumki, bugun “Yangi O‘zbekiston” va “O‘zbekiston taraqqiyotining yangi bosqichi” degan nomlar Vatanimizda va xalqaro munosabatlar masalasida muhim o‘rin egallab kelmoqda. Xususan, jamiyatimiz hayotidagi keng ko‘lamli jarayonlar amalga oshirilayotgan, ya’ni ijtimoiy-siyosiy hamda iqtisodiy munosabatlar butunlay o‘zgarib borayotgan, mamlakatimiz yangi va demokratik qiyofada jahonga tanilayotgan davrda yashamoqdamiz.

Kalit so‘zilar. Yangi O‘zbekiston, aqlli shahar, aqlli chorrahalar, sun’iy intellect.

Аннотация. Известно, что сегодня названия «Новый Узбекистан» и «Новый этап развития Узбекистана» занимают важное место в нашей стране и в международных отношениях. В частности, мы живем в такое время, когда происходят масштабные процессы в жизни нашего общества, то есть полностью меняются социально-политические и экономические отношения, и наша страна знакомится миру в новом, демократический имидж.

Ключевые слова. Новый Узбекистан, умный город, умные перекрестки, искусственный интеллект.

Annotation. It is known that today the names "New Uzbekistan" and "New stage of Uzbekistan’s development" occupy an important place in our country and in international relations. In particular, we are living in a time when large-scale processes in the life of our society are taking place, that is, socio-political and economic relations are changing completely, and our country is being known to the world in a new and democratic image.

Keywords. New Uzbekistan, smart city, smart intersections, artificial intelligence.

Mamlakatimizda shiddat bilan amalga oshirilayotgan islohotlar haqida so‘z yuritganda, davlatimiz rahbarining “Biz hali izlanishdamiz, o‘rganishdamiz”, deb ta’kidlashi bugungi milliy taraqqiyot yo‘lida har birimizning oldimizda turgan muhim va dolzarb vazifalarni amalga oshirishdan dalolat beradi.

Shu o‘rinda ta’kidlab o‘tish kerakki, barcha sohalar singari transport yo‘nalishida ham qator o‘zgarishlar ro‘y bermoqda. Jumladan, aholi turmush darajasini oshirish, fuqarolarning dolzarb muammolarini hal etish, ijtimoiy infratuzilmani yaxshilash va hududlarni rivojlantirish uchun munosib shart-sharoitlar yaratish, shuningdek 2017–2021 yillarda O‘zbekiston Respublikasini

rivojlantirishning beshta ustuvor yo‘nalishi bo‘yicha harakatlar strategiyasida belgilangan vazifalarni izchillik bilan amalga oshirish maqsadida O‘zbekiston Respublikasi Vazirlar Mahkamasining 2019 yil 18 yanvardagi 48-son “O‘zbekiston Respublikasida “Aqlli shahar” texnologiyalarini joriy etish konsepsiyasini tasdiqlash to‘g‘risida”gi qarori qabul qilindi. Ushbu qaror ijrosini ta’minlash uchun Innovatsion rivojlanish vazirligi barcha vazirliklar, idoralar, mahalliy davlat hokimiyati organlari va boshqa tashkilotlarga Konsepsiya hamda Chora-tadbirlar rejasida nazarda tutilgan tadbirlarni amalga oshirishda va ilmiy-uslubiy jihatdan qo‘llab-quvvatlashda belgilangan tartibda ko‘maklashish belgilab qo‘yilgan. Shuningdek, vazirliklar, idoralar, Qoraqalpog‘iston Respublikasi Vazirlar Kengashi, viloyatlar va Toshkent shahar hokimliklari zimmasiga quyidagi:

- ✓ davlat-xususiy sheriklik mexanizmlarini tatbiq etish hamda ilmiy-ta’lim muassasalari, nodavlat notijorat tashkilotlari, mustaqil ekspertlar (maslahatchilar), investorlar, shu jumladan xorijlik investorlarni keng jalb etish yo‘li bilan Konsepsiya va chora-tadbirlar rejasida nazarda tutilgan tadbirlarning o‘z vaqtida va sifatli amalga oshirilishi;
- ✓ konsepsiya va chora-tadbirlar rejasida nazarda tutilgan tadbirlarga muvofiq aholi turmush darajasini oshirish, fuqarolarning dolzarb muammolarini hal etish, ijtimoiy infratuzilmani yaxshilash va hududlarni rivojlantirish uchun munosib sharoitlar yaratilishini ta’minlab berishlari nazarda tutilgan.

Bugungi kunda O‘zbekistonda yangi zamonaviy innovatsion texnologiyalarni keng joriy qilish davom etmoqda. Texnologiyalarni jorish etish maqsadida Toshkent shahrida bir qancha yo‘nalishlar asosida ko‘plab loyihalar rejalashtirish va ularni amalga oshirish yo‘lga qo‘yilmoqda. Shu o‘rinda Toshkent shahri misolida olib borilayotgan tadqiqotimizdan kelib chiqadigan bo‘lsak, mavjud chorrahalarning asosiy qismini to‘rt tomonlama uncha murakkab bo‘lmagan kesishmalar tashkil etadi. To‘rt taraflama kelgan yo‘l harakati qatnashchilari kesishmani o‘z vaqtida talofatsiz va imkon qadar to‘xtalishlarga uchramasdan ko‘zlagan manzillari tomon shoshadilar.

Biroq, transport vositalarining xavfsiz va samarali oqimini ta’minlaydigan moslashuvchan, xavfsiz va aqlli infratuzilmani texnologiya bilan hamnafas shahar talab qiladi. Shuningdek, u kutilmagan o‘zgarishlarga munosabat bildirish uchun yetarlicha kuchli puxta reja asosida mukkamal dasturlar to‘liq hisob-kitoblar asosida ishlashi baxtiz hodisalarni kamaytirish va yo‘l harakati xavfsizligini oshirish 35 foizga, baxtsiz hodisalar sonini 25 foizga kamaytirish, chorrahalar o‘tkazuvchanligini 30 foiz hamda chorrahalarni piyoda kesib o‘tishning o‘rtacha tezligini 15 foizga oshirishga olib keladi.

Mazkur loyiha jamiyatga nima beradi va u nima uchun kerak? degan savollar uyg‘onishi tabiiy albatta. Inson o‘z hayot darajasini yaxshilash, ularning dolzarb muammolarini hal qilish, ijtimoiy infratuzilmani yaxshilash va rivojlanayotgan mintaqalar uchun munosib shart-sharoitlar yaratish muammolarini shahar yo‘llari, ko‘chalari va chorrahalarining qulayliklari kesimida hal qila oladi.

Shaharda ko‘chalarining kesishmalarida “Toshkentda aqlli chorraha” dasturiy loyihasida ko‘zda tutilgan asosiy amalga oshirilishi zarur bo‘lgan texnik va dasturiy ishlarni joriy qilish maqsadida “Shaharlarda aqlli chorraha”lar qanday imkoniyatlarga ega bo‘lishini keltirib o‘tamiz.

Bunda:

- ✓ tirbandlikni oldini olish;
- ✓ yo‘l harakati qoidabuzarliklarini aniqlash;
- ✓ statistik hisobotni avtomatik aniqlash;
- ✓ zaxarli gazlardan saqlanish;
- ✓ maxsus avtotransport vositalariga imkoniyat yaratish;
- ✓ piyodalar harakatida xavfsizlik va qulaylikni ta’minlash;
- ✓ jinoyatchilikni oldini olish;
- ✓ yo‘lda xotirjam harakatlanish uchun yo‘l holatini suv miqdori, muzlik, loy, qor va namlik, shuningdek havo va yo‘l qoplamasi haroratini aniq ma’lumot asosida baholab manzilga yetib borish;
- ✓ Guardian Road Weather Information System (RWIS) ma’lumotlari asosida avtomatik tahlil qilinib, hisob-kitoblar asosida eng zarur joylarga ishqorlar (tuz–qum) sepish va sarflanishi haqida statistik ma’lumot yuritish;
- ✓ ko‘zlangan maqsad sari harakatlangan yo‘l harakati ishtirokchilariga chorrahada o‘rnatilgan monitorlar orqali harakatlanmoqchi bo‘lgan chorraha haqida (tirband yoki tirband emasligi haqida) oldindan ma’lumotlar berib borish;
- ✓ shahar ko‘rkini buzmaslik (qazish ishlari, quduqlar o‘rnatish, har xil simlar o‘tkazishdan voz kechish), yanada ko‘rkamlashtirish;
- ✓ yo‘l harakati ishtirokchilarini vaqt masalasiga yechim topish va hal qilish;
- ✓ jinoyatni “issiq izidan” ochish va unga qarshi kurashish jamiyat hayotini turli xavf-xatardan saqlash hamda oldini olish singari qator imkoniyatlar ko‘zda tutilgan.

Shu o‘rinda O‘zbekiston Respublikasi birinchi Prezidenti tashabbusi bilan Toshkent shahrida 120 dona turli xildagi o‘z strategiyasiga va joylashuviga ega chorrahalarni yangi zamonaviy texnik imkoniyatlari yuqori chorrahalarga o‘zgartirish, tashkil qilish va samarali foydalanishni yo‘lga qo‘yish yuzasidan qaror va ko‘rsatmalar ishlab chiqilgan. Ushbu ishlarning mahsuli sifatida Poytaxtda joriy qilingan chorrahalar zamon talablariga mos ravishda va bir qancha rivojlangan mamlakatlar bilan bellasha oladigan imkoniyatlarga ega bo‘ldi.

Joriy qilingan zamonaviy chorrahalarning afzalliklari shundaki, markaziy pult orqali chorrahalarda jamoat tartibi xavfsizligini kuzatib borish, svetofor chiroqlarini masofadan turib nazorat qila olish va dasturiy ta’minotiga 15 turdagi svetofor rejimlari (fazalar)ni o‘rnatib, uzluksiz avtomatik tarzda o‘zgarib ishlashi, shuningdek sodir etiladigan qoidabuzarliklar (ya’ni, avtomashinaning tezligi, qizil chiroqda harakatlanishi)ni aniqlash, piyodalar yo‘lni kesib o‘tishdagi qulay va samarali imkoniyatlarga ega bo‘lganligi bunga yaqqol misol bo‘la oladi.

2021 yilning statistik ma’lumotlariga ko‘ra Toshkent shahar hududida 592 ta chorraha mavjud bo‘lib, shundan Toshkent shahar YHXBga qarashli 112 ta chorrahalarda Serbiya davlatidan keltirilgan SIEMENS rusumli svetoforlar o‘rnatilgan. Ular AGT va Vlatacom kompaniyalari hamkorligida tashkil qilingan bo‘lib, hozirda chorrahalar o‘z faoliyatini davom ettirmoqda.

Poytaxtimizda so‘nggi 10 yilda shahar bo‘ylab avtomobillar soni 250 mingtadan 616.834 taga, ya’ni 2 baravardan ko‘p darajada, aholi va transport vositalari ko‘payib borayotganligini kuzatish mumkin. Hozirda Toshkent shahrida 3 mln. dan ziyod aholi istiqomat qiladi. Poytaxt hududida bir kunlik vaqt davomida 900 mingdan ortig‘i avtotransport vositasi harakatlanishi yetarli darajada tirbandlikka

sabab bo‘ladi.

Loyihaning asosiy maqsadi – shahar aholisi va mehmonlari uchun qulay muhitni shakllantirish, yashash sifatining barqaror o‘sishini ta’minlash. Mamlakat va uning fuqarolari farovonligi uchun imkoniyatlar berilayotgan davrda ilmiy asoslangan yangi loyihalarni amalga oshirish juda zarur.

Shu bilan birga, O‘zbekiston Respublikasi bo‘ylab Toshkent shahar tajribasidan foydalanib yo‘l-transport tizimidagi ko‘cha va kesishmalarning o‘tkazuvchanlik qobiliyatini tajriba asosida qayta ishlash xalqimiz ravnaqi, turmush darajasi uchun qulayliklarga ega bo‘ladi.

Xulosa qilib shuni aytish mumkinki – aqilli charroxalar nafaqat poytaxt hudutlariga balkim barcha viloyatlarda keng tadbiq qilish, jumladan bugungi kundagi barcha shahar markazlariga aqilli charroxalarni o‘rnatishda, ularning avzalliklari va xafsizlik darajasi yuqori ekanligi muhim o‘rin tutadi. Aholi hafsizligini taminlash, yo‘llardagi tirbantliklarni qisqartirish, yo‘l-transport tizimidagi ko‘cha va kesishmalarning o‘tkazuvchanlik qobiliyatini oshirish, shahar aholisi va mehmonlari uchun qulay muhitni shakllantirish, yashash sifatining barqaror o‘sishini ta’minlash, mamlakat va uning fuqarolari farovonligi uchun imkoniyatlarni amalga oshirish juda zarur. Joriy qilingan zamonaviy chorrahalarning afzalliklari shundaki, markaziy pult orqali chorrahalarda jamoat tartibi xavfsizligini kuzatib borish, svetofor chiroqlarini masofadan turib nazorat qila olish va dasturiy ta’minotiga 15 turdagi svetofor rejimlari (fazalar)ni o‘rnatib, uzluksiz avtomatik tarzda o‘zgarib ishlashi, shuningdek sodir etiladigan qoidabuzarliklar (ya’ni, avtomashinaning tezligi, qizil chiroqda harakatlanishi)ni aniqlash, piyodalar yo‘lni kesib o‘tishdagi qulay va samarali imkoniyatlarga ega bo‘lganligi bunga yaqqol misol bo‘la oladi.

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MAKTABGACHA TA’LIM TASHKILOTLARIDA INNOVATSION TEXNOLOGIYALARDAN FOYDALANISHNING O`ZIGA XOS XUSUSIYATLARI

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Annotasiya. Ushbu maqolada maktabgacha ta’lim tashkilotlarida mashg’ulotlarni samarali, innovatsion texnologiyalar asosida tashkil etish masalalari, normativ-huquqiy hujjatlar va undagi qo’yilgan vazifalar, maktabgacha ta`limni tashkil etish sohasida ilg`or xorijiy tajribalarni, maktabgacha yoshdagi bolalarga ta`lim va tarbiya berish sohasida innovatsion usullar va samarali pedagogik amaliyotlarni o`rganish, davlat maktabgacha ta`lim tashkilotlari faoliyatiga jalb etish va joriy etish bo`yicha ishlarni doimiy asosda tashkil etilishi haqida ochib berilgan.

Kalit so‘zlar. Maktabgacha ta’lim, maktabgacha ta’lim tashkilotlari, ta’lim-tarbiya, innovatsion texnologiyalar, pedagogik texnologiyalar.

Annotation. In this article it is disclosed about the issues of organizing effective, innovative technologies in educational institutions, the normative-legal acts and the tasks set in them, the study of advanced foreign experience in the field of pre-school education, innovative methods and effective pedagogical practices in the field of education and upbringing of pre-school children, the organization of work on a permanent basis on the involvement and implementation in the activities of state pre-school educational institutions.

Key words. Preschool education, preschool organizations, education, innovative technologies, pedagogical technologies.

Аннотация. В данной статье раскрыты вопросы организации эффективных занятий в организациях дошкольного образования на основе инновационных технологий, нормативно-правовые акты и поставленные в них задачи, организация на постоянной основе работы по изучению передового зарубежного опыта в сфере организации дошкольного образования, инновационных методов и эффективной педагогической практики в сфере образования и воспитания детей дошкольного возраста, вовлечению и внедрению в деятельность государственных дошкольных образовательных организаций.

Ключевые слова. Дошкольное образование, дошкольные образовательные организации, образовательно-воспитательные, инновационные технологии, педагогические технологии.

Kirish. Mustaqil O`zbekistonning kelajagi ko`p jihatdan yosh avlodning etuk, har tomonlama barkamol etib tarbiyalashga bog`liq. Shunga ko`ra jamiyatimizda amalga oshirilayotgan islohotlarning asosiy maqsadi siyosiy va iqtisodiy sohalar bilan bir qatorda ta`lim tizimini tubdan o`zgartirish, uni zamon talabi darajasiga ko`tarish vazifasi qo`yilgan edi [3]. Maktabgacha ta`lim tashkilotlaridagi ta`lim-tarbiya jarayonida ilg`or pedagogik va axborot texnologiyalaridan foydalanish, tashkilotlarni zamonaviy bilimlarga ega tarbiyachilar bilan to`ldirish hamda ularda kasbiy malaka, faoliyatga nisbatan ijodiy yondashuv hissini qaror toptirish, uzluksiz ta`lim tizimida olib borilayotgan islohotlarning muhim yo`nalishlaridan biridir.

Tadqiqot maqsadi. Maktabgacha ta’lim tashkilotlarida mashg’ulotlarni samarali, innovatsion texnologiyalar asosida tashkil etishning nazariy asoslari, pedagogik shart-sharoitlarini aniqlash.

Tadqiqotni tashkil qilish uslublari. Tadqiqot jarayonida tahlil, umumlashtirish usullaridan foydalanildi.

Tadqiqot natijalari va muhokamasi. O`zbekiston Respublikasi Prezidentining 2017-2021 yillarda maktabgacha ta`lim tizimini yanada takomillashtirish chora-tadbirlari to`g`risidagi Qarorida maktabgacha ta`lim muassasalari tarmog`ini kengaytirish, malakali pedagog kadrlar bilan ta`minlash, bolalarni maktab ta`limiga tayyorlash darajasini tubdan yahshilash, ta`lim –tarbiya jarayoniga zamonaviy ta`lim dasturlari va texnologiyalarini tadbiq etish, bolalarni har tomonlama intelektual,axloqiy,estetik, jismoniy rivojlantirish uchun shart-sharoitlar yaratish masalalariga alohida etibor qaratilgan edi [1]. Maktabgacha ta`lim tizimiga ilg`or xorijiy tajriba joriy etilishini ta`minlash, maktabgacha ta`lim sohasida eng yangi metodikalarni moslashtirish va ulardan samarali foydalanish, sog`lom va har tomonlama kamol topgan bolani voyaga etkazish maqsadida O’zbekiston Respublikasi Vazirlar Mahkamasining «Maktabgacha ta’lim sohasiga innovacion yondashuvlarni joriy etish loyihalarini amalga oshirish uchun eksperimental maydonchalarni tashkil etish chora-tadbirlari to’g’risida»gi qarorida:

- maktabgacha ta`limni tashkil etish sohasida ilg`or xorijiy tajribani, maktabgacha yoshdagi bolalarga ta`lim va tarbiya berish sohasida innovatsion usullar va samarali pedagogik amaliyotlarni o`rganish, davlat maktabgacha ta`lim tashkilotlari faoliyatiga jalb etish va joriy etish bo`yicha ishlarni doimiy asosda tashkil etish;

- o`rganishlar va eksperimentlar yakunlari bo`yicha kompleks loyihani amalga oshirish doirasida ijobiy amaliy yutuqlarni mamlakatning boshqa mintaqalariga yoyishni maktabgacha ta`limni boshqarishning zamonaviy standartlarini, yangilangan o`quv rejalari va dasturlarni ishlab chiqish va joriy etishni, ilg`or pedagogik axborot-kommunikatsiya texnologiyalarini ta`lim jarayoniga keng joriy etishni, maktabgacha ta`lim muassasalari uchun takomillashtirilgan o`quv-metodik, didaktik materiallarni nashr etishga tavsiyalarni ishlab chiqishni nazarda tutuvchi kompleks loyihani amalga oshirish;

- shu jumladan, maktabgacha ta`lim sohasida nazariy ishlanmalarni va ilg`or xorijiy tajribani ta`lim-tarbiya jarayoniga joriy etish uchun tajriba-eksperimental baza sifatida to`g`ridan-to`g`ri ishtirok etish orqali respublika maktabgacha ta`lim tizimining yosh istiqbolli ilmiy-pedagog kadrlari malakasini oshirishni tashkil etishga ko`maklashish;

- ta`lim-tarbiya jarayonini tashkil etishning ilg`or xorijiy metodikalarini keng qo`llash asosida ta`lim faoliyatini amalga oshirish, maxsus treninglar va mavzuli seminarlarni tashkil etish va o`tkazish nazarda tutilgan.

Ushbu qarordan ko’rinib turibdiki, respublikamizda maktabgacha ta’limdagi innovacion faoliyatga kundan kunga e’tiborni kuchaytirish talab qilimoqda [2].

Ta'lim sohasida zamonaviy axborot va kompyuter texnologiyalari, internet tizimi, raqamli va keng formatli telekommunikasiyalarning zamonaviy usullarini o’zlashtirish, bugungi taraqqiyot darajasini belgilab beradigan

bunday ilqor yutuqlar nafaqat maktab, lisey va kollejlar, oliy o’quv yurtlariga, balki har qaysi oila, hayotiga keng kirib borishi uchun zamin tug’dirishning ahamiyatini chuqur anglab olishimiz lozim. Prezident tomonidan ilmiy asoslab berilgan ta'lim-tarbiya modelini amaliyotga tadbiq etish o'quv jarayonini texnologiyalash bilan uzviy bog'liqdir. Ushbu dastur mazmunida barkamol shaxs va malakali mutaxasisni tarbiyalab voyaga yetkazish jarayonining mohiyati to’laqonli ochib berilgandir. Malakali kadrlar tayyorlash jarayonining har bir bosqichi o’zida ta'lim jarayonini samarali tashkil etish, uni yuqori bosqichlarga ko’tarish, shu bilan birga jahon ta'limi darajasiga yetkazish borasida muayyan vazifalarni amalga oshirishi lozim.

Keyingi vaqtlarda o`quv jarayonining tashkil etishning eng samarali usuli sifatida zamonaviy pedagogik texnologiyalar deb tan olinmoqda. Hozirgi kunda ta`lim jarayonida interfaol usullar, innovatsion pedagogik va axborot texnologiyalardan foydalanib, ta`limning samaradorligni ko`tarishga bo`lgan qiziqish, e`tibor kundan-kunga kuchayib bormoqda. Zamonaviy texnologiyalar qo`llanilganda pedagoglar egallayotgan bilimlarni o`zlari qidirib topishlariga, mustaqil o`rganib, tahlil qilishlariga, hatto xulosalarni ham o`zlari keltirib chiqarishlariga qaratilgan. Pedagog bu jarayonda shaxs va jamoaning rivojlanishi, shakllanishi, bilim olishi va tarbiyalanishiga sharoit yaratadi. Shu bilan bir qatorda boshqaruvchilik, yo`naltiruvchi vazifasini bajaradi. Hozirgi davrda sodir bo`layotgan innovatsion jarayonlarda ta`lim tizimi oldidagi muammoarni hal etish uchun yangi axborotni o`zlashtirish va o`zlashtirgan bilimlarini o`zlari tomonidan baholashga qodir, zarur qarorlar qabul qiluvchi, mustaqil va erkin fikrlaydigan shaxslarga aylanadi.

Xulosa. Maktabgacha ta`lim tashkilotlarida innovatsion texnologiyalarning qo`llanishi masalasi tobora ko`proq ko`tarilmoqda, chunki ta`lim muassasasining ishiga innovatsiyalarning joriy etilishi – maktabgacha ta`lim-tarbiya tizimini takomillashtirish va isloh etishning eng muhim shartidir. Pedagogik innovatsiyalar deganda pedagogik faoliyatga yangiliklar kiritish, samaradorligini oshirish maqsadida ta`limning mazmuni va texnologiyasini o`zgartirishlarni tushunish lozim. Shunday qilib, innovatsiyalar jarayoni yangilik mazmuni va tashkil etilishining shakllanishidan va rivojlanishidan iborat.

Shuning uchun ham ta`lim muassasalarining o`quv-tarbiyaviy jarayonida zamonaviy o`qitish usullari-interfaol usullar, innovatsion texnologiyalarning o`rni va ahamiyati beqiyosdir. Pedagogik texnologiya va ularning ta`limda qo`llanilishiga oid bilimlar, tajriba talaba yoki tarbiyachilarning bilimli va etuk malakaga egaligini ta`minlaydi.

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TARMOQLI TUZILMA QISHLOQ XO’JALIGI KORXONALARINING SAMARALI FAOLIYATINI SHAKLLANTIRISH OMILI SIFATIDA

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Annotatsiya. Bozor sharoitida korxonaning qishloq xo’jaligi ishlab chiqarishi samaradorligiga korxona hajmi (er maydoni, ishchilar soni); agroiqlim sharoitlari; iqtisodiyotning transport yo’nalishlariga, qayta ishlash korxonalariga, shaharlarga, sanoat markazlariga nisbatan joylashishi; moddiy-texnik ta’minot (sanoat ishlab chiqarish materiallari, energiya tashuvchilar, binolar, uskunalar); tarmoq tuzilmasi (o’simlikchilik va chorvachilik o’rtasidagi bog’liqlik, ixtisoslashuv);

Kalit so’zlari. Tashqi omil, ichki omil, tarmoq tuzilmasi, ishlab chiqarish rentabelligi, o’simlikchilikning rentabelligi, resurs bozarlari.

Аннотация. Размер предприятия (земельная площадь, численность работающих) влияет на эффективность сельскохозяйственного производства предприятия в рыночных условиях; агроклиматические условия; расположение экономики по отношению к транспортным путям, перерабатывающим предприятиям, городам, промышленным центрам; материально-техническое обеспечение (материалы промышленного производства, энергоносители, здания, оборудование); сетевая структура (связь растениеводства и животноводства, специализация);

Ключевые слова. Внешний фактор, внутренний фактор, сетевая структура, рентабельность производства, рентабельность растениеводства, рынки ресурсов.

Qoraqalpog’iston Respublikasi qishloq xo’jaligi korxonalari ishlab chiqarish samaradorligiga ta’sirini ko’rib chiqamiz. Korxonaning tarmoq strukturasining iqtisodiy samaradorligi uning tovar tarmoqlarining iqtisodiy samaradorligi orqali namoyon bo’ladi, uni baholash uchun tovar mahsuloti tarkibini korxona foydasi tarkibi bilan solishtirish zarur. Mahsulot ishlab chiqarish rentabellik darajasini tahlil qilish qishloq xo’jaligi ishlab chiqarishi tarkibini, uning ixtisoslashuvini, hududiy joylashishini takomillashtirish masalasini aniqlashga, u yoki bu qishloq xo’jaligi mahsulotini ishlab chiqarish samaradorligini aniqlashga yordam beradi.

Belgilangan omillarning xodimlardan foydalanish samaradorligiga ta’sirini o’rganar ekanmiz, bunda qishloq xo’jaligi ekinlarining solishtirma og’irligining oshishi xodimlardan foydalanish samaradorligini oshirishga yordam berishi va ikkinchidan foydalanish samaradorligiga sezilarli darajada ta’sir qilishi hamda dasht zonasida - hatto biroz salbiy natija ko’rsatishi aniqlandi. Xuddi shu kabi

o’simlikchilikning rentabellik darajasining biroz oshishi xodimlardan foydalanish samaradorligini sezilarli darajada oshirishga yordam berishi aniqlandi.

Bizningcha, bunday mezonlar aholining oziq-ovqat mahsulotlariga bo’lgan ehtiyojlarini maksimal darajada qondirish; qishloq xo’jaligi yilining turli davrlarida ish vaqtidan to’liq foydalangan holda maksimal mehnat unumdorligi; zarur mahsulotlarni maksimal darajada ishlab chiqarish; mahsulotni ishlab chiqarish va tashish uchun minimal xarajatlar; qishloq xo’jaligi ishlab chiqarishining maksimal rentabelligi bo’lishi o’rinli.

Iqtisodiy samaradorlikka ta’sir etuvchi omil sifatida biz qishloq xo’jaligining alohida tarmoqlari tarkibidan uning yalpi mahsulotining umumiy hajmida foydalanamiz. Samaradorlik mezoni sifatida mahsulot rentabelligi ko’rsatkichini olamiz. Qoraqalpog’iston Respublikasida o’simlikchilikning rentabelligining uning eng muhim kichik tarmoqlarining o’simlikchilikning umumiy hajmidagi ulushiga bog’liqligini ko’rib chiqamiz (1.1.1-jadval).

Yillar	**O’simlikchilikning rentabelligi**	**O’simlikchilikning umumiy hajmida sanoatning ulushi**			
		Don va dukkaklilar	**Texnik ekinlar**	**Kartoshkachilik, sabzavotchilik, mevachilik, rezavorchilik**	**Boshqa mahsulotlar**
	Y1	X1	X2	X3	X4
2010	91,5	43,8	0,9	44,7	10,7
2015	51,1	40,2	0,8	41,0	18,0
2020	57,3	37,3	1,7	39,1	21,9
2021	58,1	36,3	2,0	38,2	23,5
2022	58,3	37,2	1,7	39,0	22,0
2023	58,6	39,8	2,0	41,8	16,5

1.1.1-jadval. Qoraqalpog’iston Respublikasi qishloq xo’jaligi korxonalarida o’simlikchilikning tarmoq tarkibi (%).

Ushbu bog’liqlikning matematik modeli quyidagicha ko’rinadi:

$Y_1 = a_0 + a_1X_1 + a_2X_2 + a_3X_3 + a_4X_4$

bu yerda: $Y_1 -$ o’simlikchilikning rentabellik darajasi;

a_0, a_1, a_2, a_3, a_4 o’simlikchilik uchun ko’p regressiya tenglamasining koeffitsientlari;

$X_1 -$ g’alla va dukkakli ekinlarning o’simlikchilikning umumiy hajmidagi solishtirma og’irligi;

X_2 sanoat ekinlarining umumiy o’simlikchilik hajmidagi solishtirma og’irligi;

$X_3 -$ kartoshka, sabzavot, meva va rezavor mevalarning umumiy ekin yetishtirish hajmidagi solishtirma og’irligi;

X_4 - boshqa mahsulotlarning o’simlikchilikning umumiy hajmidagi solishtirma og’irligi.

Ushbu omillar yordamida ekonometrik tahlilni olib borish uchun dastlab ular o’rtasidagi korrelyatsion bog’lanish asosida ularning to’g’ri tanlanganligini tekshirib olish lozim (1.1.2-jadval).

	Y1	*X1*	*X2*	*X3*	*X4*
Y1	1				
X1	0,822162	1			
X2	-0,70878	-0,72103	1		
X3	0,872022	0,68563	-0,59363	1	
X4	-0,77202	-0,78563	0,693631	0,693424	1

1.1.2-jadval. Qoraqalpog‘iston Respublikasi qishloq xo‘jaligi korxonalarida o‘simlikchilikning rentabellik ko‘rsatkichini tanlangangan omillar bilan korrelyatsiya koeffitsiyentlari.

Aniqlangan jadval qiymatlariga ko‘ra, barcha omillar to‘g‘ri tanlangan bo‘lib, ular natijaviy omil bilan X1(rY1,X1=0,822162) va X3(rY1,X3=0,872022) omillar to‘g‘ri kuchli zichlikda hamda X2(rY1,X2=-0,70878) va X4(rY1,X2=-0,77202) omillar teskari zichlikda bog‘langan. Omillar o‘rtasida o‘zaro bog‘lanishlarda rY1,X1<0,8 shartga binoan mulьtikoleniarlik mavjud emas va Eviews dasturidan foydalangan holda Qoraqalpog‘iston Respublikasi qishloq xo‘jaligi korxonalarida o‘simlikchilikning rentabellik darajasi o‘zgarishini ko‘p omilli regressiya tenglamasi aniqlanadi (1.1.3-jadval).

Dependent Variable: Y1
Method: Least Squares
Date: 06/01/24
Time: 11:01
Sample: 2010 2023

Included observations: 14

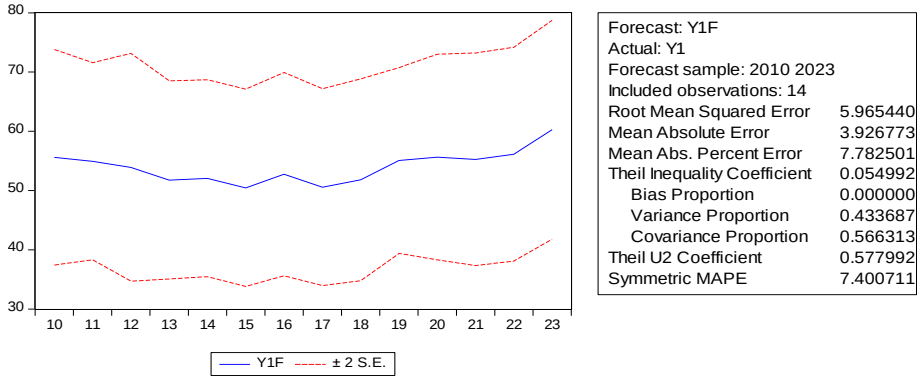
Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	2,154716	3,309096	0,65115	0.0531
X2	10,65174	5,957061	1,78809	0.0017
X3	18,71893	6,241605	2,99906	0.0440
X4	8,687412	4,62992	1,87636	0.0086
C	-975,8431	654,4898	-1,49099	0.0053
			t_{jad}=2,22814	
R-squared	0.82306	Mean dependent var		55.65714
Adjusted R-squared	8.12224	S.D. dependent var		11.59534
S.E. of regression	12.2836	Akaike info criterion		10.126863
Sum squared resid	1357.99	Schwarz criterion		10.355098
Log likelihood	-51.888	Hannan-Quinn criter.		10.105736
F-statistic	35.6460	Durbin-Watson stat		1.978461
Prob(F-statistic)	0.00036	F_{jad}=3,70827		

1.1.3-jadval. Qoraqalpog‘iston Respublikasi qishloq xo‘jaligi korxonalarida o‘simlikchilikning rentabellik ko‘rsatkichi o‘zgarishini ko‘p omilli regressiya tenglamasi natijalari.

Hisob-kitob natijalari bo‘yicha aniqlangan jadvalning 2-ustunida keltirilgan koeffitsiyent qiymatlaridan foydalangan holda, quyidagi chiziqli tenglama hosil qilinadi:

$$Y_1 = 2{,}2X_1 + 10{,}7X_2 + 18{,}7X_3 + 8{,}7X_4 - 975{,}8$$

Aniqlangan (1.1.2)-regressiya tenglamasi parametrlarining ahamiyatligini tekshirish uchun t-Statistic ustunida mezonlar bo‘yicha ahamiyatliligiga e'tibor qaratadigan bo‘lsak, α=0,05 va df=10 bo‘lgan holda t_{jad}=2,22814 ga tengligidan faqat kartoshka, sabzavot, meva va rezavor mevalarning umumiy ekin yetishtirish hajmidagi solishtirma og‘irligi – X_3 (t_{X3}=2,99906< t_{jad}=2,22814) ahamiyatli bo‘lib $t_{x1}>t_{jad}$ shartga ko‘ra, qolgan qolgan parametrlarning ahamiyatsizligi kelib chiqadi. Ushbu qolgan parametrlarning haqiqatda ahamiyatli yoki ahamiyatsizligini retrospektiv sifat mezonlari MAPE<10% va TIC<1 bilan tekshirishni amalga oshiriladi (1.1.1-rasm).



1.1.1-rasm. Qoraqalpog‘iston Respublikasi qishloq xo‘jaligi korxonalarida o‘simlikchilikning rentabellik ko‘rsatkichi o‘zgarishini ko‘p omilli regressiya tenglamasi parametrlarining retrospektiv mezonlar bilan tekshirish natijalari.

1.1.1-rasmda keltirilgan ma'lumotlarga asosan, MAPE=7,783 bo‘lib, bu o‘z navbatida MAPE=7,783<10% prognoz aniqligi yuqori va TIC=0,06 koeffitsiyentini nolga yaqinligidan va TIC=0,06<1 tengsizlik bajarilganlidan 1.1.2-regressiya tenglamasi parametrlarining barchasini ahamiyatliligi kelib chiqadi.

Hosil qilingan (1.1.2)-regressiya tenglamasini haqiqatdan ahamiyatliligini yoki olingan modelning o‘rganilayotgan jarayonga mosligi α=0,05 va k1=3; k2=10 bo‘lganda Fjad=3,7082 ga tengligini e'tiborga olgan holda hisoblangan Fisher qiymati F_{his}=35.65 tengligidan $F_{jad}<F_{his}$ shartga binoan (1.1.2)-regressiya tenglamasining ahamiyatliligi hamda DW=1.979 ga teng bo‘lganligi ya'ni qiymatni 2 atrofidaligi bois, avtokorrelyatsiya mavjud emasligidan tenglamaning ishonchli va adekvatligi kelib chiqadi.

Olingan natijalar asosida aniqlangan (1.1.2)-regressiya tenglamasiga iqtisodiy izoh beradigan bo‘lsak, tanlangan omillarning har birini ya'ni, don va dukkakli

ekinlar ulushini, kartoshkachilik, sabzavotchilik, mevachilik, rezavorchilik hamda boshqa mahsulotlar xajmini 1,0 %ga oshiriladigan bo‘lsa, u holda Qoraqalpog‘iston Respublikasi qishloq xo‘jaligi korxonalarida o‘simlikchilikning rentabellik darajasi mos ravishda 0,9 %, 7,8 % va 1,4 % qo‘shimcha oshirish imkoni borligi aniqlandi. Bu borada Respublikada ayniqsa, kartoshkachilik, sabzavotchilik, mevachilik, rezavorchilik mahsulotlarini yetishtirishga alohida e'tibor qaratib, ularni respublika hududlarida yetishtirish va ularni rag‘batlantirish chora-tadbirlarini ishlab chiqish maqsadga muvofiqdir.

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ҚОРАҚАЛПОҒИСТОНДА ЖУРНАЛИСТИКА СОҲАСИНИ ЎРГАНИШНИНГ ИЛМИЙ-ПЕДАГОГИК ТАҲЛИЛИ

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Abstract. This article depicts scientific-research works in historical and philological aspects in the field of journalism in Karakalpakstan. In the future, it is recommended to study new aspects in this field, including journalistic and pedagogical. Also, the urgency of conducting a separate research on the problem of training journalists in Karakalpakstan on the basis of pedagogical approaches is scientifically based.

Keywords. Karakalpak journalism, mass media, journalism education, training of qualified journalist personnel, Karakalpak press, specialization, journalistic and pedagogical approaches.

Аннотация. В статье анализируется исследовательская работа, проводимая в области журналистики Каракалпакстана, и в историко-филологическом аспекте. В дальнейшем рекомендуется изучать сферу в новых аспектах, в том числе журналистских и педагогических. Также научно обоснована актуальность проведения отдельного исследования по проблеме

подготовки журналистов в Каракалпакстане на основе педагогических подходов.

Ключевые слова. Каракалпакская журналистика, средства массовой информации, журналистское образование, подготовка квалифицированных журналист кадров, каракалпакская пресса, специализация, журналистско-педагогические подходы.

Аннотация. Ушбу мақолада Қорақалпоғистонда журналистика соҳасида олиб борилган тарихий-филологик аспектлардаги илмий-тадқиқот ишлари таҳлил қилинади. Истиқболда соҳани янги аспектларда, жумладан журналистик-педагогик жиҳатдан тадқиқ қилиш тавсия этилади. Шунингдек, Қорақалпоғистонда журналист кадрларни тайёрлаш муаммоси бўйича педагогик ёндашувлар асосида алоҳида тадқиқот ишини олиб бориш долзарблиги илмий асосланади.

Калит сўзлар. Қорақалпоғистон журналистикаси, оммавий ахборот воситалари, журналистик таълим, малакали журналист кадрлар тайёрлаш, қорақалпоқ матбуоти, ихтисослашув, журналистик-педагогик ёндашувлар.

Кириш. Мамлакатимизда истиқлолнинг дастлабки йилларидан барча соҳалар қатори оммавий ахборот воситалари (ОАВ) фаолиятини ривожлантиришга алоҳида эътибор қаратилди. Янги ҳуқуқий демократик давлат ва эркин фуқаролик жамиятини барпо этиш жараёнларида замонавий миллий журналистикани янги босқичга кўтариш асосида ривожлантириб бориш, ОАВнинг очиқлиги ва ошкоралиги, эркинлигини таъминлаш бўйича қатор тизимли ишлар амалга оширилмоқда. Айниқса, соҳага ҳар томонлама билимли, етук, юқори малакали мутахассислар тайёрлаш жараёнига эътибор кучайди.

Давлатимизда амалга оширилаётган демократик янгиланишлар ҳақида республика аҳолисини, жаҳон ҳамжамиятини ўз вақтида хабардор қилишга, шунингдек, дунё ахборот майдони глобаллашуви кучаяётган шароитда содир бўлаётган воқеаларга тез ва холис муносабат билдира олишга қодир бўлган юқори малакали кадрлар тайёрлаш ва қайта тайёрлаш борасида кенг қамровли ишлар олиб борилмоқда. Бу борада Ўзбекистон Республикаси Президентининг 2017 йил 7 февралдаги ПФ-49-47-сонли Фармони билан тасдиқланган 2017-2021 йилларда Ўзбекистон Республикасини ривожлантиришнинг бешта устувор йўналиши бўйича Ҳаракатлар стратегияси, Ўзбекистон Республикаси Вазирлар Маҳкамасининг 1999 йил 26 февралда қабул қилинган “Журналист кадрлар тайёрлаш ва қайта тайёрлаш тизимини такомиллаштириш тўғрисида”ги, 2006 йил 7 августдаги “Оммавий ахборот воситалари соҳасида кадрлар тайёрлаш ва қайта тайёрлаш давлат дастури тўғрисида”ги қарорлари [1] муҳим омил бўлди. Уларнинг ижроси доирасида миллий журналистика таълими соҳасида жиддий ўзгаришлар рўй бермоқда.

Асосий қисм: материаллар ва усуллар. Дарҳақиқат, оммавий ахборот воситалари мамлакатимизда фуқаролик жамиятини қарор топтиришда ижтимоий ҳаётнинг мухим бўғини бўлганлиги боис, журналистика тизими ва

ушбу соҳага мутахассислар тайёрлаш доимо олимлар диққат марказида бўлган. Шу ўринда алоҳида қайд этиш жоизки, ҳозирги замон талабига жавоб берадиган олий малакали журналист кадрлар тайёрлаш учун, энг аввало миллий журналистикамиз тарихи ва тараққиёт босқишларини илмий нуқтаи назардан бўлажак мутахассислар онгига чуқур сингдиришимиз зарур.

Маълумки, мустақиллик йилларига қадар Қорақалпоғистон журналистикаси тарихи бўйича, айниқса Қорақалпоғистонда матбуотнинг вужудга келиши ва ривожланиши билан боғлиқ тарихий аспектда илмий изланишлар олиб борилганлиги боис, қатор илмий оммабоп асарлар, китоб ва мақолалар чоп этилди. Жумладан, Я.Досумов, А.Панабергенов, И.Семенов, У.Суинов, Т.Пайзуллаева, М.Ниязова, Г.Матёқубова, Г.Досымбетов, О.Юсуповларнинг асарлари миллий матбуотимиз тарихидан маълумотлар берувчи дастлабки илмий тадқиқотлардан ҳисобланади.

Истиқлол йилларида журналистика соҳасидаги илмий изланишлар тамомила янги поғонага кўтарилди. Илмий изланишларнинг мавзу-мундарижаси бойиди, буларнинг самараси ўлароқ миллий журналистика назарияси ҳар жиҳатдан улғайди, шаклланди. Илмий таҳлил шуни кўрсатдики, мустақилликдан кейинги йилларда Қорақалпоғистонда журналистика соҳаси бўйича бир қанча илмий-тадқиқот ишлари олиб борилиб, энг аввало миллий журналистикамиз тарихи изчил ўрганишга киришилди. Жумладан, Т.Мадреймовнинг номзодлик ишида [2] Қорақалпоғистонда оммавий ахборот воситалари тарихи, айниқса республикамизда радио ва телевидениенинг ташкил топиши ва ривожланиши тадқиқ қилинган. Диссертацияда қорақалпоқ радиожурналистикасининг асосий ривожланиш босқишлари ҳамда тележурналистика ўсишининг ўзига хос йўналишлари ёритилган бўлса, Д.Бекбаулиевнинг тадқиқот ишида [3] 1991-1994 йиллар оралиғидаги қорақалпоқ матбуотини миллий мустақиллик асосида қайтадан ташкил этиш ва янги миллий мазмун билан бойитиш масалалари сўз этилган.

Таъкидлаб ўтишимиз жоизки, газета жанрларининг тил хусусиятлари мисолида тил, ёзма нутқ маданияти ва маҳорати масалаларига доир филология фанлари доктори (DSc) З.Оразимбетова самарали изланишлар олиб бормоқда. У қорақалпоқ вақтли матбуоти тилининг шаклланиши ва ривожланиши бўйича ўз тадқиқот ишларини олиб борди. Ўнинг «Қорақалпоқ вақтли матбуоти тилининг услубий хусусиятлари» [4] мавзусидаги докторлик диссертация ишида мустақиллик йилларида қорақалпоқ тилида нашр этилган газета ва журнал нашрларининг тили ва жанрлар услуби ўрганилиб, матбуот тилининг қорақалпоқ адабий тилига таъсири очиб берилган.

Узоқ йиллар давомида публицистика назариясини тадқиқ қилган Т.Машарипова ўз илмий ишида [5] публицистиканинг назарий концепциясини ярата олганлигини кўришимиз мумкин. Олима томонидан Қорақалпоғистон матбуотида эълон қилинган публицистик асарлар чуқур ўрганилган. Шунингдек, унинг “Публицистика назариясининг яхлит концепцияси: илмий-методологик таҳлил (Қорақалпоғистон матбуоти материаллари мисолида)” номли илмий асари публицистика назарияси бўйича нафақат Қорақалпоғистон, балки Ўзбекистон журналистикасидаги йирик монографиялардан бўлди.

Сўнги йилларда журналистикада ихтисослашув жараёнининг кучайиши соҳа илм-фанида ҳам ўз аксини топмоқда. Масалан, тадқиқотчи Ж.Марзияевнинг экожурналистика мавзусидаги докторлик диссертациясида [6] қорақалпоқ матбуотида экология мавзуидаги чиқишларнинг ривожланиш тенденциялари ҳамда ўзига хос хусусиятлари ўрганилган бўлса, ёш олима Қ.Бегниязованинг изланишлари [7] Қорақалпоғистонда интернет журналистикасининг шаклланиши ва ривожланиш хусусиятларини ўрганишга бағишланган.

Шунинг билан бир қаторда, соҳанинг етакчи олимларидан М.Жумамуратова, А.Абдимуратов, З.Қожықбаева, Б.Палуанов, П.Алламбергенова, Қ.Қалекеев, Ҳ.Атажанов ва бошқа бир қатор тадқиқотчилар томонидан ўқув қўлланма ва тадқиқотларда, мақолаларда қорақалпоқ журналистикасининг назарий ва амалий масалалари, ўқитиш усулларига ҳам ижодий, ҳам илмий ёндашувлар муайян фан доирасида ўрганилган.

Натижа ва мулоҳазалар. Ҳозирда журналистикага доир изланишларнинг ривожланиши соҳанинг бошқа кўплаб фан ва фан тармоқлари билан ҳамкорлик қилишига кенг йўл очмоқда. Бу эса ўз навбатида, журналистика илмининг янги аспектлардаги илмий ёндашувларга мойиллиги сезилмоқда. Масалан, журналистик таълим муаммосини олиб қарайлик. Мазкур муаммо республикамизда эълон қилинаётган кўплаб мақолалар ҳамда журналистик чиқишлар орқали қисман ёритилган бўлса-да, айнан замонавий шароитда журналистларни тайёрлашга қўйиладиган талаблар, шароитлар, ўқитиш жараёнларига бўлган янгича журналистик-педагогик ёндашувлар тадқиқи ҳали-хонуз амалга оширилмаган. Шунингдек, соҳа бўйича таҳлил этилган маҳаллий тадқиқот ишларининг аксарияти филологик, базилари тарихий аспектда ўрганилганлиги, мазкур муаммони педагогик жиҳатдан ўрганиш заруратини келтириб чиқармоқда. Шу боис, ушбу муаммо журналистика ва таълим соҳаларида катта аҳамиятга эга долзарб мавзулардан ҳисобланади.

Қорақалпоғистон журналистикаси бўйича олиб борилган илмий тадқиқотларни ўз мақсади ва вазифаларидан келиб чиққанлиги ҳамда уларнинг Қорақалпоғистонда журналистик таълимнинг шаклланиши ва мустақиллик йилларидаги тараққий этиш жараёнини очиб бера олмаганлиги боис, Қорақалпоғистонда журналист кадрларни тайёрлаш муаммоси алоҳида тадқиқот объекти сифатида ўрганишни талаб этади.

Хулоса. Юқорида таҳлил қилинган илмий асарлар, монография ва диссертациялар тадқиқот объектидан келиб чиқиб, Қорақалпоғистонда журналистик таълим тарихи ва ривожланиш хусусиятларини ўрганиш учун муҳим манба бўлиб хизмат қилади.

Умуман, фикр ва мулоҳазаларимизни илмий асослаган ҳолда, Қорақалпоғистонда журналист кадрларни тайёрлаш муаммоси бўйича алоҳида илмий диссертация объекти сифатида тадқиқот олиб бориш ва қўйидаги масалаларга алоҳида эътибор қаратиш кўзда тутилади:

– Қорақалпоғистонда журналист кадрларни тайёрлашнинг тарихий-педагогик генезиси ва ҳозирги ҳолатининг ўзига хос хусусиятларини ўрганиш;

– Олий маълумотли журналист кадрлар тайёрлаш жараёнини такомиллаштириш бўйича илмий хулосалар чиқариш;

– Қорақалпоғистонда журналистика соҳасида илмий-педагог кадрлар тайёрлаш жараёнини таҳлил этиш;

– Замонавий шароитда олий маълумотли журналист мутахассислар тайёрлашнинг самарали механизмлари ҳамда истиқболда Қорақалпоғистонда профессионал журналист кадрлар тайёрлаш жараёнини ривожлантириш йўналишлари бўйича илмий хулосалар ва тавсиялар ишлаб чиқиш лозим.

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ВОСПИТАТЕЛЬНЫЙ ПОТЕНЦИАЛ НАРОДНОЙ ПЕДАГОГИКИ В СОВРЕМЕННОМ ОБРАЗОВАТЕЛЬНОМ ПРОСТРАНСТВЕ

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Annotation. This work is devoted to the study of educational potential of folk pedagogy and its role in modern educational process. The article considers the main principles and methods of folk pedagogy, as well as their influence on the formation of personal and social qualities in young people. Special attention is paid to cultural succession, which provides a bridge between generations and promotes the transfer of values and traditions. The benefits of introducing popular pedagogy into educational programs, such as developing respect for one’s own culture, building responsibility and social inclusion, are also discussed. The article emphasizes the need to train

teachers to work with folk traditions, as well as to create partnerships with cultural institutions for the effectiveness of the educational process.

Keywords. National pedagogy, educational potential, educational process, cultural succession, values and traditions, pedagogical interaction.

Аннотация. Данная работа посвящена исследованию воспитательного потенциала народной педагогики и её роли в современном образовательном процессе. В статье рассматриваются основные принципы и методы народной педагогики, а также их влияние на формирование личных и социальных качеств у молодежи. Особенное внимание уделяется культурной преемственности, которая обеспечивает связующую нить между поколениями и способствует передаче ценностей и традиций. Также обсуждаются преимущества внедрения народной педагогики в образовательные программы, такие как развитие уважения к собственной культуре, формирование ответственности и социальной включенности. Статья подчеркивает необходимость подготовки педагогов для работы с народными традициями, а также создания партнерств с культурными учреждениями для эффективности образовательного процесса.

Ключевые слова. Народная педагогика, воспитательный потенциал, образовательный процесс, культурная преемственность, ценности и традиции, педагогическое взаимодействие.

Введение. Современное общество сталкивается с многочисленными вызовами в области образования и воспитания подрастающего поколения. В условиях глобализации, стремительного научно-технического прогресса и изменения социокультурных норм значение воспитания становится особенно актуальным. В этой связи обращение к народной педагогике, накапливший богатый опыт взаимодействия человека с окружающей средой и формирования культурных ценностей, представляет собой востребованное направление в исследовании. Актуальность темы заключается в том, что народная педагогика содержит в себе уникальные методы и подходы, способные не только обогащать образовательный процесс, но и способствовать формированию гармоничной личности. В условиях современного образовательного пространства, где наблюдается тенденция к стандартизации и унификации образовательных программ, важно учитывать опыт и традиции, которые веками формировали нравственные и культурные основы сообщества.

Обзор литературы показывает, что народная педагогика содержит в себе разнообразные воспитательные традиции, которые могут обогащать современную педагогическую практику [5; сс. 20-24]. Многие исследователи обращают внимание на необходимость интеграции народной мудрости в образовательные программы, подчеркивая её значимость для формирования нравственных и культурных ценностей у молодёжи [2; сс. 8-12].

Методология. Исследование воспитательного потенциала народной педагогики был основан на эмпирическом подходе. С целью выявления мнения педагогов и учеников о значимости народной педагогики в современном образовании был разработан анкета. Анкетирование позволило собрать

количественные и качественные данные, которые помогут лучше понять восприятие народных традиций в воспитательном процессе. Собранные данные был подвергнуты качественному и количественному анализу. Количественные данные были обработаны с использованием статистических методов, что позволило выявить закономерности и тенденции, в то время как качественные данные помогли осветить конкретные примеры и контексты применения народной педагогики.

Результаты исследования. В современном образовательном процессе особое внимание уделяется воспитательному потенциалу народной педагогики. Это направление, основанное на исторически сложившихся методах и подходах к воспитанию, становится все более актуальным в условиях глобализации и стремительных изменений в обществе. Проведенное исследование позволило выявить ключевые аспекты народной педагогики, ее эмпирическую значимость и практическое применение в образовательных учреждениях.Народная педагогика основывается на принципах традиционности, коллективизма и практической значимости. Традиционность подразумевает использование методов, проверенных временем, что позволяет сохранить культурные особенности и передать их следующему поколению. Коллективизм акцентирует внимание на социальной ответственности, формируя у учащихся понимание важности взаимодействия в группе. Практическая значимость обучения через опыт, близкий к реальной жизни, способствует более глубокому усвоению знаний и навыков. Кроме того, интеграция народной педагогики играет важную роль в сохранении культурных традиций. Это не только способствует формированию идентичности, но и развивает уважение к культурным ценностям, что особенно важно в многонациональном обществе. В рамках исследования было проведено анкетирование более 300 педагогов и учеников, результаты которого показали высокий интерес к элементам народной педагогики. 78% респондентов отметили, что использование этих элементов может повысить качество образования. Педагоги также подчеркнули, что народные традиции способствуют формированию у учащихся чувства ответственности и уважения к старшим. Интервью с преподавателями подтвердили, что многие из них активно применяют практики народной педагогики в своей работе. Это проявляется в проведении занятий по культуре и традициям региона, что, в свою очередь, повышает мотивацию учащихся и их вовлеченность в учебный процесс. Наблюдение за практикой в 10 образовательных учреждениях выявило интеграцию народной педагогики через специальные проекты и мероприятия, посвященные народной культуре. Внедрение традиционных обрядов в праздники и экскурсии создает уникальную атмосферу, способствующую более глубокому восприятию материала. На основе собранных данных была разработана модель внедрения народной педагогики в учебный процесс. Она включает создание программ подготовки педагогов, разработку учебных материалов на основе народных традиций и вовлечение родителей и сообщества в организацию мероприятий. Такой подход позволит не только обогатить учебный процесс, но и создать условия для обмена знаниями о культуре между разными поколениями. Исходя

из результатов исследования, можно выделить несколько рекомендаций. Во-первых, активно внедрять элементы народной педагогики в образовательные программы, особенно в начальных классах. Во-вторых, повышать осведомленность педагогов о ценности народных традиций через специальные курсы и семинары. В-третьих, развивать сотрудничество с местными культурными и общественными организациями для обогащения учебного процесса. Исследование подтвердило значимость народной педагогики как важного компонента воспитательного процесса. Интеграция народных традиций в современное образование не только способствует сохранению культурного наследия, но и помогает развитию личностных качеств учащихся, таких как уважение, ответственность и чувство общности. Таким образом, народная педагогика представляет собой мощный инструмент для формирования гармоничной личности в условиях современного общества.

Обсуждение. Обсуждение результатов исследования о воспитательном потенциале народной педагогики позволяет глубже оценить не только значение данной темы, но и влияние культурных традиций на процесс образования. Народная педагогика играет ключевую роль в сохранении культурной идентичности, особенно в условиях глобализации, когда традиционные ценности могут быть под угрозой. Использование элементов народной педагогики в образовательном процессе способствует формированию у учащихся уважения к своим корням и понимания важности их культурного наследия. Это, в свою очередь, может быть важным механизмом для повышения интереса молодого поколения к сохранению и развитию культурных традиций. Результаты эмпирического исследования показывают, что использование народной педагогики влияет на мотивацию учащихся. Вовлечение в практическую деятельность, основанную на традициях, может делать учебный процесс более интересным и значимым для учеников. Особенно это актуально для детей начальных классов, которые лучше усваивают материал через игровые и практические формы. Интеграция народной педагогики способствует формированию системы ценностей у молодежи. Понятия уважения, коллективизма и социальной ответственности, акцентируемые в народных традициях, становятся основой для воспитания гармоничных личностей. Это создает необходимые условия для формирования здоровой и ответственной гражданской позиции у будущих поколений. Несмотря на очевидные преимущества, существуют и вызовы, связанные с внедрением народной педагогики в образовательный процесс: Недостаток ресурсов: Во многих образовательных учреждениях отсутствуют программы и материалы, которые могут помочь педагогам в интеграции народной педагогики. Сопротивление изменениям: Некоторые учителя могут не видеть необходимости в использовании народных методов или испытывать трудности с их применением. Это может быть связано как с недостаточной подготовленностью, так и с упорством в традиционных методах обучения. Современные реалии: Мировая интеграция и стремительное развитие технологий могут затушевать значимость народных традиций. Педагогам необходимо находить баланс между инновациями и культурными традициями.

Для успешной интеграции народной педагогики в образовательный процесс можно рассмотреть следующие рекомендации: Подготовка педагогов: Важно организовать курсы и семинары для учителей, чтобы повысить их осведомленность о народной педагогике и развить навыки её применения. Создание партнерств: Сотрудничество с местными культурными центрами, этнографическими организациями и родителями укрепит связь образовательного процесса с культурным наследием. Проекты на основе традиций: Разработка междисциплинарных проектов, которые объединяют науки и народные традиции, поможет усваивать знания в контексте. Обсуждение исследовательских результатов подтверждает, что народная педагогика — это мощный инструмент для воспитания гармоничных личностей и формирования социальной ответственности у молодежи. Применение традиционных ценностей и практик в образовательном процессе имеет положительное влияние на личное и культурное развитие учащихся, однако для успешной интеграции необходимо преодолеть ряд вызовов. Важно продолжать работу в данном направлении, создавая условия для эффективного и органичного включения народной педагогики в современное образование.

Заключение. Исследование воспитательного потенциала народной педагогики позволяет утверждать, что традиционные образовательные практики и ценности имеют значительное значение в формировании личности, а также в развитии социальных навыков у молодежи. Народная педагогика не только способствует культурной преемственности, но и обогащает образовательный процесс, делая его более значимым и привлекательным для учащихся. Актуальность использования народных традиций в современном образовании заключается в том, что они помогают формировать у детей уважение к своей культуре, развивать чувство ответственности и включенности в общественные процессы. Тем не менее, для успешной интеграции народной педагогики в образовательные программы необходимо преодолеть существующие препятствия, такие как недостаток ресурсов и инерция учебных систем. Важными шагами в этом направлении являются подготовка педагогов, создание партнерств с культурными организациями и внедрение проектного подхода, основанного на традициях. Это позволит использовать народные методы как эффективный инструмент для формирования у учащихся ценностей, необходимых для успешной жизни в современном обществе. Таким образом, народная педагогика представляет собой важный компонент комплексного подхода к образованию, способствующий развитию гармоничной личности и устойчивого гражданского общества.

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OLIY TA’LIMDA SHAXS ESTETIK FAOLLIGINI SHAKLLANTIRISHDA INFORMATSION TEXNOLOGIYALARNING O`RNI

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Annotatsiya. Ushbu maqolada tadqiqotning maqsadi shaxs estetik faolligining shakllanishda informatsion texnologiyalarni shaxsni tarbiyalab yangicha tafkkur asosida innovatsion va transformatsion jihatlarining o’ziga xosligi va uning hozirgi islohotlar davridagi ahamiyatini ochib berishga harakat qilingan.

Kalit so‘zlar. Axborot texnologiyalari, estetik faoliyat, visual va ovoz effektlari, yuqori sifatli kontent, Smartfonlar, qaramlik, tanqidiy fikrlash, o`z-o`zini ifoda etish.

Tadqiqot usullari. Maqolada kompleks yondoshuv, tarixiylik va mantiqiylik, tizimlilik, qiyosiy tahlil, kuzatuv, sotsiologik so’rovnoma kabi tadqiqot usullaridan foydalanilgan.

Kirish. Bizga ma’lumki, Oliy ta’limda shaxsning estetik faolligini shakllantirish zamonaviy ta’limda juda muhim. Axborot texnologiyalari esa bu jarayonga yanada rang-baranglik va imkoniyatlar beradiMamlakatimizni innovatsion rivojlantirish strategiyasi va mexanizmlari, eng avvalo, shu davlatda yaratilgan intelektual va ilmiy texnikaviy salohiyatdan qanchalik samarali foydalanish bilan chambarchas bog`liq [1; 224 b.]. Oliy ta’limda axborot texnologiyalari shaxsning estetik faoliyatini shakllantirishda muhim ahamiyat kasb etadi. Ular bizga san’at, musiqa, fotosuratlar, videolar, visual va ovoz effektlarini yaratish va tarqatish, shuningdek, ijobiy ishimizni boshqa odamlar bilan muloqot qilish va baham ko`rish imkonini beradi. Oliy ta’limda shaxsning estetik faoliyatini shakllantirishda axborot texnologiyalaridan foydalanishdagi asosiy muammolardan biri bu yuqori sifatli kontentning mavjudligidir. Internetda estetik didning rivojlanishiga salbiy ta`sir ko`rsatishi mumkin bo`lgan juda ko`p ma`lumotlar va past sifatli materiallar mavjud. Shuning uchun, yuqori sifatli tarkibni qanday tanlashni o`rgansh muhimdir. Yana bir

muammo- axborot texnologiyalariga qaramlik. Samartfonlar, kompyuter va boshqa qurilmalardan tez-tez foydalanish real hayotdan uzilib qolishga, odamlar bilan muloqotning cheklanishiga va analogiya san`at turlariga qiziqishning yo`qolishiga olib keladi. Shu bois, Oliy ta'limda axborot texnologiyalaridan oqilona foydalanishni o`rganish, virtual va real dunyoda o`tkazilgan vaqtni muvozanatlash zarur.

Informatsion texnologiyalar-estetik global vositasi. Bir paytlar tabiiy va texnika bo'yicha mutaxassislar tayyorlaydigan oliy ta`lim muassasalari talabalariga "Sizning idealingiz asosan qaysi sohalarda aks etadi?" degan savolga ularning ko'pchiligi san`at, adabiyot va ma`rifat sohasida ko`proq aks etadi, degan javob berishgani ham fikrlarimizni isbotlaydi [2; 2 b.]. Bizning estetik idealimiz asosan axborot texnologiyalari, san'at va dizayn sohalarida namoyon bo'ladi. Biz yoshlarning o'sish uchun ma'lumot olish, almashish va foydalanishga yordam beradigan vositalarni yaratishga mexanizmlarini ishlab chiqishimiz zarur.

Endi qanday qilib Oliy ta'limda shaxs estetik faolligini shakllantirishda information texnologiyalar yordam berishini ko`rib chiqamiz

1. San'at asarlari bilan tanishtirish. Axborot texnologiyalari orqali talabalar turli san'at asarlari bilan tanishish imkoniga ega bo`ladi. Masalan, onlayn muzeylar, virtual galeriyalar, san'at asarlari, haqida ma'lumot beradigan saytlar va dasturlar talabalarga turli xil rasmlar, haykallar, me'morchilik namunalari, musiqa va teatr asarlarini o`rganishga imkon beradi.
2. Ijodiy loyihalar uchun imkoniyatlar. IT talabalrga o`zlarining ijodiy qobiliyatlarini rivojlantirish uchun ko`plab imkoniyatlar yaratish imkoniga ega. Masalan, grafik tahrirlash dastrulari (Potoshop, GIMP) yordamida talabalar rasm chizish, fotomontaj qilish, dizayn yaratish kabi ijodiy faoliyatlar bilan shug`ullanishlari mumkin. Video tahrirlash dasturlari (Adobe Premiere Pro, Final Gut Pro) yordamida esa qisqa metrajli filmlar, animatsion filmlar yaratish, musiqalarga kliplar tayyorlash mumkin. Bundan tashqari, 3D modellashtirish dasturlari (Blender, Maya) yordamida talabalr virtual olamni o`zlarining tasavvurlari bilan boyitish imkoniga ega bo`ladi
3. Estetik qobiliyatlarni o`rganish. Internetda turli xil san'at tarixi, estetika, madaniyat haqida ma'lumot beradigan saytlar va onlayn kurslar mavjud. Bu ma'lumotlar talabalarga turli davrlar mamlakatlar va madaniyatlarning estetik qadriyatlari bilan tanishishga imkon beradi.
4. Ijodiy jamoalar va guruhlar: Internet orqali talabalar turli xil ijodiy jamoalar va guruhlarga qo'shilishi, o'z ishlari bilan bo'lishishi, fikr almashishi va birgalikda ijodiy loyihalar ustida ishlashi mumkin. Bu jarayon talabalarni o'z ishlarini boshqalarga ko'rsatishga undaydi, o'zlarining ijodiy qobiliyatlarini rivojlantirishga va boshqalar bilan hamkorlik qilishga undaydi.
5. Estetik ta'sirni oshirish: IT orqali talabalarga turli xil san'at asarlarini yuqori sifatda tomosha qilish, tinglash va o'rganish imkoniyati yaratilishi mumkin. Masalan, 4K formatdagi videolarni tomosha qilish, yuqori sifatli audio tizimlar orqali musiqa tinglash, virtual reallik texnologiyalari yordamida san'at asarlarini o'rganish talabalarning estetik ta'sirini oshirishga yordam beradi.

Tanqidiy fikrlashni rivojlantirish, yuqori sifatli kontetni tanlashni o`rganish, virtual va real dunyoda o`tkaziladigan vaqtni muvozanatlash va raqamli tafovutni

kamaytirish ustida ishlash kerak. “Aytish mumkinki, axborot va kommukiatsiya texnologiyasi bugungi kunda insoniy va iqtisodiy taraqqiyotning muhim vositaisga aylanishi natijasida odamlarning turmush tarzini, o`zaro aloqasini hatto tashqi ko`rinishini ham tubdan o`zgartirishga olib keldi” [3; 177 b.]. Oliy ta’limda shaxsning estetik faolligini shakllantirishda axborot texnologiyalariga quyidagilar kiradi:

1. Mavjudligi va mazmuni xilma-xilligi: Axborot texnologiyalari musiqa, kino, tasviriy san`at, adabiyot va boshqalar kabi axborot va san`atning har xil turlaridan keng foydalanish imkonini beradi. Inson o`zi yoqtirgan va qiziqtirgan narsalarni tanlash imkoniyatiga ega.

2. O`z-o`zini ifoda etish imkoniyati: Axborot texnologiyalari yordamida inson asarlarini yaratish va boshqalar bilan bo`lishishi mumkin. Masalan, maxsus dasturlar yoki ilovalar yordamida musiqa yoki fotosuratlar yaratish.

3. Tajriba almashish: Axborot texnologiyalari odamlarga bir-biri bilan muloqot qilish, badiiy asarlardan olgan taassurotlari bilan o`rtoqlashish, ularni muhokama qilish va tahlil qilish imkonini beradi. Bu estetik idrokning rivojlanishiga hissa qo`shadi va shaxsga o`z ufqlarini kengaytirish imkonini beradi.

4. O`qish imkoniyati: Axborot texnologiyalari shaxsning san`at va uning tarixini o`rganishi, bu boradagi ko`nikma va bilimlarini rivojlantirish mumkin bo`lgan ta`lim resurslaridan foydalanish imkonini beradi.

5. Shaxsiylashtirish: Axborot texnologiyalari kontenti shaxsiy imtiyozlar va qiziqishlarga moslashtirish imkonini beradi. Bu shaxsiy estetik makonni yaratishga va o`z uslubingizni rivojlantirishga yordam beradi.

6. Globallashuv: Axborot texnologiyalari geografik va madaniy chegaralarni qisqartirib, insonga butun dunyodan turli san`at turlaridan foydalanish imkonini beradi. Bu uning madaniy tajribasini kengaytiradi va estetik didni shakllantirishga yordam beradi. Ammo shuni ta`kidlash kerakki, axbobot texnologiyalari axborotning haddan tashqari yuklanishi, virtual olamga qaramlik yoki tashqi dunyo bilan haqiqiy aloqani yo`qotish kabi salbiy oqibatlarga olib kelishi mumkin. Shuning uchun axborot texnologiyalaridan muvozanatli va ongli ravishda foydalanish muhim ahamiyatga ega.

Xulosa. Xulosa qilib aytganda, axborot texnologiyalari oliy ta'limda shaxsning estetik faolligini shakllantirishga muhim hissa qo'shadi. Ular talabalarga san'at asarlari bilan tanishish, ijodiy faoliyatlar bilan shug'ullanish, estetik qadriyatlarni o'rganish, ijodkor jamoalarga qo'shilish va estetik ta'sirni oshirish imkoniyatlarini taqdim etadi.

Bundan tashqari, biz mahsulotlarimizni estetik jihatdan yoqimli va ulardan foydalanish yoqimli bo'lish tomonlarini ta'minlamog’imiz kerak. Raqamli tafovut muammosini ham aytib o`tish joiz. Ba`zi odamlar moliyaviy cheklovlar yoki geografik masofa tufayli axborot texnologiyalaridan foydalana olmaydi.

Tadqiqot natijalari. Oliy ta’limda shaxs estetik faolligini shakllantirishning umumnazariy asoslari, imkoniyatlari va innovatsion va transformatsion o’zgarishlarning mexanizmlari ishlab chiqilgan;

Oliy ta’limda shaxs estetik faolligini shakllantirishning innovatsion va transformatsion jarayonda talabalarning faolligini tartibga solish, ularda mehnatga

ijodiy yondoshish malakalarini uyg'otishda foydalanishga oid amaliy takliflarni hamda tavsiyalarni o'z ichiga oluvchi uslubiy tavsiyalar ishlab chiqish;

Innovatsion va transformatsion o'zgarishlarning shaxs estetik faolligiga ta'sirini, yanada kengaytiish va takomillashtirish yuzasidan taklif va tavsiyalar ishlab shiqish.

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LEXICAL COMPETENCE AS THE FOUNDATIONAL BASIS IN FOREIGN LANGUAGE LEARNING

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Annotation. In this work we will examine the significance of lexical competence in foreign language education. We will explore the fundamental concepts associated with the lexical aspect of foreign language instruction, as well as the levels of lexical competence development and its specific characteristics.

Key words. Lexical competence, competence, foreign language learning, levels of lexical competence.

In contemporary society, proficiency in foreign languages plays a crucial role in professional activities. One of the key aspects of foreign language mastery is lexical competence. Lexical competence encompasses the knowledge and use of various words and expressions, as well as the ability to apply them correctly in context. It is an integral component of linguistic competence and plays a significant role in the development of professional communicative competence among students in non-linguistic higher education institutions.

Lexical competence involves not only the knowledge of individual words and expressions, but also the ability to utilize them in diverse communicative situations. It includes both passive skills, such as understanding foreign speech, and active skills, such as expressing one's thoughts in a foreign language. Lexical competence is a vital element of both expressive and receptive forms of speech activity.

Lexical competence is part of the structure of linguistic competence, which is a constituent element of foreign language communicative competence. The components of lexical competence consist of motivational, cognitive, practical, and reflective elements.

Lexical competence is an integral component of linguistic competence, which itself is a constituent part of foreign language communicative competence. It

encompasses the understanding and utilization of various lexical units, including terms, phrases, expressions, and words specific to particular professional domains.

The lexicon-grammar composition of any language serves as its foundation. Therefore, lexical competence is an essential element of foreign language communicative competence, aimed at developing the ability to successfully address tasks of mutual understanding and interaction with native speakers of the target language, in accordance with the norms and cultural traditions during both direct and mediated contacts. Lexical competence involves knowledge of the vocabulary of the language, including lexical elements, and the ability to employ them in speech. A robust vocabulary enables individuals to convey their thoughts and emotions more accurately, thereby avoiding inaccuracies and ambiguous interpretations. Furthermore, strong lexical competence facilitates more effective reading, comprehension, and translation of texts in a foreign language.

The components of lexical competence include the following: motivational, cognitive, practical-activity, and reflective elements.

The development of lexical skills, whether productive or receptive, leads to the formation of lexical competence, which encompasses students' ability to determine the contextual meaning of words, compare their scope across two or more languages, and identify specific national characteristics inherent to the culture of the people speaking the language. A key indicator of well-developed lexical competence is the students' ability to solve tasks related to the acquisition of foreign words based on the knowledge and skills they have acquired.

The formation of lexical competence occurs at various levels and comprises multiple stages. At the first level, students become familiar with fundamental lexical units and learn to pronounce and comprehend them correctly. At the second level, students expand their vocabulary and learn to use words and expressions in context. At the third level, students develop their lexical literacy and learn to select appropriate words and expressions based on the communication situation.

Lexical skills hold significant importance within the context of interdisciplinary connections. In their professional endeavors, students often encounter terminology and specialized vocabulary related to their field. Correct usage and comprehension of these terms are crucial factors in successful communication and collaboration with colleagues from other disciplines.

There are numerous methodologies and approaches for developing lexical competence. One such approach is the utilization of authentic materials, such as films and audio recordings, to expand vocabulary and enhance comprehension of spoken foreign language. Another approach involves the active use of terminology and specialized vocabulary pertinent to the students' field of study in the educational process.

Numerous studies are conducted in the realm of lexical competence. Some focus on the development of new methodologies and approaches to foster lexical competence among students, while others investigate the specifics of lexical competence across various professional fields and its impact on the success of professional activities. Building lexical competence is a critical aspect of language learning, requiring a multifaceted approach that combines explicit instruction with

extensive exposure to authentic language materials. By employing strategies such as context-based learning, mnemonics, and spaced repetition, language learner.

Thus, we can assert that lexical competence is an essential component of linguistic competence and plays a vital role in foreign language education. The development of lexical competence requires certain conditions and can be implemented using various methodologies. Proper usage and comprehension of diverse words and expressions in context contribute to successful communication and collaboration in professional environments. The cultivation of lexical competence necessitates systematic training, the application of diverse methodologies and approaches, and an understanding of the unique characteristics of the students' professional fields.

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PISA – МЕЖДУНАРОДНАЯ ПРОГРАММА ПО ОЦЕНКЕ ОБРАЗОВАТЕЛЬНЫХ ДОСТИЖЕНИЙ УЧАЩИХСЯ НАЧАЛЬНОЙ ШКОЛЫ

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Аннотация. Оценка учащихся начальной школы с помощью международных программ оценки, таких как Программа международной оценки учащихся (PISA), привлекла значительное внимание в образовательном дискурсе. В этой статье критически рассматриваются обоснование, методологии и последствия использования оценок PISA на начальном уровне. Благодаря всестороннему анализу литературы и методологическому исследованию эта статья проливает свет на сложности и противоречия, связанные с использованием оценок PISA для учащихся начальных классов.

Результаты подчеркивают необходимость детального понимания роли таких оценок в формировании политики и практики в области образования. В разделе обсуждения рассматриваются последствия ранней оценки для образовательных систем и результатов учащихся, что приводит к выводам и предложениям для будущих исследований и разработки политики.

Ключевые слова. PISA, учащиеся начальной школы, оценка, международное образование, образовательная политика.

Программа международной оценки успеваемости учащихся (PISA) стала важным глобальной оценки образования, позволяющей получить представление об успеваемости учащихся в чтении, математике и естественных науках в разных странах. Последователи утверждают, что ранняя оценка дает ценную информацию о системах образования и помогает определить области для улучшения. Однако критики высказывают опасения по поводу уместности таких оценок для детей младшего возраста и потенциальных последствий для педагогики и благополучия учащихся. Цель этой статьи - критически проанализировать необходимость оценки учащихся начальных классов в рамках международной программы оценки PISA [3].

Анализ литературы выявляет многогранный дискурс, связанный с оценкой учащихся начальных классов с помощью оценок PISA. Сторонники подчеркивают преимущества раннего выявления проблем в образовании, что позволяет своевременно принимать меры и проводить реформы. Они утверждают, что оценка младших школьников может предоставить ценные исходные данные для отслеживания прогресса в образовании и принятия обоснованных политических решений. Однако критики предостерегают от потенциальных ловушек, связанных с тем, что маленьких детей подвергают оцениванию с высокими ставками, ссылаясь на опасения по поводу стресса, тревожности и сужения учебных программ. Более того, ученые ставят под сомнение обоснованность и надежность оценок PISA для учащихся начальных классов, подчеркивая различия в развитии между младшими и старшими учениками.

В данной статье используется качественный исследовательский подход, опирающийся на существующую литературу и теоретические основы для анализа обоснования и последствий оценки учащихся начальных классов с помощью программы оценки PISA. Для обобщения существующих знаний по теме был проведен систематический обзор академических журналов, программных документов и эмпирических исследований. Методологический подход включает тематический анализ и критическую интерпретацию ключевых выводов для разъяснения сложностей ранней оценки в контексте международного образования [4].

Программа международной оценки учащихся (PISA) в первую очередь предназначена для оценки и сравнения образовательных систем разных стран путем оценки навыков и знаний 15-летних учащихся в области чтения, математики и естественных наук. Хотя PISA ориентирована на учащихся в возрасте 15 лет, оценка учащихся начальной школы с помощью этой

программы может оказаться неуместной или эффективной по нескольким причинам:

- Стадия развития: Учащиеся младших классов (обычно в возрасте от 6 до 12 лет) находятся на другой стадии развития по сравнению с 15-летними. Их когнитивное, эмоциональное и социальное развитие все еще продолжается, и они могут не обладать таким же уровнем зрелости или когнитивных способностей, как учащиеся старшего возраста.
- Несоответствие учебных программ: оценки PISA приведены в соответствие с учебными планами стран-участниц, которые, как правило, предназначены для учащихся старшего возраста. Ожидание от учащихся начальной школы хороших результатов в оценках, предназначенных для учащихся старшего школьного возраста, может неточно отражать их истинные способности или прогресс в обучении.
- Стресс и давление: Подвергание маленьких детей стандартизированным тестам с высокими ставками, таким как PISA, может вызвать стресс и тревогу, что может негативно сказаться на их благополучии и отношении к обучению. Такое давление может быть неприемлемым с точки зрения развития или способствовать созданию позитивной учебной среды.

Ограниченная полезность: Основная цель PISA - сравнить системы образования в разных странах и определить области для улучшения на национальном уровне. Оценка учащихся начальной школы может не дать значимого представления о работе образовательной системы, поскольку эти учащиеся еще не завершили свое образование или не достигли возраста, когда они могли бы участвовать в оценках PISA [4].

Вместо использования PISA для оценки учащихся начальной школы, возможно, было бы более выгодно сосредоточиться на формирующих оценках, которые предоставляют учителям информацию об успеваемости учащихся и областях для роста. Эти оценки могут быть адаптированы к стадии развития учащихся начальной школы и использоваться для информирования о методах обучения и поддержки индивидуальных потребностей в обучении.

Взятые результаты подчеркивают необходимость тонкого подхода к оценке учащихся начальной школы с помощью международных программ оценки, таких как PISA. Хотя ранняя оценка может предоставить ценные данные для образовательных реформ, политики должны учитывать потенциальные последствия для педагогики, благополучия учащихся и справедливости. Кроме того, следует приложить усилия для обеспечения обоснованности и надежности оценок для младших школьников с учетом особенностей их развития и разнообразных потребностей. Совместные усилия политиков, преподавателей, исследователей и заинтересованных сторон необходимы для решения сложных проблем, связанных с ранней оценкой в контексте международного образования [6].

Выводы и предложения. В заключение, оценка учащихся начальных классов в рамках международной программы оценки PISA представляет как возможности, так и проблемы для систем образования во всем мире. Хотя

ранняя оценка может служить основой для принятия политических решений и улучшения результатов образования, необходимо тщательно рассмотреть целесообразность, обоснованность и последствия таких оценок для учащихся младшего возраста. Будущие исследования должны быть сосредоточены на разработке альтернативных моделей оценки, учитывающих потребности учащихся начальной школы в развитии и способствующих целостному обучению. Более того, разработчики политики должны уделять приоритетное внимание благополучию и равенству учащихся в усилиях по реформированию образования, гарантируя, что методы оценки поддерживают, а не подрывают их образовательный путь. Применяя сбалансированный и основанный на фактических данных подход, заинтересованные стороны могут использовать потенциал ранней оценки для содействия инклюзивному и качественному образованию для всех.

Эта статья служит призывом к действию для педагогов, политиков и исследователей к участию в критическом диалоге и совместных усилиях по формированию будущего оценки в начальном образовании в глобальном контексте.

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ЯНГИЛАНАЁТГАН ЎЗБЕКИСТОНДА ТАЛАБАЛАРНИНГ МАФКУРАВИЙ ИММУНИТЕТИНИ РИВОЖЛАНТИРИШ ЙЎЛЛАРИ

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Аннотация. Мақолада ёшларда ғоявий иммунитетни ривожлантириш масалаларининг айрим жиҳатлари тадқиқ этилади. Жумладан, ёшларда ғоявий иммунитетни мустаҳкамлаш учун оила, жамоа ва жамиятда улар тарбиясига асосий эътибор қаратиш лозимлиги назарий жиҳатдан асосланади. Манбаларга таянилган ҳолда концептуал ғояларга муносабат билдирилади. Бугунги турли таҳдидларнинг мавжудлиги шароитида ёшларда ғоявий иммунитетни мустаҳкамлаш учун ватанга ва халққа муҳаббат ҳиссини сингдириш лозимлиги масалалари таҳлил этилади.

Калит сўзлар. Ўқув дастурлари ва дарсликлар, таълим тизими, интеграция, ёшлар, ғоявий иммунитет, ватанпарварлик, тарбия, оила, жамоа, жамият, креатив тафаккур.

Annotation. The article deals with some aspects of the development of ideological immunity in young people. In particular, in order to strengthen the ideological immunity of young people, it is theoretically based that the main attention should be paid to their upbringing in the family, community and society. In the paper, conceptual ideas are treated based on sources. In the conditions of the existence of various threats today, the issues of needing to inculcate the feeling of love for the country and the people in order to strengthen the ideological immunity in the youth are analyzed.

Keywords. Curriculum and textbooks, educational system, integration, youth, ideological immunity, patriotism, education, family, collective, society, creative thinking.

Муҳтарам Президентимиз Шавкат Мирзиёйевнинг 2018 йил 28 декабрдаги парламентимизга йўллаган мурожаатномасида, “Олдимизга қўйган улкан вазифаларни амалга оширишда биз учун куш-қудрат манбаи бўладиган миллий ғояни ривожлантиришимиз зарур”. Олий Мажлисга мурожаат қилиш жараёнида бу фикрлар бежизга таъкидланмади, албатта. Чунки ҳозирги кунда дунё цивилизациясида фуқаролик таҳдидлар ва саводхонлигини ҳуружлар кучайиб бораётган даврда мамлакатимиз ёшларини турли хавф-хатарлардан асраб қолишда айнан миллий ғоянинг ривожлантирилиши, ёвуз ғояларга қарши ёшларда саводхонлигини иммунитетини шакллантирилиши зарур [1].

Бугунги замонавий технология сон орқасидан қувиш эмас, балки сифат ўзгаришларининг ҳам бўлишини тақозо этмоқда. Бу жиҳатдан ривожланган давлатларнинг тажрибасига таянмоқ лозим. Уларнинг 70 фоизи таълим тизимида интегратив характердаги ўқув дастурлари ва дарсликлардан фойдаланмоқдалар. Жумладан, Буюк Британия таълим тизимида асосан интегратив фанлар жорий қилинган бўлса, Корея ва Швейцарияда интеграциялашган фанлар, Венгрияда маданият йўналишидаги ўқув фанлари, Ирландияда фан ва техника каби блокларда барча ўқув фанлари

мужассамлаштирилган ҳолда ўқитилади.

Ҳозирги замон фани тараққиётининг долзарб муаммоларидан бири фанларни интеграциялашдан иборат. Фанларни интеграциялаш тенденциясини педагогик заруратга айланишни исбот қилишга, табиий, ижтимоий ва техник фанларнинг ўзаро интеграциясини кучайтиришга объектив асосларини очишга бугунги кунда алоҳида аҳамият берилмоқда. Интеграция – бу предметлараро боғланишда қўлланиладиган турли предметларни ўзаро келишилган ҳолда ўқитилишидан, уларнинг ўзаро кескин таъсирлашиш даражасига ўтиш орқали ўқитиш эканлигини яхши англаш лозим.

Агар фанлараро интеграция фанлар бўйича таълим бериш тизимида ўқув жараёнининг ривожланиш усули сифатида ишлатилганда ҳамда унинг бирлигини таъминланганда, ташкил этганда иштирок этса, у ҳолда унинг методологик функцияси таъминланади. Қайд этилган материал фанлараро интеграция мазмунини тушуниш ва янгича ёндашувни илгари суришга ҳамда уларни нафақат фанлараро интеграцияда дидактик эквивалент сифатида қараш, балки ижтимоий онг ва одам фаолиятининг шакллари билан илм-фан алоқаларининг дидактик эквиваленти деб қараш жихатидан ҳам ўринлидир.

Янгиланаётган Ўзбекистонда талабаларнинг мафкуравий иммунитетини ривожлантириш натижасида “Ҳаракатлар стратегиясидан - Тараққиёт стратегияси сари” тамойилларига асосан ишлаб чиқилган қуйидаги еттита устивор йўналишлардан иборат 2022-2026 йилларга мўлжалланган Янги Ўзбекистоннинг тараққиёт стратегияси тасдиқланди: Бу стратегияси қуйидаги 7 та йўналишни ўз ичига қамраб олади: 1-йўналиш: “Инсон қадрини юксалтириш ва эркин фуқаролик жамиятини янада ривожлантириш орқали халқпарвар давлат барпо этиш”. 2-йўналиш: “Мамлакатимизда адолат ва қонун устиворлиги тамойилларини тараққиённинг энг асосий ва зарур шартларига айлантириш”. 3-йўналиш: “Миллий иқтисодиётни жадал ривожлантириш ва юқори ўсиш суръатларини таъминлаш”. 4-йўналиш: “Адолатли ижтимоий сиёсат юритиш, инсон капикталини ривожлантириш”. 5-йўналиш: “Маънавий тараққиётни таъминлаш ва соҳани янги босқичларга олиб чиқиш”. 6-йўналиш: “Миллий манфаатлардан келиб чиққан ҳолда умумбашарий муаммоларга йўндашиш”. 7-йўналиш: “Мамлакатимиз хавфсизлиги ва мудофаа салоҳиятини кучайтириш, очиқ прогматик ва фаол ташқи сиёсат юритиш” [2].

Истиқлол жамиятимиз аъзолари, жумладан ёшларнинг ижтимоийиқтисодий ва маданий-маънавий камолоти учун шарт-шароит яратиб, жамиятнинг келажак тараққиётини таъминловчи куч бўлган ёшларнинг ғоявиймаънавий янгиланишида ҳам зарурий омилдир. Фуқаролик жамияти шароитида демократик тафаккурнинг ривожи боис, кузатилаётган маънавий ва ижтимоиймаданий ўзгаришлар ёшлар онгида ижобий дунёқарашни ривожлантирмоқда. Истиқлолнинг қўлга киритилиши туфайли ҳамда миллий тафаккурнинг ривожи боис ёшларда жамиятдаги ижобий ўзгаришларга нисбатан оптимистик кайфиятлар ривожланмоқдаки, бу уларда ғоявий иммунитетнинг устуворлигини таъминламоқда.

Креатив фикрлайдиган ёшларни тарбиялаш бугунги куннинг долзарб вазифаси экан, бунинг учун зиёлиларимиз зиммасидаги асосий вазифа –

ёшларда ғоявий иммунитетни ривожлантириб, фуқаролик жамияти институтлари шаклланаётган ҳозирги шароитида Ватан учун фидойи ёшларни тарбияламоқ лозим. Шу сабабли фуқаролик жамияти шароитида ёшлар ва уларда ғоявий иммунитетни ривожлантиришнинг назарий-методологик асосларини бугунги куннинг реал воқеълиги асосида тадқиқ этиб, ёшларнинг маънавий-ахлоқий ривожини янада юксалтирувчи таклиф ва тавсияларни илгари суриш муҳим. Чунончи, бугунги жадал тараққиёт шароити давлат миқёсида баркамол авлодга эътибор қаратилиб, қатор тадбирлар ишлаб чиқилаётганлиги ёшларнинг маънавий баркамоллигини таъминлаб, уларда ғоявий иммунитетни ривожлантириш объектив зарурият сифатида муҳим эканлигини кўрсатиб, унинг концептуал асосларини яратишни кун тартибига қўймоқда. Миллий истиқлол туфайли шаклланган демократик тафаккур жамият аъзолари, хусусан ёшларга янги имкониятларни вужудга келтириб, ўзига хос масъулиятни ҳам юклади. Янгича фикрлаш, миллий қадриятларга ижобий муносабат, уларнинг умуминсоний қадриятлар тизимидаги ўрнини теран ҳис этиш имконини берди. Шу билан бир қаторда ўзликни англаб, ўтмишга холисона муносабатда бўлиш, яқин ўтмиш воқеаларини танқидий-таҳлилий нуқтаи-назардан идрок этиш ёшлар ижтимоий-маданий ва маънавий фаолиятининг ажралмас қисмига айланди.

Ёшларда ғоявий иммунитетни ривожлантириш масаласи асосан, жамиятнинг социал тизимида ижтимоий-иқтисодий, сиёсий ва маънавий жиҳатдан динамик ўсишда бўлган гуруҳ вакилларига хос бўлиб, глобал тараққиётнинг айрим ҳолатлардаги реал хавфнинг мавжудлиги шароитида улар онги ва қалбида бундай таҳдидларга қарши кучли маънавий-ахлоқий мавқенинг барқарорлигини таъминлашдан иборатдир. Умуман олганда жамиятнинг ижтимоий тизимида ёшлар ва ғоявий иммунитет масалаларининг назарий-методологик таҳлили мустақиллик шароитида миллий фанимизнинг ривожини таъминласа, иккинчи томондан ёшларнинг маънавий-ахлоқий мукаммаллигини, демократик-ҳуқуқий давлат шароитида ёшларнинг ижтимоий фаоллигини оширишнинг концептуал жиҳатларини кўрсатувчи тадқиқот сифатида ҳам муҳимдир.

Бугунги, янгиланаётган Ўзбекистон шароитида ёшлар ахлоқида позитив жиҳатлар ҳамда улар орасида миллий ва умуминсоний қадриятлар тарғибини, миллатлараро муносабат маданиятини тарғиб этиш зарур. Ушбу усуллар орқали ёшлар орасида умуминсоний цивилизацияга хос хусусиятларни, ватанпарварлик, фуқаровий бирлик каби хислатларни ривожлантириш лозим.

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INNOVATSION TEXNOLOGIYALAR - MAKTAB INFORMATIKA O'QITUVCHILARINING METODIK TAYYORGARLIGINI TAKOMILLASHTIRISH OMILI

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Annotatsiya. Innovatsion texnologiyalarni loyihalash amaliy didaktiga oid tadbirlarni ketma-ket va izchil amalga oshirish.

Kalit so'zlar. Kasbiy tayyorgarligi, kasbiy shakllantirish, kasbiy-pedagogik ta'lim, kasbiy sifatlar.

Аннотация. Последовательное выполнение мероприятий, связанное с практическо-дидактическим проектированием инновационных технологий.

Ключевые слова. Профессиональная подготовка, профессиональное становление, профессионально-педагогическое образование, профессиональные качества.

Annotation. Sequential and consistent implementation of activities related to the practical didactic design of innovative technologies.

Keywords. Professional training, professional formation, professional-pedagogical education, professional qualities.

Kirish. Ma'lumki, fan va texnika jadal sur'atlar bilan rivojlanayotgan bugungi kunda yuqori malakali o'qituvchilarga qo'yilgan talablar ortib borib, barkamol avlodni asrlar davomida shakllanib kelgan umuminsoniy va milliy qadriyatlar ruhida tarbiyalash layoqatiga ega, fanning fundamental asoslarini, pedagogika va psixologiya metodlarini mukammal egallagan, kasbiy tayyorgarligi yuksak darajada bo'lgan hamda zamonaviy pedagogika va axborot texnologiyalarini amaliyotda qo'llash ko'nikma va malakasiga ega ijodkor pedagoglarni tayyorlash talab etiladi.

Tadqiqot maqsadi. Bugungi kunda informatika o'kituvchilarining metodik tayyorgarligidagi:

- faol ta'lim olish shakllariga bo'lgan ehtiyoji va ijtimoiy zaruriyatning to'la qondirilmayotganligi;
- kasbiy shakllanishiga yo'naltirilgan o'quv-tarbiyaviy ishlarni tashkil qilish uchun etarli darajada kasbiy-pedagogik tayyorgarlikka ega emasliklari;
- kasbiy shakllantirishda ta'limning mazmuni, metodi, zamonaviy vositalarini mustaqil tanlashlari uchun zarur shart-sharoit yaratilmaganligi;
- talab etiladigan bilim va ko'nikmalarning etarli shakllantirilmaganligi kabi nomutanosibliklarga barham berish yo'llarini va usullarini aniqlash, ular asosida ilmiy tadqiqot va tajriba sinov ishlarini olib borish orqali zarur ilmiy xulosalar

chiqarish hamda ilmiy, amaliy va metodik tavsiyalar ishlab chiqish zaruriyati tug'iladi [1; 160 b.].

Har bir o'quv mavzusi, bo'limni o'rganish jarayonida interfaol topshiriqlarni tuzish imkoniyatini ham alohida nazarda tutish talab etiladi, chunki informatika turli o'quv fanlarini o'zlashtirish jarayonida interfaollikni ta'minlash alohida texnologiyalardan foydalanishni taqozo etadi. Dastlab bu texnologiyalar O'zbekistonda nashr qilinayotgan darslik va qo'llanmalarda ham o'z aksini topgan. N.N.Azizxo'jaeva "Pedagogik texnologiya va pedagogik mahorat", Sh.Shodmonova, N.S.Mirsagatova, G.N.Ibragimova, M.T.Mirsolievalar tuzgan "Pedagogik texnologiyalar" metodik qo'llanmasida, U.I.Inoyatov, N.A.Muslimov, D.I.Ro'zieva, M.H.Usmonbaevalar innovatsion texnologiyalarning quyidagi turlarini asoslaydilar: muammoli ta'lim, rivojlantiruvchi ta'lim, tabaqalashtirilgan ta'lim, hamkorlik ta'lim, modul ta'limi, o'yin texnologiyalari, masofaviy ta'lim, mustaqil ta'lim.

Tadqiqotni tashkil qilish uslublari. Shu nuqtai nazardan qaralganda, maktab informatika o'qituvchilari bilan interfaol ishlashning har bir shakli o'ziga xos texnologiyalarni qo'llash imkonini beradi. Jumladan:

1. Birgalikta juftliklarda ishlash: "Yuzma-yuz o'tirib ishlash", "Birga-ikki va birgalikda ishlash".

2. Kichik guruhlarda ishlash: "Akvarium" usuli.

3. Interfaol o'yinlar: "Rolli o'yinlar".

4. Munozara asosida o'qitish texnologiyasi: "O'z nuqtai nazarimni tanlayman" usuli kabilar [2; 104 b.].

O'qituvchilar dars jarayonida bir qancha innovatsion metodlardan foydalanib kelishmoqda. Biz hozirgacha o'qitish texnologiyalarining bir qancha turlari bilan tanishamiz. Bu texnologiyalarning "Aqliy hujum", "Bumerang", "Baliq skeleti", "BBB" texnologiyasi, "Insert jadvali", "Nilufar guli", "Fikrlay olasanmi", "Klaster" kabi turlari mavjud. Albatta, bunday texnologiyalardan foydalanib, darslarni tashkil qilish uning qiziqarli va samarador bo'lishiga xizmat qiladi.

Tadqiqot natijalari va muhokamasi. Ko'plab ilmiy manbalarni tahlil qilish natijasida biz kasbiy-pedagogik ta'lim jarayonida amalga oshiriladigan innovatsion o'qitishning o'ziga xos xususiyatlarini aniqlashga muvaffaq bo'ldik. O'qitishning innovatsion metodlari va texnologiyalari maktab informatika o'qituvchilarining ta'limiy ehtiyojlarini qondirishga yo'naltiriladi. Jumladan:

1. Interfaol o'qitish jarayonining mazmuni maktab informatika o'qituvchilarning kasbiy bilimlarini egallash ehtiyojlari bilan bog'liq bo'lishi lozim. Bunda maktab informatika o'qituvchilarining shaxsiy quvvatlari, nuqtai nazarlari, bilim darajalarini aniq hisobga olish talab etiladi.

2. Interfaol o'qitish jarayonida maktab informatika o'qituvchilari o'z kuchlariga nisbatan qo'shimcha ishonch hosil qilib, umuminsoniy qadriyatlarni o'zlashtirib, o'z o'quv faoliyatlari uchun mas'uliyat hissiga ega bo'ladi.

3. Treninglar, ishchan o'yinlar yordamida maktab informatika o'qituvchilari muntazam tarzda o'z mavqelarini aniqlashga muvaffaq bo'ladi, chunki jamoaviy ish shakli muntazam tarzda o'z mavqeini aniqlash, o'z nuqtai nazarlarini qat'iyat bilan himoya qilishni talab etadi. Buning natijasida guruh a'zolari bilan kelishgan holda umumiy echimlar qabul qilinadi hamda maktab informatika o'qituvchilarida yaxlit

jamoa bo’lib ishlash, bu jarayonda o’z qobiliyatlarini namoyon qilish ko’nikmalari shakllantiriladi.

4. Interfaol o’qitish jarayonida maktab informatika o’qituvchilarining o’zlari mustaqil tarzda kreativ qobiliyatlarini namoyon qiladilar, faol tarzda kasbiy sifatlarini o’zlashtiradi.

5. Maktab informatika o’qituvchilar o’zlari o’zlashtirgan bilimlarni va kasbiy sifatlarini istiqboldagi faoliyatlarida qo’llash ko’nikmalarini izchil tarzda egallaydi.

6. Interfaol o’qitish jarayonida vujudga keltiriladigan xayrxoh muhiti, o’zaro ishonch hamda hamkorlik maktab informatika o’qituvchilarning ijodiy yuksalishlari uchun qulay imkoniyat yaratib, ularning kreativ qobiliyatlarini muntazam rivojlantirishga asos bo’ladi [2; 152 b.].

Ma’lumki, maktab informatika fanlarini o’qitishda umumiy o’rta ta’lim maktablarida va kasb-hunar maktablarida ham ko’pgina qiyinchiliklar mavjud bo’lib, ularning aksariyati maktab informatika o’qituvchilarining metodik tayyorgarliklari etarli darajada takomillashtirilmaganligi sababli yuzaga kelmoqda. Bu esa o’z-o’zidan Respublikamizdagi barcha pedagogika oliy ta’lim muassasalarida maktab informatika o’kitishda talabalarning metodik tayyorgarligiga bo’lgan e’tiborni yanada kuchaytirish zarurligini ko’rsatadi. Shuningdek qayd etilgan vazifalarni samarali hal etish, “Kadrlar tayyorlash milliy dasturi”ning talablari asosida respublikamizdagi barcha umumiy o’rta va o’rta maxsus ta’limi muassasalari uchun pedagog kadrlarning yangi avlodini tayyorlash, xususan, maktab informatika o’qituvchilarining metodik tayyorgarligini Davlat ta’lim standartlari talablari darajasida ta’minlash yo’llari, vositalari va usullarini ishlab chiqish dolzarb masalalardan ekanligini ko’rsatadi [3; 80 b.].

Xulosa. Shunday qilib, innovatsion texnologiyalarni loyihalash amaliy didaktiga oid tadbirlarni ketma-ket va izchil amalga oshirishni taqoza etadi. Innovatsion o’qitish texnologiyalari ta’lim oluvchilarda bo’lajak kasbiy faoliyat uchun muhim sanalgan shaxs sifatlarini, vazifasiga ko’ra funktsional majburiyatlarini amalga oshirishni kafolatlaydigan bilim, ko’nikma va malakalarini shakllantira oladigan texnologiya hisoblanib, jarayonli metodik harakatlar tizimi va didaktik instrumentlardan iborat bo’ladi.

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OLIY TA’LIM MUASSASALARI TALABALARI BILIMINI PIRAMIDA STRATEGIYASI ASOSIDA BAHOLASH METODIKASI

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Annotatsiya. Ushbu maqolada baholash jarayonining innovatsion usullari, ya'ni talabalarni baholash tartib-qoidalarining samaradorligini oshirish va tezkor fikr-mulohazalarni, ishonchli va asosli baholashlarni olish uchun ko'p bosqichli moslashuvchan o'lchovlar muhokama qilinadi. Ko'p bosqichli adaptiv o'lchovlar aralash ta'limda, ommaviy ochiq onlayn kurslarda va elektron ta'limda qo'llanilish, shuningdek piramidal usul asosida o‘quvchilar faoliyati haqqida so‘z etildi.

Kalt so‘zi. Ta’lim, sifat, tanlash, algoritm, aniqlik, samaradorlikni oshirish, baholash jarayoni.

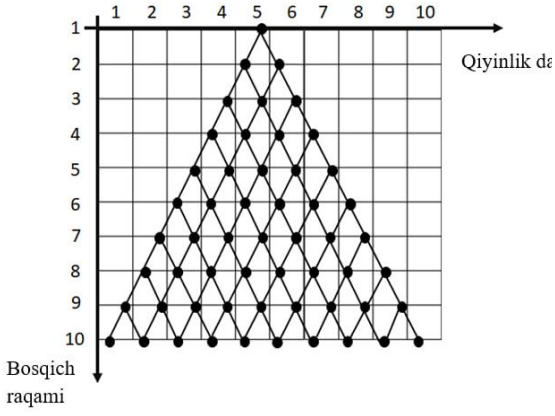
Ta’lim natijalarini baholashning samarali usuli sifatida ko‘p bosqichli adaptiv o‘lchovlarning asosi modellashtirish yondashuvlari hisoblanadi. Strategiyani tanlash va ta’lim o‘lchovlarining samaradorligini qo‘lga kiritadigan o‘lchash moslamasini ta’minlash algoritmini ishlab chiqish ko‘p bosqichli moslashuvchan o‘lchovlarni boshlashdan oldin amalga oshiriladi. Shunday qilib, moslashuvchan o‘lchovlarni ikki bosqichli va ko‘p bosqichli deb tasniflash mumkin, ularga ko‘ra turli strategiyalar va algoritmlar ishlab chiqiladi.

Ko‘p bosqichli o‘lchov - bu har bir bosqichda soni va murakkabligi bo‘yicha har xil bo‘lgan vazifalar to‘plamini bajarish jarayonida sub'ekt o‘zining individual yo‘li bo‘ylab harakatlanadigan o‘lchovni shunday tashkil etishdir. Elementlarni tanlash va taqdim etish algoritmi teskari aloqa printsipiga asoslanadi: sub'ekt to‘g‘ri javobni tanlagandan so‘ng, uning keyingi vazifasi qiyinlashadi, ammo javob noto‘g‘ri bo‘lsa, keyingi element oldingisiga qaraganda osonroq bo‘ladi. Shunday qilib, moslashuvchan ko‘p bosqichli o‘lchov kontekstga sezgir algoritmlarga asoslanadi, agar keyingi qadam oldingisiga bog‘liq bo‘lsa va faqat uning natijalarini baholashdan keyin amalga oshiriladi [2].

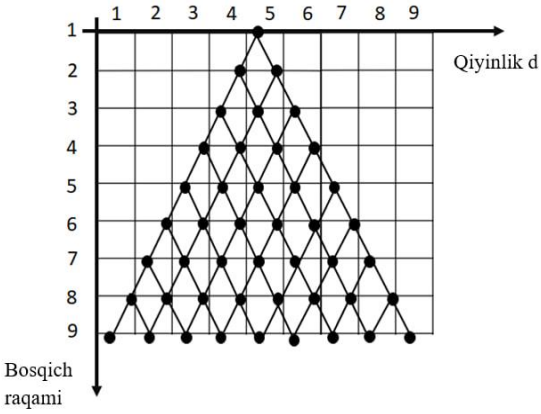
O‘z navbatida, ko‘p bosqichli adaptiv o‘lchov vositalari qanday yaratilganiga qarab, ko‘p bosqichli moslashuvchan o‘lchov strategiyalari sobit strategiya va moslashuvchan strategiyaga bo‘linadi. Agar bir xil to‘plam qiyinchilik o‘qi bo‘yicha o‘lchov vositalarining qat'iy pozitsiyasiga ega bo‘lgan barcha talabalar uchun ishlatilsa, lekin ularning har biri oldingi qadamining natijalariga qarab to‘plam bo‘ylab harakatlansa, moslashtirilgan o‘lchash strategiyasi deterministik-tarmoqli hisoblanadi [3]. To‘plamdagi qiyinchilikni o‘lchash asboblari odatda bir-biridan teng masofada joylashtiriladi yoki qiyinchilikning o‘sishiga mos ravishda pastga tushishni tanlab, talaba uchun taraqqiyot tezligini moslashtiradi. Ushbu dissertatsiyada biz qat'iy strategiya bilan bog‘liq eng keng tarqalgan strategiyani tasvirlab beramiz.

Piramida strategiyasi. Piramida strategiyasining mohiyati shundan iboratki, barcha o‘quvchilar o‘rtacha qiyinlikdagi topshiriqlardan boshlaydilar. Agar talabaning javobi to‘g‘ri bo‘lsa, unga keyingi qiyinchilik darajasidagi topshiriq

beriladi. Agar talaba noto‘g‘ri javob bersa, unga qiyinroq mavzu beriladi. Talaba kerakli miqdordagi javoblarni topshirmaguncha protsedura takrorlanadi. Piramida strategiyasini amalga oshirish uchun testdagi har bir qiyinchilik darajasi uchun elementlar soni oldindan belgilangan o‘lchov qadamlari bilan aniqlanishi kerak (bu qiyinchilik darajalari soni bilan bir xil) [4].



1-rasm. 10 bosqichli o‘lchov uchun vazifalarni taqsimlash.



2-rasm. 9 bosqichli o‘lchov uchun vazifalarni taqsimlash.

1-rasmda 55 ta elementdan iborat 10 bosqichli o‘lchov namunasi ko‘rsatilgan. Boshida talabaga o‘rtacha qiyinchilikdagi (5-darajali) topshiriq beriladi. Ikkinchi bosqichda unga 5 yoki 6-darajali topshiriq berilishi mumkin. Shubhasiz, har bir bosqichda turli xil vazifalar berilishi mumkin, ularning murakkablik darajasi o‘tgan qadam soniga to‘g‘ri keladi. Agar testda 10 ta qiyinchilik darajasidagi topshiriqlar mavjud bo‘lsa, unda umuman olganda har bir test predmetiga testga kiritilgan 55 ta topshiriqdan 10 tasi beriladi.

Shuni ta’kidlash kerakki, har bir murakkablik darajasidagi piramida strategiyasi ma’lum miqdordagi vazifalarni talab qiladi (2-rasm). Eng ko‘p sonli vazifalar (qiyinchilik darajalari soniga teng) ikkinchi darajali bosqichga jalb qilinishi mumkin. Eng yuqori darajada faqat bitta element ishlatiladi. Qo‘shni darajalarda vazifalar soni 2 ga farq qiladi (o‘rta darajaga qo‘shni darajalar bundan mustasno). Ko‘rinib turibdiki, birinchi bosqichda - 2 ta, ikkinchisida - 4 ta, uchinchisida - 6 ta va boshqalar talab qilinadi. Oxirgi bosqichda 1 ta vazifa, oxirgi bosqichda - 3 ta vazifa va boshqalar ishlatiladi (2-rasm).

Har qanday qiyinchilik darajasidagi vazifalar sonini aniqlash uchun umumiy formuladan foydalanishingiz mumkin. Faraz qilaylik, bizda qiyinchilik darajalari bor. Qiyinchilik darajalarining o‘rtacha soni darajalar sonining 2 ga bo‘lingan komponenti sifatida aniqlanadi: shubhasiz, agar X juft bo‘lsa, u x/2 ga teng va toq x ni olish uchun biz (X+1)/2 ni olamiz. X/2 dan kam sonli qiyinchilik darajasida 2i vazifalar qo‘llaniladi, bu yerda i - darajalar soni. X/2 dan katta raqamlar bilan qiyinchilik darajalari uchun vazifalar soni 2(X-i)+1, bu erda i-darajalar soni, agar qiyinchilik darajasi X / 2 bo‘lsa, unda g‘alati X\\ 2 bo‘lsa, vazifalar soni 2 (X-i)+1, va hatto 2(X-i) ga teng. Hammasi bo‘lib testda X(1+X)/2 darajalar qo‘llaniladi [5].

Qiyinchilik darajasi raqami	Vazifalarning umumiy soni	Tegishli raqam darajasidagi savollar																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
5	15	2	4	5	3	1															
6	21	2	4	6	5	3	1														
7	28	2	4	6	8	5	3	1													
8	36	2	4	6	8	7	5	3	1												
9	45	2	4	6	8	9	7	5	3	1											
10	55	2	4	6	8	10	9	7	5	3	1										
11	66	2	4	6	8	10	11	9	7	5	3	1									
12	78	2	4	6	8	10	12	11	9	7	5	3	1								
13	91	2	4	6	8	10	12	13	11	9	7	5	3	1							
14	105	2	4	6	8	10	12	14	13	11	9	7	5	3	1						
15	120	2	4	6	8	10	12	14	16	13	11	9	7	5	3	1					
16	136	2	4	6	8	10	12	14	16	15	13	11	9	7	5	3	1				
17	153	2	4	6	8	10	12	14	16	17	15	13	11	9	7	5	3	1			
18	171	2	4	6	8	10	12	14	16	18	17	15	13	11	9	7	5	3	1		
19	190	2	4	6	8	10	12	14	16	18	19	17	15	13	11	9	7	5	3	1	
20	210	2	4	6	8	10	12	14	16	18	20	19	17	15	13	11	9	7	5	3	1

1-jadval. Piramida strategiyasining har bir darajasidagi vazifalar soni.

1-jadvalda har bir darajadagi elementlarning soni va o‘lchov qadamlari sonining turli qiymatlari uchun umuman testda ko‘rsatilgan. Piramida strategiyasidan faqat turli darajadagi murakkablikdagi ko‘p sonli vazifalar taqdim etilgan taqdirdagina foydalanish mumkinligi aniq. Biroq, bu ko‘p bosqichli adaptiv o‘lchovlarni soddalashtirilgan tushunishga mos keladi.

Ushbu maqolada Piramida strategiyasining har bir darajasidagi vazifalar sonini jadvalda ko‘rsatib berganmiz va 9 va 10 boshqishli piramida metodiga batafsil to‘qtalib o‘tganmiz. Piramida metodini Oliy ta’lim tizimida qo‘llasak samarali natiyjagalarga erishamiz.

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LISTENING STRATEGIES OF L2 LEARNERS WITH VARIED TEST TASKS

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Annotation. This article investigates the strategies that EFL students used and how they adjusted these strategies in response to various listening test tasks. The test tasks involved four forms of listening support: previewing questions, repeated input, background information preparation, and vocabulary instruction. Twenty-two participants were enlisted and interviewed from a sample of 160 business major students based on their listening anxiety levels. Overall results showed that various listening tasks influenced test takers' listening strategies by varying degrees, with previewing test questions tending to have a greater effect on strategy use than other types of support. This study also found that both anxious and non-anxious students knew how to use the available information before taking a test; however, while doing the task, many students lacked competence to employ the strategies they intended to use. Finally, the article discusses some subtle problems reported by the interviewees and also provides scope for future research.

Keywords. Listening comprehension, Task-based Teaching, listening support, communicative, strategies, productive skills.

The motivation for the current study is the fact that in a foreign language environment, students typically learn English through formal classroom instruction and have limited exposure to the language outside formal study. In such circumstances, their ability to comprehend spoken English may be limited making high-stakes listening comprehension tests particularly stressful. To add to this

problem, listening in a test situation usually requires precise comprehension and precludes opportunities to clarify or negotiate with the speaker. Therefore, underwood suggests that before a listening task begins, students should be "tuned in so that they know what to expect to hear. This can be done through various types of preparatory work such as pre-listening activities or providing forms of listening support. This kind of preparatory work is assumed to help ease students' processing load and so improve comprehension. However, despite this assumption, the effectiveness of listening support is still variable. In order to understand the factors that contribute to the inconclusive findings about listening support, this research looks at two important factors that may interact closely with the characteristics of a test task: strategies used by learners to comprehend spoken input and learners' levels of listening anxiety.

The Use of Listening Support in Listening Comprehension Tests Because listening is not easy for foreign-language learners in general, providing test-takers with some form of support before or while listening may have an effect on their use of strategy. The most popular kinds of listening support are previewing questions and repeated input, usually embedded in a test design. Opinion is divided on the effectiveness of previewing questions. Some researchers consider this support helpful because it may provide test- takers with extra information, whereas others regard it as interference because it may preoccupy listeners and interrupt their thinking. In studies by Buck and Chang and Read, students reported that previewing questions helped their comprehension because the questions revealed the content of the story. In addition, after they read the questions, they listened specifically for answers to the questions, implying that previewing questions affected their listening strategy [1].

Listening plays an essential communicative role in learning English as a foreign language. Without having good listening skills, effective communication cannot be reached. Therefore, listening should be viewed as an active process. However, traditional listening theories regarded listening as a passive process.

Listening received less teaching, and less research attention than the other language skills. Language teaching concentrated on productive skills rather than the receptive skills. That is why listening was not considered an essential part of the coursebooks, and teachers did not properly attend to this important skill in their teaching. However, it is an accepted reality nowadays that programs for teaching listening should be supported, and should be backed by scientific research.

Listening comprehension has been classified into a number of sub- skills, such as: identifying main ideas, listening for details, predicting, sequencing, understanding structure, understanding vocabulary, correcting, comparing, inferring and summarizing. Wei & Zheng classified them into: comprehending pronunciation, identifying speaker's purpose, making connections between pieces of information, understanding vocabulary, identifying structures, comprehending information, classifying information, summarizing, identifying errors in a transcription, making inferences, generalization or conclusions. Ramli, Mukminatien, Saukah and Proyogo concentrated on: identifying the main ideas, specific details, information from the text and sequencing. Whereas Morales & Fernandez identified them by: discriminating

between phonemes, listening for main ideas, listening for details and making inferences [2].

In a listening comprehension test, some people get nervous and distracted because they don't listen and pay attention. He loses time and gets less points. Therefore, you should listen without paying attention. The most important thing in listening comprehension test is concentration. The student should prepare for an independent test. Then it will achieve a high result.

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HOW TO DEVELOP LISTENING IN ENGLISH?

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Annotation. In this article, we will write about how to develop listening skills in English and what are the ways to develop them.

Key words. Listening development methods, listening techniques, listening strategies.

Nowadays, in the 21st century, various new technologies are introduced rapidly. That is why interest in learning foreign languages is increasing. Now young people are learning the English, Korean, and Turkish languages. Among them, there are young people who are studying English, and I am one of those young people. English is very beautiful and also one of the most famous languages. There are 4 skills in English. They; it consists of reading, listening, writing, and speaking. In this article, we will discuss the English listening skills I write about how to develop.

Successful listening can also be looked at in terms of strategies the listener uses when listening. Does the learner focus mainly on the content of a text, or does he or she also consider how to listen? A focus on how to listen raises the issues of listening strategies. Strategies can be thought of as the ways in which a learner approaches and manages a task, and listeners can be taught effective ways of approaching and managing their listening. These activities seek to involve listeners actively in the process of listening. Identifies two kinds of strategies in listening: a. Cognitive strategies: mental activities related to comprehending and storing input in writing; b. Monitoring – this is a strategy for checking on the progress in the course of learning or carrying out a learning task. - General listening development Consider progress through a set of predetermined criteria. Determine how close it is to achieving a

short-term or long-term goal. Set realistic short-term and long-term goals. Check and see if the same mistake is still being made. - Specific listening task Check understanding during listening Check the appropriateness and the accuracy of what is understood and compare it with the new information Decide in advance on which aspect of the text to concentrate on. Identify the source of difficulty. c. Evaluating This is a strategy for determining the success of an attempt to learn or complete a learning task. - General listening development Asses listening progress against a set of predetermined criteria. Asses the effectiveness of learning and practice strategies. Asses the effectiveness of learning goals and objectives set. - Specific listening task Check the appropriateness and the accuracy of what has been understood and compare it with the new information. Determine the effectiveness of strategies used in the task. Asses overall comprehension of the text [1].

Extensive Listening is undoubtedly best improved by simply listening. Increased exposure to a large amount of comprehensible aural input is called extensive listening (EL). The EL practices can be both teacher - and learner-initiated, and can be conducted outside the classroom. The fundamental step in EL is that learners do a variety of meaningful listening practices. As learners become exposed to ample aural input, they begin to automatically process the data and obtain a reasonable level of comprehension. Chang and Millet (2014) defined this as listening fluency. Developing listening fluency in an L2 context is a challenging process as it requires consistent practice with abundant exposure to spoken language. According to Vandergrift and Goh (2012), there are three important principles for effective EL practice: variety, frequency, and repetition. L2 learners need to listen to a variety of listening materials on various topics and themes so that they become familiar with the structures of different listening texts. Furthermore, EL practice should be done frequently and regularly.

A sustained extensive listening practice can be between five minutes and one hour. Repetition is also another key to EL as it can increase the level of comprehension and help listeners focus more on details and features of the listening material. Podcasting and vodcasting technology can support these three principles of EL and provide the rich and sustained aural input much needed in EL [2].

Podcasting and Vodcasting in L2 Contexts Today, digital technology is preferred by many as the first go-to source of a dynamic hub of knowledge and learning. In light of this trend, language learning has, to some extent, transmuted into a more flexible and cost-effective format without being limited to physical space or time. Indeed, recent mobile technologies (e.g., smartphones, tablets) and the widespread availability of L2 materials on the Internet can greatly benefit L2 learners. From this perspective, one particular method that can both embrace mobile technology and combine flexible and extensive learning is the implementation of podcasting and vodcasting technologies. Podcasts are audio files that are distributed over the Internet through subscription. Podcasts are usually in the format of an MP3 and can be played on any digital device, such as laptops, tablets, and smartphones. Podcasts are automatically delivered to subscribed users, and they can listen to them whenever and wherever they want. Vodcasts are podcasts with video content instead of audio. For this reason, video podcasts are also known as video podcasts. As of

January 2020, there were more than 850,000 podcasts and 30 million episodes available around the globe, and these numbers are increasing daily [3].

1. Pre-listening activities.

They are called also introductory activities, which are an introduction to the topic of the text and activities focusing on the language of the context. They aim to deal with all of these issues which are generating interest, building self-confidence, and facilitating comprehension. They serve to motivate learners to begin the activity easily, and teachers actually give some minutes to find out key words, unknown words, useful structures that in order to understand and predict what kind of tasks will be asked.

2. While-listening activities.

In these activities, the learner receives a series of comprehension activities for developing listening skills, and the teacher's purpose is to practice listening skills. In that time, a learner has a chance to confirm his or her prediction about the text. Teachers should observe how pupils feel and what they are doing while listening to activity attentively. If there are some learners that are not able to do the task and feel pressure, it is possible to turn on the audio again. Generally, this part is the most difficult stage for teachers to control, make them do the task independently and process the information actively.

3. Post-listening activities.

The last stage is the post-listening one, which asks learners to talk about how a topic in the text relates to their own lives or give their opinions on parts of the text. These activities have a goal to utilize the knowledge gained from listening and summarize the ideas. It also includes working with mistakes which part is more difficult than other parts or just why learners made them [4].

From my point of view, everyone should not be stopped from developing. Today, we young people should take advantage of the opportunities created for the youth by our leader and contribute to the development of our country. I hope that the suggestions, techniques, and structures in this article will be useful for the youth of our country.

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ADVANTAGES OF IN-DEPTH STUDY IN THE ENGLISH LANGUAGE SPECIALTY

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Abstract. This study investigates the impact of specialized English language training on personal and professional development among students. Through qualitative interviews and quantitative surveys, the research outlines key benefits such as enhanced communication skills, critical thinking abilities, and increased cultural awareness. Participants reported a significant boost in confidence and preparedness for diverse career paths, highlighting the dual value of acquiring language proficiency and personal growth. The findings indicate that well-structured English programs not only equip students with essential skills for the global job market but also foster empathy and broaden their perspectives through engagement with varied literature.

Keywords. English language training, personal development, professional development, communication skills, critical thinking, cultural awareness, student confidence, career paths, educational institutions.

Introduction. The English language, often regarded as a global lingua franca, plays a critical role in connecting diverse cultures, facilitating international business, and fostering global communication [5; pp. 1-12]. In an increasingly interconnected world, proficiency in English is more than just an asset; it is essential for academic success, professional advancement, and social interaction. English language specialties encompass a wide range of fields, including literature, linguistics, education, and translation, offering students opportunities to delve deeply into the nuances of the language and its usage [1; pp. 165-186]. Despite the recognized importance of English proficiency, there exists a lack of comprehensive understanding regarding the specific benefits derived from pursuing an in-depth study of the English language specialty. While many educational institutions offer English programs, the emphasis on depth versus breadth in their curricula varies significantly. This inconsistency raises the question of whether students fully appreciate the extensive advantages that a focused, in-depth study can provide.

The aim of the study. The primary objective of this study is to explore the multifaceted benefits of engaging in an in-depth study of the English language specialty. By focusing on this aspect, we aim to illuminate how such intensive engagement not only equips students with advanced language skills but also enhances their critical thinking, cultural awareness, and professional opportunities.

Methods. An online survey distributed to a broader audience, including students and professionals in the field. The survey consisted of both closed-ended and open-ended questions, facilitating the collection of quantitative data alongside qualitative insights. This dual approach allowed for corroboration of findings from the interviews and enhanced the overall robustness of the research.

Interviews: Semi-structured interviews provided an opportunity for selected participants to share detailed insights into their experiences and perceptions regarding the benefits of pursuing an in-depth study of English. Each interview was expected to last approximately 30-60 minutes and was recorded with the consent of the

participants. This format allowed for a flexible yet focused discussion, enabling participants to express their thoughts freely while also addressing specific topics of interest.

Results. The results delineate the key findings derived from both interviews and surveys conducted in this study. The data analysis unveiled several prominent themes associated with the benefits of engaging in in-depth English language specialties. Below, the findings are systematically organized according to the identified themes, supported by qualitative excerpts from interviews and quantitative data from surveys.

Enhanced Communication Skills. A considerable majority, approximately 85% of survey respondents, indicated that their academic pursuits significantly enhanced their verbal and written communication skills. Interview participants echoed this sentiment, noting that specialized training in English fostered greater proficiency in articulating arguments and producing clear, coherent writing. One graduate commented, "The rigorous writing workshops and peer reviews helped me realize how to communicate my ideas effectively. It’s a skill that has served me well in my job."

Critical Thinking and Analytical Skills: Around 78% of survey participants reported that their studies in English bolstered their critical thinking abilities. Many interviewees emphasized that engaging with various texts and constructing reasoned arguments were instrumental in developing their analytical skills. A current student highlighted, "Engaging with complex literary works taught me to think critically about narratives and perspectives, which I apply in all areas of my life."

Career Opportunities: Survey data indicated that 70% of graduates believed their focused study of English significantly enhanced their employability across diverse sectors. Interview participants shared their varied career trajectories, noting that their specialization prepared them for roles in education, publishing, content creation, and beyond. An industry professional noted, "Having a solid foundation in English studies allowed me to transition into a marketing role where I create content and manage communication strategies."

Personal Growth and Confidence: Both surveys and interviews underscored personal growth and heightened self-confidence as crucial benefits of pursuing English studies. Approximately 65% of respondents reported feeling more self-assured in their skills as a result of their academic experiences. Participants attributed their increased confidence to aspects such as presentations and public speaking components within their programs. A recent graduate reflected, "Presenting my thesis in front of an audience was daunting, but it ultimately boosted my confidence tremendously, setting the tone for my professional life."

Intellectual Engagement and Passion for Literature: Participants frequently conveyed a deeper appreciation for literature and enhanced intellectual engagement. Survey results indicated that around 75% felt more connected to literary works because of their studies. Interviews often sparked passionate discussions about favorite authors, genres, and the societal impact of literature. One student expressed, "Studying different genres and historical contexts opened my eyes to the power of literature and its role in shaping culture. It ignited a passion in me that I didn’t know I

had." The findings of this study illuminate the multifaceted advantages of engaging in in-depth English language specialties. Participants reported significant enhancements in communication skills, critical thinking, career prospects, personal development, and a profound passion for literature. These results not only emphasize the academic merit of English studies but also highlight their practical applicability across various professional and personal dimensions. The subsequent section will discuss these findings in relation to existing literature and explore potential implications for future research and curriculum development.

Discussion. The findings from this study reveal a rich tapestry of benefits associated with pursuing specialized English language studies. The results not only align with existing literature but also extend the conversation about the relevance and applicability of English education in contemporary contexts. This discussion explores the implications of these findings, their alignment with previous research, and suggestions for educators and policymakers. The findings supporting enhanced communication skills, critical thinking, and analytical abilities resonate with existing literature. Various studies have shown that language education fosters these essential skills, positioning graduates for success in diverse fields.

The implications of this study urge educators to continually adapt and enrich English curricula to meet the evolving needs of students. Here are a few recommendations based on the findings:

- Integrate Career Readiness: English programs should integrate career services, including resume workshops and networking opportunities, to better prepare students for the job market.

- Focus on Experiential Learning: Create more opportunities for experiential learning, such as public speaking events, peer reviews, and writing conferences, to bolster student confidence and practical skills.

- Promote Interdisciplinary Approaches: Educators might consider interdisciplinary coursework that connects English studies to other fields such as history, media studies, or public relations, thereby broadening perspectives and enhancing applicability.

- Encourage Diverse Literary Engagement: Curricula should reflect diverse voices and viewpoints, encouraging critical engagement with a wide array of texts that resonate with students' lives and experiences. This study underscores the significant benefits of pursuing in-depth English language specialties. The findings reflect a symbiotic relationship between academic growth and personal development, equipping students with vital skills and fostering a passion for literature. As educators and policymakers move forward, it is crucial to embrace these insights to enhance English programs, thereby supporting students in their academic journeys and preparing them for a dynamic and interconnected world. Future research could further explore the long-term impacts of English studies on graduates, enriching the discourse surrounding linguistics and literary education.

Conclusion. In summary, this study highlights the multifaceted advantages of pursuing specialized English language studies, encompassing not only the development of communication and analytical skills but also significant personal growth and career readiness. The positive experiences reported by participants

provide compelling evidence that well-structured English programs can empower students to excel in diverse professional landscapes while nurturing their intellectual curiosity and personal confidence. The alignment of these findings with existing literature underscores the enduring significance of English education in fostering critical life skills, such as effective communication, critical thinking, and cultural awareness. Moreover, the profound engagement with literature reported by graduates illustrates the importance of nurturing a deep connection with diverse narratives, which can enhance empathy and broaden perspectives. By embracing these insights, educational institutions can cultivate an enriching environment that maximizes the benefits of English language studies, preparing students not just for the workforce, but for lifelong learning and engagement in an increasingly complex world.

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ПЕЧЕНЕГЛАР КОНФЕДЕРАЦИЯСИНИНГ ПАЙДО БЎЛИШИ

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Аннотация. Мақолада қадимги Кангюй ва эфталит давлатининг географик маконида туркий хоқонлик чегараларининг пайдо бўлиши ва кенгайиши билан туркий қабилаларнинг Ўрта Осиёга кириб бориши тасвирланган.

Туркийзабон қабилаларнинг баъзи Фин-угор аралашмалари билан эронийзабон муҳитга кириб бориши натижасида Ғарбий туркий хоқонлик доирасида мураккаб этнодемографик жараёнлар содир бўлди. Унинг қулашидан кейин унинг ҳудудларида янги этнополитик тузилмалар, шу жумладан печенеглар гегемонлиги остида маҳаллий ва бегона қабилаларнинг бирлашиши натижасида, Печенег қабилалар конфедерацияси пайдо бўлди.

Аннотация. В статье рассказывается о проникновении тюркских племен в Центральную Азию с возникновением и расширением границ Тюркского каганата в географическом пространстве древнего Кангюя и государства эфталитов.

В последствии проникновения тюркоязычных племен в ираноязычную среду с некоторой финно-угорской примесью происходили сложные этнодемографические процессы в рамках западно тюркского каганата, после падения которого на его территориях возникали новые этнополитичекские образования, в том числе печенежская конфедерация племен, которые сложились в результате объединения местных и пришлых племен под гегомонством печенегов.

Annotation. The article describes the penetration of Turkic tribes into Central Asia, with the emergence and expansion of the borders of the Turkic Khaganate within the geographical space of ancient Kangju and Ephthalite states. As a result of this penetration, complex ethnodemographic processes occurred within the Western Turkic Khaganate, after which new ethnopolitical formations arose, including the Pecheneg Confederation of Tribes, which emerged as a result of unification of local and foreign tribes under Pecheneg hegemony.

VI аср ўрталарида Олтой ҳудудида Евросиё халқларининг этник тарихида муҳим рол ўйнаган туркий қабилаларнинг кўчманчи давлати - Турк хоқонлиги (551-744) вужудга келган. Турклар яқин атрофидаги қариндош қабилаларни ўзига бўйсундириб, янги шаклланган давлатнинг ўзагини ташкил этдилар. Кейинчалик кенгроқ қабилалар иттифоқи, ва шунингдек, уларга бўйсунувчи халқлар ҳам турклар деб атала бошланган.

Жанубий Олтой этакларида ташкил этилган қабилалар иттифоқи кучайиб бориб, ўз суверенига бўйсунишни истамаган ва улкан ҳудудда ҳукмронлик қилган Жуан-жуан хоқонлигига қаттиқ зарба берган [9; 278-281 бб.].

Ўша пайтдан бошлаб туркий ҳукмдор ўзини Жуан-жуан давлатининг босиб олинган мулклари ҳукмдори сифатида кўрсатиб, хоқон унвонини қабул қилган ва 555-йилда уларни ниҳоят мағлуб этиб, қолган қисмларини ғарб томонга сиқиб чиқарган.

Янги давлат асосчиси - Мухон хоқон (553-572) даврида давлат ҳудудий жиҳатдан атрофдаги қўшнилар ҳисобига ўсиб бораётган хоқонлик Осиёдаги энг йирик давлатга айланган: жануби-ғарбий Манчжуриядаги киданлар, Енисей бўйидаги қирғизлар ва бошқа қабилалар босиб олинган. Шимолий Хитой қабилалари ҳам туркларнинг ирмоқларига айланган.

Шу билан бирга, туркларнинг ғарбий йўналишда фаол ҳарбий юришлари жуан-жуанга босимни кучайтириши билан давом қилинган. Ҳарбий воқеалар бошланишида-ёқ Коханнинг укаси Истемий ўн туман қўшиннинг раҳбари сифатида, Олтой ҳудудида истиқомат қилган Еттисув турклари ва эфталитларни ўзига бўйсундирган ва ўзини туркларнинг ғарбий ерларининг хоқони деб эълон қилган [6; 34 б.]. У ўз қудратини мустаҳкамлаб, 555-йилда ғарбга навбатдаги ҳарбий юриш уюштирган, бунинг натижасида турклар

ҳудуди Сирдарёнинг ўрта ва қуйи оқими бўйлаб Орол денгизигача кенгайган. Улар томонидан Эфталитлар давлатининг мағлубиятга учратиличи билан Ўрта Осиёнинг асосий қисми ҳам босиб олинган. Натижада Турк хоқонлиги шу қадар улуғвор бўлиб қолдики, унинг ҳудудлари шарқда Корея кўрфазидан ғарбда Каспий денгизигача, жанубда Гоби чўлидан, шимолда Байкал кўлига қадар чўзилган.

554-йилда бошланган Истеми хоқон қўмондонлиги остида туркларнинг ғарб томон юришларининг тезлигига қараганда, бу юришлар пайтида улар унчалик кучли қаршиликка дуч келмаган деб тахмин қилиш мумкин. 555-йилда уларнинг қўшини улар"Ғарбий денгиз"деб номлаган Орол денгизигача етиб борган [6; 35 б.]. Бу юришлар боришида турклар бир ярим йил ичида Еттисув, Хоразм ва ҳозирги Марказий Қозоғистоннинг бутун ҳудудини ўзига бўйсундирган. Истеми хоқон бошчилигида турклар томонидан амалга оширилган бу ҳарбий ҳаракатлар асосида турли этник-маданий бирлашмаларга мансуб турли тоифадаги этник гуруҳлар, жумладан, эронзабон ва фин-угорларнинг ҳарбий тадбирларга жалб қилиниш жараенлари юзага келган. Шарқдан кўп миқдорда қабилаларнинг кўчиб келиши ва уларнинг ерлик аҳолига оралашиш муносабатлари билан бизни қизиқтирган қадимги Қангюй давлатининг ҳудудларига мансуб бўлган Сирдарё соҳилларида мураккаб этнодемографик ўзгаришлар рўй берган.

Турклар ўша юришлари боришида Орол денгизининг шимолий соҳилларида IV аср бошидан бу ерда яшаб келган сак-массагет қабилалари иттифоқига кирувчи хионит қабилалари, эфталитлар конфедерациясини ташкил етган учта этник компонентининг энг йирик қабиласи бўлган уар қабиласи, ва фин-угор тилларига мансуб бўлган огор қабилаларининг қаршилигига дуч келган ва улар 558-йилда Волга дарёсининг нариги қирғогига туркутлар томонидан сиқиб чиқарилган [6; 35 б.].

Бу угор қабилалари IV асргача Ғарбий Сибирда яшаб келган Саргат археологик маданиятига мансуб бўлган угор қабилаларнинг авлодлари эди. Бу угор қабилалари IV асрда хунлар билан биргаликда Каспий бўйи ва Волга бўйларига кўчиб утганлар [4; 151 б.]. Олимларнинг фикрича, бу қабилаларнинг бир қисми хунлар билан бирга ҳаракатланиб бориши чоғида, афтидан Оролбўйининг шимоли ва шимоли-шарқида ўрнашиб қолиб кетган ва Истеми хоқон ҳужумигача ўзларининг этносиёсий бирлашувини сақлаб келган. [4; 151 б.]. Бу вақтга келиб, Истеми хоқоннинг бу томонга ҳужум билан келишидан олдин ҳам, баъзи угор қабилалари туркутлар томонидан бўйсундирилган ва улар янги давлат бирлашмаси - Турк хоқонлиги таркибига кирган.

Шундай қилиб, Турк хоқонлигининг собиқ эфталитлар маконидаги ҳудудда - тарихий майдонда пайдо бўлиши билан туркий этник гуруҳларнинг кириб бориши кучайиб, маҳаллий этник расмнинг ўзгаришига олиб келади. Айнан шу даврлардан бошлаб манбаларда собиқ Қангюй давлати ерлари билан 7; бевосита алоқада бўлган кангарлар ва қанглилар этнонимлари пайдо бўла бошлаган.

Хитой манбаларида таъкидланишича, кангюй халқи ўз урф-одатлари ва кийим-кечаклари бўйича скиф-сарматлардан - келиб чиқиши эрон тилида

сўзлашувчи кўчманчи сармат ва аланлардан фарқ қилмаган. Шарқдан кўчиб келган туркийзабон қабилалар таъсирида кангюйлар конфедерацияси таркибига кирган, ўша даврга келиб бўлиниб кетган ва қабилалар I-минг йиллик ўрталаридан бошлаб ўзларининг этник қиёфасини ўзгартира бошлаганлар. Кўринишидан, бу жараён бир хилда кечмаган, чунки Ўрта Осиёнинг алан-ас қабилалари орасида эроний тилининг туркий тилга кўчирилиши ҳали тугалланмаган жараён эканлиги ҳақида XI асрга оид маълумотлар мавжуд. Берунийнинг сўзларига кўра, Хоразм ва Журжон оралиғида яшаган аланлар ва аслар "Хоразм ва печенег аралаш тилда" гаплашган [7; 174 б.].

С.Г.Кляшторныйнинг ёзишича, айнан шу даврда, кангар этноними тарихий манбаларда пайдо бўлган [7; 175 б.]. Буларнинг барчаси Ўрта Осиё минтақасининг шарқий чеккаларида мураккаб туркийлашув жараёни бошланганидан далолат беради ва бу "кангар" ўтган даврда собиқ эфталитлар давлати ҳудудидаги Сирдарё қурғоқларида яшаган ва аллақачон турклашган турли этник гуруҳларга нисбатан қўлланилган янги этноним бўлганлигини кўрсатади. Айрим манбаларда бу кангарлар печенеглар орасида жасорати билан ажралиб турганлиги, ва уларнинг конфедерацияси таркибида тохар, шарқий эрон ва булгар тилларида сўзлашувчи қабилалар борлиги таъкидланади (Карлыбаев, 1964, 174 б.).

Ёзма манбаларда кангарлар ҳақида сўнгги эслатма VIII аср бошларига тўғри келади, бу кангар қабилаларнинг ватани бўлган қадимги Кангюй ерларини ўз таркибига олган Ғарбий турк хоқонлигининг қулаши билан бир вақтга тўғри келади. Турк хоқонлиги қулаганидан кейин кангарлар ўрнида бошқа этнонимлар пайдо бўлган. Тадқиқотчиларнинг фикрига кўра, кейинчалик улар Ўрта Осиёда кенгереслар номи билан машҳур бўлган [7; 161 б.]. Орхон битикларида 710-711 йилларда кенгереслар ҳақида хабар берилган. Бунда айтилишича кенгереслар турғашлар билан жанг қилган, ва уларнинг Сирдарёнинг қуйи ва ўрта оқими бўйлаб яшаганликлари айтилади [6; 266 б.]. Шунингдек, С.Г.Кляшторный турклар ўртасида бўлиб ўтган ҳарбий ҳаракатларни таҳлил қилиб, ушбу воқеаларда фаол иштирок етган кенгересларни Сирдарёнинг ўрта оқими ҳудудидаги яшаш жойларини маҳаллийлаштиради [7; 163 б.]. Бу ерда, тадқиқотчиларнинг фикрига кўра, ўша пайтда мураккаб бирлашган уруг-қабила тузилмалари, маҳаллий эроний ва шарқ томондан кўшиб келган туркий қабилаларнинг аралашиши натижасида печенегларнинг туркий қабилалар бошчилигидаги янги этносиёсий бирлашма пайдо бўлган [7; 179 б.].

Манбалар шуни кўрсатадики, маҳаллий аҳоли лингвистик ўзгаришларга учраган бўлса-ҳам, улар ушбу янги уюшманинг тўлиқ аъзолари ҳисобланган. 913-959 йилларда ҳукмронлик қилган Византия императори, Византияга қўшни печенеглар ҳақида ёзган Константин Богрянародний кангарлар печенеглар уюшмасида "асосий" ҳисобланганлигини таъкидлаган [5; 284 б.]. Махмуд Қошғарийнинг 1072-йилда ёзилган "Диван Луғат-ит Турк" асарида ҳам шунга ўқшаш маълумотларни учратиш мумкин. Унда Орол денгизи бўйидаги печенеглар, ўғузлар ва қипчоқларнинг яшаш жойлари ва улар орасида мавжуд

бўлган, мавқе ўрнида қўлланилган "қангли" сўзи қайд этилган. Улар учун қангли сўзининг маъноси катта одамни англатган [11; 64-67 бб.].

Мана, бу манбаларда биз бир этник гуруҳнинг номи бўлган кангар ва қангли этнонимини учратамиз. ва "Қангли" бу кангар этнонимининг туркийлашган кўриниши бўлиб, бу этник гуруҳнинг туркийлашуви Печенег уюшмаси таркибига кирган даврда содир бўлган. Бу маълумотлар шуни кўрсатадики, печенеглар Сирдарёда ўз ўрнини эгаллаб, Сирдарё аҳолисини, шу жумладан этник кангарларни ўз таркибига жалб қилган.

Н.А.Баскаков Константин Богрянародний нинг кангар қабилаларининг номлари ва уларнинг бошлиқлари ҳақидаги ёзма маълумотларини тилшунослик нуқтаи назаридан таҳлил қилиб, бу қабилалар, яъни кангарлар, шубҳасиз, туркий қабилалар бўлганлиги ҳакида хулосага келган [3; 129 б.]. Чунки агар бу вақтга келиб, кангарлар Византия билан қўшни жойларга кўчиб ўтишдан олдин, улар узоқ вақт давомида Печенеглар уюшмасининг таркибида бўлган ва табиийки, туркий тиллаш печенеглар ўзларининг сиесий устинлиги билан таъсир килиб, тил томонидан ҳам ўзларининг худудида ўзгартиришлар киритган бўлиши керак эди.

Бизни қизиқтирган печенегларнинг Сирдарё ва Орол денгизи атрофида яшаган аввалги даврлари ҳақидаги маълумотлар жуда чекланган. Шунга қарамастан, печенегларнинг дастлабки даврига оид мавжуд ёзма манбаларни таҳлил қилиш шуни кўрсатадики, печенеглар конфедерациясининг географик худудлари VIII асрда, - уларнинг шаклланиши даврида IX асрдаги худудига нисбатан анча кенгроқ бўлган. Уларнинг кўчманчи лагерлари шарқда Тарбағатойдан қуйи ва ўрта Сирдарё бўйларини таркибига олган ҳолда, ғарбда Уралгача чўзилган. Хитой туркологи Цен Чжуньмянь хитой ҳужжатларига асосланиб, Олтойнинг ғарбида яшаган ва Теле гуруҳи таркибига кирган хунларнинг авлодларини санаб ўтаган: "Кан давлатининг шимолида Аде дарёси бўйида Хэдэ, Хэцзе, Боху, Бичан, чжуйхаи, Ҳэбиси, Ҳэцо, суба, емо, хэдалар яшаган". Уларнинг барчаси миқдори жиҳатидан учта туменни ташкил қилган, яъни аҳоли, агар заруриёти туғилганда, 30 минг қўшин тўплашга қодир бўлган. С.М.Ахинжанов тақдим етилган маълумотларни таҳлил қилиб, Цен Чжуньмянь санаб ўтган теле қабилалари гуруҳи Олтойнинг ғарби ва Ўрта Осиёнинг шимолида ғарбий ва марказий Қозоғистон кенгликларида кучиб юрганликларини аниқлаган. Шунингдек, юқоридаги рўйҳатдаги, ҳудди шу даврнинг бошқа манбаларида келтирилган бошқа этнонимларга мутлақо ўқшамайдиган этнонимларни ҳам бизга маълум бўлган этнонимларни аниқлаштириб, "Бичан" этнонимини печенеглар эканлигини аниқлайди [1; 59 б.]. Бунга параллель равшда уйғур элчилари томонидан тузилган, тибет тилига таржима қилинган ёзма манба ҳам мавжуд. Шунга кўра, VIII асрда Печенеглар (бе-са-наглар) Балхаш ва Сирдарё оралиғида яшаган [1; 60 б.]. Тадқиқотчиларнинг фикрича, улар кангарлар, кенгереслар, печенеглар - бир этник гуруҳ номи бўлиб, бир географик маконда турли хронологик доираларда бир-бирини алмаштирган этнонимлар хисобланади [6; 266 б.].

Манбаларга кўра, печенегларнинг шаклланишини айнан шу даврга боғлаш кераклиги маълум бўлиб туради. Улар Ғарбий Турк хоқонлиги даврдаги

туркий маданиятнинг узоқ вақт ҳукмронлик қилиб келган географик маконида, қадимги кангюй сиёсий иттифоқи худудида яшаган қабилалар асосида шаклланган бўлиб, бунга туркий тилли компонентларнинг фаол кириб келишлари натижасида туркий тилнинг кенгдан тарқалишига ва уни ўша пайтга келиб парчаланиб кетган эрон тилида сўзлашувчи аҳолини ва оз миқдордаги фин-угор қабилаларининг аралашмаси билан бирлаштирган. Ғарбий Турк хоқонлигининг емирилиши билан унинг ҳудудида этносиёсий характердаги янги фаоллашишлар бошланади. Илгари бу муҳитнинг бир қисми бўлган, этник-сиёсий тузилиш тизимида ўз мавқеини яхшилашга интилаётган қабилалар курашга киришадилар. Натижада, янги бирлашма пайдо бўлади. Янги уюшма Печенег номини олган ва унинг келиб чиқиши ҳақида бир нечта фикрлар мавжуд. Улардан бири, назаримда, эҳтимолга яқинроқ: у туркий Бечче номидан олинган ва у Печенег қабилалари иттифоқининг биринчи раҳбарининг номи бўлган [10; 12 б.].

Бу вақтда, Еттисувнинг шарқий қисмида, карлуклардан ажралиб чиққан жигирлар (чигиллар) яшаган, улар ўз навбатида, VIII асрнинг ўрталарига қадар Жанубий Олтой ва Тарбағатой ўртасида яшаб, шимолда Йемек қабилалар гуруҳи билан қўшни бўлган. [9; 113 б. 1; 61 б.]. Бу муҳитда VIII аср ўрталарида Қарлуклар ва ўғузлар ўртасида туркеш меъроси учун кураш бошланган. 766-йилда шимолий қўшниларининг тазйиқи остида қарлуқлар Еттисувга қараб ўғузлар мамлакатига кўчишни бошлаб, Иссиққўл ва Талас вилоятларига кириб келади. Бу қарама-қаршилик натижасида ўғузларнинг асосий қисми Еттисувни тарк етиб, Сирдарё томонга йўл олган. У ерда улар, ўз навбатида, Сирдарё соҳилидаги печенеглар ерларига кўчиб ўтишни бошлайдилар. [1; 61 б.]. Ўрта аср арабзабон олими Ибн Хордодбеҳнинг VIII асрнинг иккинчи ярмидаги воқеаларга оид маълумотларига кўра, ҳозирги марказий ва шимолий Қозоғистон чегараларида туркийзабон қабилаларнинг жойлашуви кўриниши сақланиб қолган. Бу маълумот параллель манбалар томонидан тасдиқланган ва ўғузларнинг ғарбга, Сирдарё соҳилига кўчиб ўтгани ҳақида сўз боради. Тадқиқотчилар уларни таҳлил қилиб, ўғузларнинг Сирдарё томонга кўчиб ўтишлари 766-йилдан кейин, яъни Еттисувда карлуклар ҳаракати бошланиши билан боғлиқ содир бўлган деган хулосага келишган. Ушбу манбага кўра, VIII асрнинг ўрталарига келиб, печенег яйловлари Саурандан қуйи Волгагача чўзилган. Бундан ташқари, 755-йилда печенеглар ва уйғурлар ўртасида тўқнашувлар бўлганлиги, ва иккинчисининг ғарб томонга печенегларга қарши уруш олиб боришга ҳаракат қилганида Сауран ва Тарбагатай минтақаларида печенеглар томонидан тўхтатилганлиги ҳақида далиллар мавжуд [2; 120 б. 6; 378 б.]. Ушбу маълумотларга кўра, ўғузлар томонидан Печенег ерларини тортиб олиш воқеалари 766-йилда бошланган, шу пайтда ўғузларнинг ўзлари ҳам карлуклар ҳужумига учраган ва бу ўғузлар ва печенеглар ўртасидаги урушнинг бошланиши учун бошланғич нуқта бўлган. Сирдарё қирғоқларида ҳаётий ресурсларга эгалик қилиш учун икки кўчманчи давлат ўртасидаги қарама-қаршилик узоқ давом этган. Кўчманчилар устунлик қиладиган этносиёсий бирлашмаларнинг тўқнашуви одатда аҳолининг бир яшаш жойидан бошқасига кўчишига сабаб бўлади. Бундан ташқари, ғолибнинг ҳам,

мағлубнинг ҳам аҳолиси ҳаракатга бўйсунади. Биринчиси янги яйловларни ўзлаштираётганлиги сабабли, иккинчиси таслим бўлишга ва бошқа жойларга кўчиб ўтишга ёки янги уюшманинг бир қисми сифатида пастроқ мақомга рози бўлиб, ўша янги тизим таркибида яшаб қолаверишга мажбур. Юқорида айтиб ўтилганидек, VIII асрнинг биринчи ярмида печенегларнинг яйловлари Тарбағатойдан қуйи Волгагача чўзилган, Оролбўйи ва Сирдарё бўйидаги даштларни қамраб олган ва чегаралари қадимги Қангюй чегараларига тўғри келган.

Кўриб чиқилган барча маълумотларга асосланиб, айтишимиз мумкинки, Печенег бирлашмасининг пайдо бўлиши Ғарбий Турк хоқонлиги парчаланиши билан бевосита боғлиқ бўлиб, хоқонликнинг аҳолиси аввалги этносиёсий тизимини йўқотиб, аввал унинг таркибига кирган этник бирлашмалар янги вазиятта имкон қадор юқори мақомга даъво қилиб, фаоллашиш жараёни хавж олган вақтда, намоён бўлди. Печенеглар уюшмаси маҳаллий турклашган қабилалар, собиқ эронзабон ва фин-угорларнинг бир қисми, шунингдек, шарқдан келган туркийзабон печенеглар асосида шаклланган ва у тахминан VIII асрнинг 1-ярмига тўғри келади ва уларнинг шаклланиш ҳудуди шарқда Тарбағатойдан ғарбда Уралгача бўлган кенгликни эгаллайди. Бу кенглик печенегларга тегишли бўлиб, улар бу ҳудуддан аввал ўғузлар, сўнгра қипчоқлар, кимакларнинг ҳарбий ҳужумлари орқали ғарб томон сиқиб чиқарилган.

Шаклланишининг дастлабки босқичида, бошқа этник бирлашмалар сингари, печенеглар ҳам, юқорида айтиб ўтилганидек, турли туркийзабон гуруҳлардан иборат бўлиб, кейинчалик туркийлашган собиқ эфталит ва туркийлар давлатлари худудида яшаб келган баъзи эронийзабон ва фин-угор элементларидан иборат эди. Уларнинг баъзилари Турк хоқонлиги даврида туркийлашган бўлиб, баъзи турклашиб улгирмаганларининг туркийлашиши ўша печенеглар даврида давом қилган. Бу печенеглар иттифоқининг шаклланиши ўғузлар иттифоқи шаклланиши билан бир вақтда ва қўшнилик ҳолатида ташкил топган. Махмуд Кошғарийнинг ёзишича, печенег тили болгар ва сувор тилларига яқин бўлган. Улар сиёсий ва этник жиҳатдан ўзларига хос бўлган моддий маданият негизида шакллана бошланган кенгликда кўшманчи ҳаёт кеширган.

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ADAPTATSIYA PSIXOLOGIK FENOMEN HODISA SIFATIDA

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Annotatsiya. Bugungi keltirilgan ushbu maqolada psixologik adaptatsiya, uning qanday hodisa ekanligi, turlari, shaxs tomonidan uning ahamiyati, muhitga va jamiyatga ta'siri, turli xil vaziyatlardagi uning o'rni haqida so'z yuritiladi.
Kalit so'zlar. Tadqiqot, sotsial muhit, moslashuv, shaxs, progressiv, norma, readaptatsiya, etnomadaniy, guruh.

Аннотация. Сегодняшняя статья рассказывает о психологической адаптации, о том, что это за явление, ее виды, ее значение для личности, ее влияние на окружающую среду и общество, ее роль в различных ситуациях.
Ключевые слова. Исследование, социальная среда, адаптация, личность, прогрессивность, норма, реадаптация, этнокультурная, группа.

Annotation. Today's article talks about psychological adaptation, what kind of phenomenon it is, its types, its importance for the individual, its impact on the environment and society, and its role in various situations.
Key words. Research, social environment, adaptation, individual, progressive, norm, readaptation, ethnocultural, group.

Psixologiya bu ko'p qirrali, hodisa va jarayonlarga boy bo'lgan fan sifatida qaraladi. Unda pedagogika ham, filofiya ham tarix va shunga o'xshash ko'p fanlar chambarchas bog'lanib ketadi. Bugun biz siz bilan uning kichkinagina bir bo'lagi, jarayoni bo'lish adaptatsiya jarayoni bilan so'z yuritamiz.

U yoki bu xususiyatli sotsial-psixologik rolli funksiyalarni egallash hamda odamlar o'rtasida sotsial-psixologik mavqe (status) qozonish bilan bog'liq jarayon **adaptatsiya** (moslashish) deyiladi. Sotsial-psixologik adaptatsiya jarayonida inson

hayot vafaoliyatining tashqi va ichki sharoitlari o’rtasida uyg’unlikka erishish uchun uzluksiz ravishda harakat qiladi.

Inson dunyoga kelar ekan unda bu jarayon boshlanadi. Hayotning turli vaziyatlariga ko’nikish, moslashish jarayonlari yuz beradi. Turli xil vaziyatlardan bosqichdan bosqichga o’tayotgan lahzasi u uchun sinovli bo’lishi tabiiy ko’rinish hisoblanadi. **Adaptatsiya** inson boshqa odamlar bilan, qolaversa jamiyat bilan o’zaro ta’sir o’tkazishda vujudga keluvchi destabilizatsiya, bezovtalanish, ichki psixik zo’riqish kabilarni pasaytirish va bartaraf etishda shaxsning mudofaa (himoya) vositasi sifatida gavdalanadi. Bunda pixikaning himoya mexanizmlari shaxsning psixologik adaptatsiyasi usuli sifatida ro’yobga chiqadi. Inson adaptatsiyani qachon boshidan o’tkaadi, qachonki unda jaroxatlanish, shikastlanish va ko’ngil og’rishi, sovishi kabilarda adaptatsiyaga uchraydi. Bunday vaziyatlar insonni shunday ijtimoiy muhitga moslashtiradi.

Mobodo **readaptatsiya** jarayonida shaxsning hayoti va faoliyatida oldingi sharoitlarga o’tish (qaytish) ehtimoli yuzaga kelsa u taqdirda sub’ekt o’zida adaptatsiyaga nisbatan muhtojlikni his etishi mumkin. Endi adaptatsiyaning yana bir turi etnomadaniy adaptatsiyani ko’rib chiqsak:

Etnomadaniy adaptatsiya - bu sotsial-psixologik adaptatsiyaning bir ko’rinishi bo’lib, odamlarning yangi bir madaniyatga ijtimoiy, psixologik jihatdan odatlanishi, moslanishi va ko’nikishini o’zida mujassamlashtirish, shuningdek begona, notanish an’analar, qadriyatlar, turmush tarzi, xulq-atvori etnoslararo ta’sir, talablari va normalariga rioya qilishni muvofiqlashtirishdir.

Sotsial-psixologik adaptatsiya ikki tipga ajratiladi va ular quyidagicha tavsiflanadi:

1. Progressiv (taraqqiyparvar) barcha funksiyalar va maqsadlar to’liq adaptatsiyaga erishish xususiyatiga ega bo’lib, bir tomondan ularni amalga oshirishda shaxsning qiziqishlari va maqsadlari birligiga erishiladi.
2. Regressiv- shartli moslashuv sifatida vujudga keladi, shaxsning o’ziga va mazkur ijtimoiy guruhning rivojlanishiga, jamiyatning manfaatiga javob bera olmaydi.

Amalga oshish mexanizmi bo’yicha sotsial-psixologik adaptatsiya ixtiyoriy va majburiy turlarga ajraladi. Ixtiyoriy adaptatsiya bu shaxsning o’z ixtiyori bilan amalga oshiriladi. Bunda shaxs biror narsani o’zi mustaqil qabul qilishni xohlasa, biror urf-odatni bajarishni xohlasa yuz beradigan jarayondir. Majburiy adaptatsiya esa bu odam o’ziga zid, hatto unga yoqmaydigan salbiy, xohishiga qarama- qarshi ijtimoiy hodisalarga ilojsiz ravishda moslashishi mumkin. Bu tipdagi adaptatsiya inson psixikasiga zara keltirishda, ya’ni shaxsning axloqiy, intellectual sifatlarining deformatsiyasi hisobiga kechadi, unda mental va emotsional buzilishning avj olishi natijasida muhitning o’zgarishiga olib keladi, hatto inson o’z ruhiy olamini o’zgartirish huquqidan ham mahrum bo’ladi.

Sotsial-psixologik adaptatsiyaning funksiyalari:

1. ,,Shaxs-ijtimoiy muhit’’ munosabati dinamik sistemasidaoptimal tenglikka erishish;

2. Muomala va o’zaro munosabatlarni boshqarish, shaxsning qobiliyatlari va ijodiy imkoniyatlari rivojlanishi va maksimal namoyon bo’lishi, odam ijtimoiy faolligining ko’tarilishi;

3. Shaxsda emotsiona-komfortga nisbatan pozitsiyalari (qarashlari) ni shakllantirish;

4. Shaxsning o’zini-o’zi namoyon etishi;

5. O’zini-o’zi bilish va o’zini-o’zi tuzatish (psixologik korreksiyalash);

6. Ham shaxsni ham ijtimoiy muhit (jamoa) ni moslashtiruvchi faoliyatning samaradorligini oshirish;

7. Ijtimoiy muhit jipsligi va barqarorligini oshirish, psixologik salomatlikni saqlash.

Inson hayotida adaptatsiya tushunchasi o’ziga xos asosiy o’rinni egallaydi. Chunki shaxsning mustaqil qaror qabul qilishi ham qaramlikni, ziddiyatni, xato va kamchiliklarni keltirib chiqarishi ham asl negizi adaptatsiyaga borib taqaladi. Chunkin shaxsda mustaqil bo’lish uchun ham yoki o’zgalarga qaramlik bo’lish uchun moslashish jarayoni rol o’ynaydi. Adaptatsiyani ikki xil usulda qabul qilish to’g’ri deb o’ylayman. Ham ijobiy, ham salbiy. Inson o’ziga qanday moslashishni ravo ko’rsa unda shu bo’yicha adaptatsiya ro’y beradi.

O’yin, mehnat, o’quv, muomala va boshqa faoliyat turlarining muvaffaqiyatli kechishi, shaxslararo munosabatlarda xulq-atvorning namoyon bo’lishi ijobiy psixologik holat sifatida baholansa, emotsiya va hissiyotning barqaror, maqsadga yo’nalgan tarzda hukm surish adaptatsiya jarayoni bilan birgalikda amalga oshadi deb e’tirof etiladi.

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ЎЛЧАШ ВОСИТАЛАРИНИНГ МЕЪЁРЛАНУВЧИ МЕТРОЛОГИК ХАРАКТЕРИСТИКАЛАРИГА ТАЪСИР ҚИЛУВЧИ ОМИЛЛАР

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Аннотация. Ушбу мақолада машинасозлик деталларини ишлаб чиқариш технологик жараёнларда замонавий ўлчов воситаларидан фойдаланиш вақтида динамик ва статик характеристикаларга эътибор берилган ҳолатда ўлчаш жараёнларини олиб бориш усуллари хақида маълумотлар ёритилган.

Калит сўзлар. Машина, замонавий воситалар, ўлчаш, усул, сифат, хатолик, статик, динамик, восита, элемент, ресурс, меъёр, метрологик, стандарт, ҳужжат, информация.

Аннотация. В данной статье освещены сведения о методах проведения измерительных процессов с учетом динамических и статических характеристик при использовании современных средств измерений в технологических процессах производства деталей машиностроения.

Ключевые слова. Станок, современный, инструмент, измерение, метод, качество, погрешность, статика, динамика, инструмент, элемент, ресурс, эталон, метрологический, эталон, документ, информация.

Abstract. This article covers information about the methods of measuring processes, taking into account dynamic and static characteristics when using modern measuring instruments in technological processes for the production of machine building parts.

Keywords. Machine tool, modern, tool, measurement, method, quality, error, statics, dynamics, tool, element, resource, standard, metrological, standard, document, information.

Машинасозлик ишлаб чиқаришида машина деталларининг аниқ ўлчамлар бўйича метрологик талаблар асосида тайёрланиши, машиналарнининг ишлаш ресурсини оширишга олиб келади [1; 246-251 бб.]. Замонавий ўлчаш воситаларини қўллаш натижасида аниқлик даражасини кўтаришга имкон беради. Ўлчаш воситаларининг аниқ хиллари учун меъёрланувчи метрологик характеристикалар танланма мажмуасининг ва ўлчаш воситаларига меъёрий техник ҳужжатларда метрологик характеристикаларни меъёрлаш усулларининг метрологик характеристикалари номенкулалари бу:

- ўлчаш воситаларига умумий техник талаб қўювчи стандартлар ва умумий техник шартлар;
- ўлчаш воситаларига техник талаб қўювчи стандартлар ва техник шартлар;
- ўлчаш воситаларининг техник шартлари;
- ўлчаш воситасини ГОСТ 8.009-84 стандарти талаблари ўрнатилган ҳолда ишлаб чиқишда қўйиладиган техник топшириқлардир.

ГОСТ 8.009-84 “Ўлчаш воситаларининг меъёрланувчи метрологик характеристикалари” га мувофиқ ўлчаш воситаларининг метрологик характеристикалари олти гуруҳга бўлинади:

– ўлчаш натижаларини аниқлаш учун характеристикалар;
– ўлчаш воситаси хатолигининг харктеристикалари;
– таъсир этувчи катталикка нисбатан ўлчаш воситаси сезгирлигининг характеристикалари;
– Динамик характеристикалар;
– ўлчаш обекти ва воситасининг ўзаро таъсирлашувининг таъсир характеристикалари;

– Чиқиш сигналининг ноинформатив параметрлари.

Ўлчаш натижаларини аниқлаш учун белгиланган ўлчаш воситасининг биринчи гуруҳ характеристикасига қуйидаги характеристикалар киради:

– ўлчаш воситаси чиқиш катталиги (чиқиш сигнали)нинг кириш катталигига (кириш сигналига) боғлиқлигини характерловчи ўзгариш функцияси.

Ўзгариш функцияси аналитик, график ёки жадвал кўринишида бўлиши мумкин [1].

а) битта физикавий катталик ўлчамини ҳосил қилувчи бир қийматли ўлчов қиймати ёки бир қатор бирисмли катталикларни турли хил ўлчамларидан ҳосил қилинувчи кўп қийматли ўлчовлар қиймати;

б) ўлчаш асбобининг ёки кўп қийматли ўлчовнинг шкала бўлинмаси қиймати;

в) чиқиш коди тури (рақамли ўлчаш воситасининг), разряд кодининг қиймати, натижани рақамли код кўринишида узатиш учун белгиланган ўлчаш воситаси энг кичик разряд кодининг бирлик қиймати.

Кўрсатилган характеристикалар ўлчаш воситасининг аниқ бир хилини номинал характеристикалар кўринишида меъёрлайди [2; 22-25 бб.].

Иккинчи гуруҳга ўлчаш воситаси хатоликларининг мунтазам ва тасодифий ташкил этувчиларининг характеристикалари киради.

Ўлчаш воситаси хатолигининг мунтазам ташкил этувчисининг математик кутилиши (ўртача арифметик қийматиги) ни баҳолаш қуйидаги формула билан амалга оширилади:

$$\overline{\sigma}|\Delta s| = \sqrt{\frac{\sum_{i=1}^{i=m}(\Delta s - \tilde{M}|\Delta s|)^2}{m-1}}. \qquad (1)$$

Ўлчаш воситаси хатолигининг мунтазам ташкил этувчиси кўрилаётган характеристикалари қуйидагиларни ўрнатиш йўли билан ўрнатилади:

а) маълум туридаги ўлчаш воситаси хатолигининг рухсат этилган мунтазам ташкил этувчисининг (ижобий ва салбий) чегараси;

б) маълум туридаги ўлчаш воситаси хатолигининг ўртача квадратик оғиши ва математик кутилиши рухсат этилган мунтазам ташкил этувчисининг (ижобий ва салбий) чегараси;

Тасодифий хатоликнинг пайдо бўлиши асосида чиқиш сигнали гистерезисининг пайдо бўлиши натижасида ўлчаш воситасининг чиқишида номоён бўлувчи тақсимланиш қонуни ётади. Ушбу ҳодиса ўлчаш воситаси чиқиш сигнали информатив параметрларининг икки математик кутилиши орасидаги фарқни ифодалайди [3; 388-395 бб.].

Характеристикаларнинг учинчи гуруҳига ўлчаш воситасининг таъсир этувчи катталикка нисбатан сезгирлиги киради. У қуйидаги сонлардан танланади:

Катталикка таъсир этувчи ўлчаш воситаси сезгирлигининг асосий характеристикалари бўлиб, таъсир этувчи фактор (иқлимий, механик ва бошқа бир қатор факторлар) билан ўлчаш аниқлиги орасидаги муносабат ҳисобланади,

яъни фақат асосий хатолик эмас, балки қўшимча хатоликлар ҳам ҳисобга олинади. Шу мақсадда таъсир этувчи функция тушунчаси киритилади.

Таъсир этувчи функция ўлчаш воситаси метрологик характрестикаси ўзгариши билан таъсир этувчи катталикнинг ёки таъсир этувчи катталик мажмуасининг ўзгаришига боғлиқ.

Таъсир этувчи функция номинал функцияни ўрнатиш йўли билан меъёрланади [4; 165-167 бб.].

Метрологик характеристикаларнинг тўртинчи гуруҳи ўлчаш воситаларининг динамик характеристикалари сифатида қаралади.

Ўлчаш воситасининг динамик характеристикаси чиқиш сигналининг кириш сигнали қийматига таъсири натижасида юзага келувчи ўлчаш воситасининг хусусияти ҳисобланади. Бу қиймат вақт давомида ҳар қандай миқдорга ўзгариши мумкин.

1. Аналог ўлчаш воситаларининг тўла ва хусусий динамик характеристикалари фарқ қилади, бунда уларни чизиқли характристика сифатида қараш ҳам мумкин. Улар ташкил этувчи характристикаларни ва уларниг рухсат этиладиган оғишдаги чегараларини (мусбат ва манфий) ўрнатиш йўли билан меъёрланади [5; 109-115 бб.].

Ўлчаш воситасининг ўткинчи характеристикалари чиқиш сигналини бевосита ўлчаш йўли билан поғонали ўлчашда олинувчи вақтинчалик характеристика ҳисобланади.

Ўлчаш воситасининг импулъсли ўткинчи характеристикалари делъта-функция (Дирак функцияси) кўринишида олинган ўлчаш воситаси сигналини киришга узатиш натижасида олинувчи вақтинчалик характеристика ҳисобланади [6; 284-290 бб.].

Хусусий динамик характеристикалар фақат ўлчаш воситаларини қўллашда унинг динамик хусусиятларини ҳисобга олиш учун этарли бўлганда меъёрлашга рухсат этилади.

Метрологик характеристиканинг бешинчи гуруҳи ўлчаш обектининг (тўла қаршиликлари билан) кириш ва чиқишига уланган ўлчаш воситасининг ўзаро таъсирини ҳисоблаб чиқади. Тўла қаршилик қиймати ҳисоби ўлчаш натижаси хатолигининг характерстикаларини баҳолайди [7; 319-330 бб.].

Олтинчи гуруҳ ўлчаш воситаси чиқиш сигналининг ноинформатив параметрларини ўз ичига олади. Ўлчаш воситаси чиқиш сигналининг ноинформатив параметрлари бўлиб, узатиш учун фойдаланилмайдиган ёки ўлчаш ўзгарткичи кириш сигналининг информатив параметрлар қиймати индикацияланмайдиган ёки ўлчовни чиқиш катталиги ҳисобланмайдиган чиқиш сигналининг параметри ҳисобланади.

Чиқиш сигналининг ноинформатив параметрлари номинал параметрларни ва ундан рухсат этилган, яъни параметр қийматининг энг катта ва энг кичик рухсат этилган оғиш чигарасини ўрнатиш йўли билан меъёрланади [8; 176-178 бб.].

Ўлчаш воситалари, бошқа техник қурилмалар каби уларнинг вазифа ва қўлланилишини белгиловчи қатор техник характеристикаларига эга.

Ўлчаш воситаларининг сифатини, уларнинг техник даражасини баҳолашда хизмат қиладиган ва ўлчаш натижаларига таъсирини ва хатоликларини баҳолаш мақсадида ўлчаш воситаларининг баъзи характеристикалари ажратилади. Ўлчаш воситаларининг бундай хусусиятлари *метрологик характеристикалар* дейилади. Ишлаш режимига қараб улар статик ва динамик характеристикаларга бўлинади.

Асосий статик характеристикаларга *ўзгартириш функцияси, сезгирлик, сезгирлик остонаси* киради [9; 160-168 бб.].

Ўзгартириш функцияси – бу ўлчаш воситасининг киришидаги (Х) ва чиқишидаги (У) катталиклари қийматларининг ўзаро функционал боғлиқлигидир.

Ўзгартириш функцияси аналитик ифода бўйича $У=ф(Х)$ ўзгартириш тенгламаси, график тарзда ва жадвал кўринишида берилиши мумкин.

Ўзгартириш функцияси кўпинча ўлчаш воситасининг *градуировкали характеристикаси* дейилади.

Ўлчаш воситаси учун (ёки ўлчаш воситасининг конкрет тури учун) кўрсатилган ўзгартириш функциясини ўлчаш воситасининг *номинал ўзгартиш функцияси* $У=ф_Х(Х)$ дейилади.

Идеал ҳолда ўлчаш ўзгарткичлари ва ўлчаш асбобларининг номинал ўзгартиш функцияси чизиқли боғлиқликда - $У=к_Х(Х)$ бўлади. Бундай асбоблар бир текис шкалали бўлиб, уларда икки қўшни белгилари орасидаги оралиқ бутун шкала бўйича бир хил, яъни пропорционал боғлиқ бўлади. Асбобларда ўзгартириш функциясининг чизиқли бўлиши қайдномаларни олишни осонлаштиради, субектив хатоликларни эса камайтиради.

Сезгирлик – умуман сезгирлик – бу ўлчаш воситасининг ташқи сигналга нисбатан таъсирчанлиги, сезувчанлигидир. Умумий ҳолда сезгирлик ўлчаш воситасининг чиқиш сигнали ўзгаришини шу ўзгаришнинг сабабчиси – кириш сигнали ўзгаришига нисбатидан аниқланади:

$$S = \lim_{\Delta X \to 0} \frac{\Delta У}{\Delta X} \approx \frac{\Delta У}{\Delta X} \quad (2)$$

Сезгирликнинг ўлчамлиги кириш ва чиқишдаги катталикларнинг ўлчамликларидан аниқланади.

Ўлчаш воситаларининг сезгирлигини тескари қиймати $C = \frac{1}{S}$, уларнинг доимийлиги дейилади ва у ўлчаш ўзгарткичлари ва асбобларининг асосий характеристикаларидан бири бўлиб ҳисобланади.

Кўрсатувчи стрелкали асбобларининг саноқ қурилмаси (кўрсаткичи) шкала ва кўрсаткичдан тузилган. Шкаладаги сонли қийматлар кўрсатилган белгилар шкаланинг сонли белгилари дейилади. Шкаланинг икки қўшни белгилари орасидаги оралиқ *шкаланинг бўлинмаси* дейилади. Шкаланинг икки қўшни белгиси мос келган катталик қийматлари айирмаси *шкала бўлинмасининг қиймати* дейилади.

Сезгирлик остонаси – бу ўлчанадиган катталикнинг шундай энг кичик (бошланғич сезувчанлик) қийматики, у ўлчаш асбобининг чиқиш сигналини сезиларли ўзгаришига олиб келади ва қуйидагича аниқланади:

$$S = \frac{X_{\min}}{X_{пот}} \cdot 100\%, \qquad (3)$$

бу ерда $X_{мин}$ – ўлчанадиган катталикнинг энг кичик (бошланғич) қийматидир.

Интегралловчи асбоблар учун “сезгирлик” тушунчаси ишлатилмайди ва ўз навбатида “сезгирлик остонаси” тушунчаси эса исталган ўлчаш ўзгарткичлари ва асбоблари учун қўлланилиши мумкин.

Хусусий энергия сарфи- бу хусусият ҳам муҳим ҳисобланиб, асбобнинг ўлчаш занжирига уланганидан сўнг киритиши мумкин бўлган хатоликларни баҳолашда аҳамиятли саналади. Айниқса, кам қувватли занжирларда ўлчашларни бажаришда жуда муҳимдир [10; 505-509 бб.].

Ўлчаш воситаларининг исталган унинг киришига ёки чиқишига уланган компонентлари билан (ўлчаш обекти, ўлчаш воситаси) ўзаро таъсири ўлчаш хатолигининг асбобий ташкил этувчисини ўзгартиради ва бу ҳолатни баҳолашда ўлчаш воситасининг *кириш ва чиқишидаги импеданси* (тўла қаршилик) каби хусусиятлари ҳам ишлатилади. Метрологик амалиётда кўрсатилган тушунчалар қуйидагича таърифланади.

Ўлчаш воситаларининг кириш/чиқиш импеданси – бу ўлчаш воситасининг кириш/чиқишга таъсир этувчи умумлашган кучнинг, ўлчаш воситаси кириш (чиқиш) занжиридаги жараённи характерловчи умумлашган тезлигига нисбатидир. “Импеданс” атамасини исталган физик тизимлар (механик, гидравлик, магнит, электр) учун қўллаш мумкин.

Ўлчанадиган катталикнинг ўлчаш воситалари учун йўл қўйиладиган хатоликларини меъёрланган қийматлари оралиғи ўлчаш асбоби ёки ўлчаш ўзгарткичининг *ўлчаш диапазони* дейилади.

Техник асбобларда, одатда, ўлчаш диапазони билан кўрсатувлар диапазони мос келади. Ўлчаш диапазонининг энг кичик ва энг катта қийматлари *ўлчаш чегараси* дейилади.

Ўлчаш воситаларининг динамик характеристикалари.

Динамик характеристикалари– ўлчаш воситаларининг инерсион хусусиятларини акс эттиради ва ўлчаш воситасида чиқиш сигнали билан вақт бўйича ўзгарадиган катталикларнинг ўзаро боғлиқлигидан аниқланади. Вақт бўйича ўзгарувчан катталиклар булар кириш сигналининг параметрлари, ташқи таъсир этувчи катталиклар ва бошқалар. Ўлчаш воситаларининг динамик хусусиятларини тўла ифодалаш мақсадида уларни тўла ва хусусий динамик тавсифларига бўламиз.

Тўла динамик хусусият – бу ўлчаш воситасининг киришидаги исталган информатив ёки ноинформатив параметрлари *X(t)* ва чиқиш сигналларининг *Y(t)* ўзгаришидан аниқланади.

Тўла динамик хусусиятларга қуйидагилар киради: ўтиш тавсифи, импулъсли ўтиш тавсифи, амплитуда-фаза тавсифи, амплитуда частотали ва фаза частотали тавсифлар мажмуи, узатиш функцияси [12].

Хусусий динамик хусусият – ўлчаш воситасининг динамик хусусиятларини тўла акс эттирмайди. Аналогли ўлчаш воситаларининг хусусий динамик тавсифларига исталган функционал ёки тўла динамик хусусиятларнинг параметрлари киради. Бундай хусусиятларга қуйидагилар киради: ўлчаш воситасининг таъсирланиш вақти (асбоб кўрсатишининг тўхташ вақти), демпфирлаш коэффициенти, хусусий резонанс частотасининг қиймати, амплитуда-частотали тавсифининг резонанс частотасидаги қийматилари билан аҳамиятли ҳисобланади.

Машинасозлик ишлаб чиқаришида замонавий ўлчаш воситаларидан фойдаланиш жараёнида, ўлчаш воситаларининг статик ва динамик хусусиятларини аҳамиятлилиги ҳисобга олган ҳолда, метрологик талаблар асосида, деалларни ишлаб чиқариш машинанинг ишлаш ресурсини оширишга имконият яратади.

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DEVELOPMENT OF NEW MECHANISMS FOR REGULATING EMPLOYMENT AND FUNDAMENTAL RESTRUCTURING OF THE PERSONNEL TRAINING SYSTEM IN THE CONTEXT OF SANCTIONS[1]

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Abstract. The presented abstracts of the presentation at the International Scientific and Theoretical Conference "Samarkand Scientific Renaissance" present the results of research conducted by employees of the Plekhanov Russian University of Economics as part of the research work "Development of mechanisms for regulating the labor market under sanctions." The authors propose innovative approaches to the development of new mechanisms for regulating employment and fundamental restructuring of the personnel training system, the implementation of which will have a positive impact on the effective functioning of the labor market of the Russian Federation and its institutions, motivation to work, and labor behavior of employees under the conditions of international sanctions. In the final part of the theses, recommendations are given on the use of the results of the research work carried out by the authors not only to representatives of the scientific community, but also to be applied to adjust the development strategy of the national economy, education and science, to organize the work of cognitive centers within the framework of the program currently being implemented in the country to create a network of situational centers and train managers at various levels.

Keywords. Labor market, human capital, employment, portfolio employment, international sanctions, personnel training system.

[1] The abstracts of the speech were prepared based on the results of the research work funded from the funds of the Plekhanov Russian University of Economics on the topic "Development of mechanisms for regulating the labor market under sanctions."

Introduction. The labor market in the new conditions was influenced by a unique combination of diverse economic, political, and social factors. The Russian Federation is facing unprecedented economic pressures that no other country in the world has faced before. Over 19 thousand sanctions have been imposed against the state by a number of developed countries, which is many times more than those of Iran and the DPRK. Such a situation could not but affect the labor market, as many sanctions were imposed on key sectors of the economy: banking, agriculture, oil and gas, which employ a large proportion of the working population of the country. In addition, the situation has exposed a number of old problems that have not been solved since the 90s: "brain drain", the weakness of the trade union movement, and the underdevelopment of the labor market infrastructure. The sanctions challenge for the development of the Russian labor market is just beginning to become the subject of scientific research. The relevance of the research is determined by the fact that the transformation of the paradigm in the labor market in the field of employment under conditions of sanctions pressure entails a change in public relations, the emergence of new values and the formation of completely different knowledge, adaptation to which is a difficult and long-term process. This problem is becoming more acute, as one of the key obstacles to the development of the national economy and employment in Russia are the problems of human capital formation, ensuring rational employment of the working-age population, and the threat of rising unemployment due to the introduction of international economic sanctions against Russia. Despite the fact that Russian fundamental science explains the emergence and development of crises of social and labor relations in the labor market, interprets the patterns of post-crisis dynamics, it is largely limited by the existing methodology, many theories for the study of transformational processes in the field of employment in the context of the sudden emergence of such a situation. The latter is currently relevant not only for Russia, but also for the whole world.

The purpose of the study. Development of new mechanisms for regulating employment and fundamental restructuring of the personnel training system, the implementation of which will have a positive impact on the effective functioning of the labor market of the Russian Federation and its institutions, motivation to work, labor behavior of employees in the context of the introduction of international sanctions. The importance of developing new scientific approaches is high, which will allow: to conduct a comprehensive, large-scale, detailed description of theories of social development reflecting the dynamics of changes in socio-economic systems (evolutionary theory, theory of crises and catastrophes, civilizational theory, etc.) in the context of employment in the Russian labor market; to conduct an analytical review of social and labor relations in society under the impact of international sanctions in the historical aspect and structure the list of consequences of international sanctions on the labor market; to diagnose and predict the labor needs of the Russian national economy, which allows with a high degree of probability and a low level of error, to determine the need for specialists in industries and qualifications, taking into account changes taking place in the structure of the economy of the Russian Federation in the context of the transition to a new model of economic development and the introduction of international sanctions.

Methods and organization of research. The authors chose a civilizational (socio-cultural) approach as the methodological basis of the study, taking into account the most important dialectical patterns occurring in the context of the emergence of sudden factors affecting changes in the structure of the labor market under the influence of sanctions. This approach in research is supported by many both domestic and foreign scientists. It is also effective in developing new mechanisms for regulating employment and fundamental restructuring of the personnel training system. The essence of the civilizational approach to this study is based on the idea that a modern civilized society is characterized by the unity of many structural components of its vital activity, which, according to the provisions of the theory of management systems, not only coexist, but also closely interact with each other and with the external environment. This also applies to the human resource management system, including employment regulation. The most important aspects representing society as a whole, requiring both individual and comprehensive research in the field of employment regulation, are historical experience, technological, economic and socio-cultural level of development of society. It should be noted that, guided by the research rules underlying the civilizational approach, studying one or another aspect of social dynamics and highlighting the prerequisites and patterns of transformation of the employment regulation system under the conditions of imposed international sanctions, it is necessary to take into account the multidimensional, civilizational nature of the functioning of a state or a group of states representing a civilization. This is also relevant when justifying changes in the impact of economic instability on the formation of personnel policy in the country, including the introduction of innovative directions for the development of the higher education system. When conducting research on the practice of fundamental restructuring of the personnel training system under sanctions, the authors of the article used the following general scientific methods:

The method of observation. It is used for direct observation of changes in society, the socio-economic system during the transformation of the personnel training system under sanctions in order to further apply deeper methods corresponding to the tasks of the study.

The method of description. It is a system of procedures for the collection and primary analysis of data related to the system of state regulation of employment of the population. In our study, it was used following the method of observation or the method of data analysis in order to generalize the description of the transformation of the personnel training system using new innovative educational technologies that are currently taking place, or in historical retrospect, and the visible socio-economic consequences.

The method of analysis. It is used to identify and study individual stages of the transformation process of the socio-economic system in the context of their changes under the influence of the system of improving the formation of personnel policy in the country. The research results presented in the article were conducted on the basis of an analysis of scientific papers by leading Soviet, Russian and foreign economic scientists. An interdisciplinary research approach was used to draw conclusions based

on literature analysis. Internet resources and static databases, including Rosstat, were used.

Research results and discussion. Starting in 2020, the Russian economy as a whole and the labor market in particular have been under the strong and unpredictable impact of the COVID-19 pandemic, and then powerful sanctions pressure from unfriendly countries. The effects of these shocks on the Russian labor market have varying degrees of study. In general, the pandemic challenge has already been comprehended and is being actively studied by the Russian scientific community. The sanctions challenge for the development of the Russian labor market is just beginning to become the subject of scientific research. Estimates of the impact of sanctions on the Russian economy are contained in the operational reports of the structures of the Government of the Russian Federation and the Central Bank of the Russian Federation. Since the end of February 2022, the Russian economy has been under the influence of new sanctions imposed by the United States and its allies. The sanctions imposed proved to be unprecedented both in severity and in the range of individuals and legal entities affected by them. The full review of sanctions deserves a separate study. We should immediately note that the effect of sanctions has not yet fully manifested itself due to the short time that has passed since their introduction; therefore, we can only assess the impact of sanctions in advance. Sanctions pressure accelerated inflation in Russia. The sharp increase in inflation is caused by excessive consumer demand, real and expected supply shortages due to sanctions restrictions, growing inflation expectations, the depreciation of the ruble and taking into account its uncertainty. Since April 2022, there has been a tendency for inflation to slow down due to the weakening of the effect of these factors, except for the supply shortage factor, it remains in effect. The labor market in the new conditions was influenced by a unique combination of diverse economic, political, and social factors. An important feature of the emerging configuration of the labor market is the uneven impact of the negative effects of sanctions pressure on various sectors of the economy and, as a result, increased structural imbalances, labor shortages in some sectors and excess in others. Let's look at these imbalances in more detail. Economic activity is expected to decrease in sectors such as the automotive industry, automotive components manufacturing, commercial space launches, oil production and refining, air transportation, automobile transportation, non-food retail, and public services. The question remains to what extent a decrease in economic activity in these sectors will lead to a decrease in employment. In our opinion, the decline in employment in these sectors will be uneven. In industrial sectors with a high proportion of specialized labor focused on a specific industry, one can expect an increase not so much in layoffs as in shortening the working week, an increase in the number of downtime and vacations and other forms of employment reduction aimed at retaining staff. In the areas of non-food retail and public services, an increase in the number of layoffs and termination of the activities of the self-employed is very likely. The situation of those employed in these sectors is somewhat facilitated by the opportunity to move to other sectors of the service sector, for example, to food retail or domestic tourism, as well as to Russian market players in their sectors instead of the departed foreign ones. RAS experts note the following risks for the labor market in the new conditions: – the

growth of informal employment; – difficulties with the employment of young people entering the labor market for the first time; – an increase in the number of violations of labor legislation by the employer. At the same time, we can expect an increase in economic activity in such sectors as the defense industry, civil aviation, agricultural engineering, maritime transportation, logistics services in certain areas, domestic tourism, clothing and footwear production, and breeding areas in agriculture. The situation is ambiguous in the field of information technology. On the one hand, the withdrawal of Western employers from the Russian IT market frees up a large number of their employees, on the other hand, there is an outflow of IT specialists from Russia, while there is a demand for replacement of foreign products. It can be expected that the information technology labor market will find a balance point at lower levels of employment and wages than it was before the sanctions were imposed. These circumstances necessitated the introduction of measures to retain IT specialists in Russia. However, under the current conditions, the Russian IT market is less attractive to employees than the international one, both in terms of wages, opportunities to participate in projects and access to infrastructure. In conditions of significant deformation of markets, there is a trend towards non-market corrective measures from the state, including the impact on the labor market. Analyzing the measures taken to mitigate the situation on the labor market, we note the following: Decree of the Government of the Russian Federation No. 511 dated March 30, 2022 "On the specifics of the legal regulation of labor relations and other directly related relations in 2022". The key provision of this resolution is aimed at ensuring the opportunity to engage in legal paid work for employees of companies that have suspended their activities as part of the sanctions campaign. At the moment, while foreign companies that have suspended operations continue to pay salaries to Russian employees, this measure is not entirely relevant. But in the future, due to the depletion of reserves of ruble cash for salary payments, the possibility of transferring an employee to another employer while maintaining the original employment contract may become a flexible mechanism to protect the interests of employees of these companies and maintain the level of employment. According to the Decree of the Government of the Russian Federation dated March 19, 2022 No. 413 "On Amendments to Appendix No. 35 to the State program of the Russian Federation "Economic Development and Innovative Economy", grants will be allocated to young entrepreneurs (14-25 years old). Subsidies are offered to businesses for the employment of college and university graduates without work experience, young people without secondary vocational or higher education, disabled people, orphans, parents of minor children under the age of 30. The amount of the subsidy is 3 minimum wages per new employee. The access of the unemployed to a social contract is also expanding. The income of a family member dismissed after March 1, 2022 and declared unemployed will not be taken into account when assessing family income for concluding a social contract. A proactive measure to support employment is the Decree of the Government of the Russian Federation dated March 16, 2022 No. 376 "On the specifics of organizing the provision of public services in the field of employment in 2022". According to this Decree, not only unemployed citizens will now be able to use the services of employment centers, but also those who are at risk

of dismissal, transferred by the employer to a part-time job or sent on unpaid leave. Such citizens will be able to count on the proactive assistance of employment centers in order to navigate the labor market, maintain or increase their income. In particular, they will be provided with assistance both with temporary employment and with starting their own business, including financial support for state registration as an individual entrepreneur, an organization being created or a farm. These citizens can also be sent for re-education. This set of measures to support the labor market is not exhaustive and is constantly being supplemented and adjusted.

Conclusion. The scientific and social significance of the conducted research lies in improving the system of regulation of the Russian labor market by forming a new model of employment, manifested in the development of new forms and types of labor activity, positioning electronic self-employment of citizens, as well as the formation of digital platforms in the field of employment and labor relations, which will further avoid many threats from the imposed international sanctions. To this end, new mechanisms for regulating employment and proposals for a fundamental restructuring of the personnel training system have been developed, the implementation of which will have a positive impact on the functioning of the labor market of the Russian Federation and its institutions, motivation to work, and labor behavior of employees under the conditions of international sanctions. The fundamental and applied nature of the research is determined primarily by: the development of a methodology for reducing risks in the labor market under sanctions; the development of methods, criteria and indicators for diagnosing and predicting the needs of the Russian labor market for qualified personnel under the prevailing conditions of sanctions; the development of an econometric model of transformational processes of the employment system under economic and political sanctions, based on spatial mathematics, intersectoral balance and time series modeling methods. Thus, within the framework of the conducted research, a new model of employment has been developed, unlike existing ones in the Russian Federation, based on the development of new forms and types of labor activity, positioning of electronic self-employment of citizens, as well as the formation of digital platforms in the field of employment and labor relations, which will further avoid many shortcomings identified in the process of the conducted labor market research. The results of the study can be used: a) to form a theoretical and methodological basis for the development of employment and training management systems based on platform principles for designing complex interaction systems in high-tech industry and the service sector, in public administration; b) in the educational process (master's degree in the fields of Economics, Management, Information and Telecommunication Systems, postgraduate studies in Economics, Law, Informatics, target groups for training specialists of enterprises and organizations, as well as specialists of government departments and structures); c) to prepare methodological materials for corporate structures and authorities. The results of the research work carried out by the authors can not only be presented to the scientific community, but also be applied to adjust the strategy for the development of the national economy, education and science, to organize the work of cognitive

centers within the framework of the program currently being implemented in the country to create a network of situational centers and train managers at various levels.

TALABALARNING KREATIV FAOLIYATINI RIVOJLANTIRISHDA KOMPETENSIYAVIY YONDASHUV

Davletmuratova E.
Nukus innovatsiyon institutining katta o'qituvchisi

Tayanch so‘zlar. Creativ ta’lim, tarbiya, pedagogik texnologiya, innovatsion pedagogika.

Ключевые слова. Креатив образование, воспитание, педагогические технологии, инновационная педагогика.

Key word. Creative education, breeding, pedagogical technologies, innovative pedagogy.

Mavzuning dolzarbligi. Jahonda iqtisodiyotning jadal rivojlanishi tufayli kreativ fikrlovchi inson kapitali asosiy resursga aylanayotgan sharoitda zamonaviy rivojlanish tendensiyalariga mos ravishda o'qitishning metodik asoslarini rivojlantirish orqali ta'lim jarayonini kompetensiyaviy yondashuv asosida tashkil etishning metodik tizimini yaratishga alohida ahamiyat qaratilmoqda. Shunga ko'ra, talabalarga ta'lim-tarbiya berishning samarali usullarini ta'lim tizimiga joriy etish, talabalarning kreativ kompetensiyalarini rivojlantirish muhim ahamiyat kasb etadi.

Kreativ fikrlash bugungi kunda yoshlar egallashi kerak bo‘lgan muhim ko‘nikmadir. Kreativ fikrlash jamiyat hayotida muhim o‘ringa ega bo‘lgan, shaxsning tafakkuri bilan bevosita bog‘liq bo‘lgan jarayon hisoblanib, shaxsda, ayniqsa, yoshlarda ushbu ko‘nikmani shakllantirish kelgusida mamlakat taraqqiyotining muhim tomoni hisoblanadi.

Mavzuning o'rganilganligi. Mamlakatimizda T.Aliboev, G.Ibragimov, N.Muslimov, M.Turdieva, Z.Kurbaniyazova, R.Djuraev, B.Xodjaev, N.Egamberdievalarning tadqiqotlarida talabalarda kreativlikni rivojlantirish, kreativlikni rivojlantirishga ta'sir eyuvchi ijtimoiy omillar, kreativ tafakkurni shakllantirishning mavjud pedagogik shart-sharoitlari tadqiq etilgan.

Tadqiqotning maqsadi. Talabalarda kreativ kompetensiyalarini rivojlantirishga doir tavsiyalar ishlab chiqishdan iborat. Talabalarda kreativ fikr yuritish ko'nikmasini rivojlantirishdan oldin auditoriyada qulay pedagogik-psixologik muhitni yaratish lozim. Sababi, kreativlik xarakterdagi ta'lim tarbiya muhiti talabalarda kreativ va tanqidiy fikrlash ko'nikmasining rivojlanishiga olib keladi. Talabalarning kreativ qobiliyatlari ularning e'tiborini ta'lim jarayoniga faol jalb etishni ta'miyinlaydi.

Kreativ fikrlash masasasini taxlil kilar ekanmiz kreativlik tushunchasining lug‘aviy ma’nosi ingliz tilida “create ” – yaratish, “creative” yaratuvchi, ijodkor ma’nolarini anglatadi. Jamiyat hayotining qaysi sohasida qo‘llanilishiga qarab turli

soha vakillari tomonidan turlicha ta’riflar berilganligini ko‘rishimiz mumkin. Masalan, pedagogik nuqtai nazardan yondashganda, kreativlik pedagogning yangi g‘oyalarni ishlab chiqarishga tayyorlikni tavsiflovchi hamda mustaqil omil sifatida iqtidorlilikning tarkibiga kiruvchi ijodiy qobiliyati ma’nosini ifodalaydi. Shuningdek, PISA (o‘quvchilarni ta’limiy yutuqlarini baholash xalqaro dasturi) tadqiqotida kreativ fikrlash bilim sohasida original va samarali yechimlar, yutuqlar va tasavvurlarni ta’sirchan ko‘rinishlarga olib keladigan g‘oyalarni ishlab chiqish, baholash va takomillashtirishda samarali ishtirok etish qobiliyati deb ta’riflangan. Psixologik nuqtai nazardan yondashganda, kreativlik inson shaxsining ijodkorlikka bo‘lgan qobiliyati, ijodkorlik iste’dod darajasi, individning an’anaviylik yoki odat tusiga kirgan fikrlash sxemasidan uzoq bo‘lgan, prinsipial yangi g‘oyalarni yaratishga tayyorlikni xarakterlovchi, shuningdek, muammolarni o‘zgacha tarzda bartaraf etish, iqtidorning mustaqil faktori sifatida qabul qilingan ijodiy qobiliyatlaridir. Umuman olganda, bugungi kunda ijodkorlik, yaratuvchanlik, yangilik yaratishga qaratilgan faoliyat kreativ faoliyat deb tushuniladi. Kreativ shaxs esa, o‘zining fikrlashi, dunyoqarashi, doimo yangiliklarga intilishi, o‘z ustida tinimsiz ishlashi, muammoga boshqa shaxslarga qaraganda noodatiy tarzda yechim topa olishi va original qarashlarni bildira olishi, qiziqarli suhbatdosh bo‘lish va boshqa xususiyatlarni o‘zida aks ettirmog‘i lozim. Amerikalik olim D.Veksler “Kreativlik fikrning shunday turiki, u shaxsga bir muammo yoki masala yuzasidan birdaniga bir nechta yechimlar paydo bo‘lishini taqozo etadi va shablonli, zerikarli fikrlashdan farq qilib, narsa va hodisalar mohiyatidagi o‘zga xoslik, noyoblik sifatlarini anglashga yordam beradi ” - deb ta’rif beradi.

Tadqiqotning vazifalari. Talabalarning kreativ kompetensiyalarini rivojlantirish xususiyatlarini o'rganish va tavsiflash. Talabalarning kreativ kompetensiyalarini rivojlantirish darajasining pedagogic xususiyatlarini aniqlashtirish hisoblanadi.

Kreativ qobiliyatlarni faqat yangi g‘oyalarni yaratishgina uchun emas, balki hayot tarzining, yoki alohida olingan aspektlarni yaxshilash uchun qo‘llash va shaxsning ichki dunyosi rivojlanishida muhim o‘rin tutadi. Psixolog olim Abraxaam Maslou ham kreativlikni – barchaga xos tug‘ma ijodiy yo‘nalish, atrof muhitning ta’sirida ko‘pchilikda yo‘qolib ketuvchi faoliyat deb hisoblagan edi. Amerikalik psixolog olim Djo Pol Gilford esa o‘zining ilmiy tadqiqot ishlarida kreativlik va intellektni birinchi marotaba taqqosladi. U intellekt strukturasi modelini yaratishda tafakkurni konvergent va divirgent turiga ajratdi. Konvergent tafakkur - (lotincha convergere– “bir yo‘ldan”) tafakkur formasi bo‘lib, muammoning bir qancha yechimlaridan faqat yagona to‘g‘risini tanlashdir. Konvergent tafakkur asosida intellekt yotadi, shuning uchun intellektual tafakkur deb ham ataladi.

Biroq kreativlik faqatgina tafakkurning yuqori darajada rivojlanganligi bilan hosil bo‘lib qolavermaydi, ya’ni intellektual salohiyati yuqori shaxs har doim ham kreativ fikrlay olmasligi mumkin. Buni Djo Gilford tadqiqotlarida ham ko‘rishimiz mumkin. Gilford o‘z kreativlik strukturasida divergent tafakkurdan tashqari o‘zgaruvchanlik qobiliyati, yechimning aniqligi va boshqa intellektual parametrlarni birlashtirdi. Shuningek, u kreativlik va intellekt o‘rtasida o‘zaro uzviy aloqa borligini isbotladi.

Tadqiqot uslublari. Talabalarning kreativ kompetensiyalarini rivojlantirishda quyidagi metodlardan foydalanish samarali deb hisoblaymiz:

“Muammoli vaziyat” metodining mohiyati mashg'ulotlar jarayonida muammoli vaziyatlarini yaratish va eshishdan iborat bo'lib, uning asosida mashg'ulotni tashqil qilish va olib borishds foydalanadigan didaktik ziddiyatlar yotadi. Muammoli vaziyat metodi konsepsiyasining asosiy tushunchalari “muammoli vaziyat”, “muammoli toppish”, “muammoli echish”, “ziddiyatlar”, “usullar” hisoblanadi.

“Muammoli vaziyat” metodining dastlabki bosqichi muammoli vaziyatni aniqlash hisoblanib, o'zida o'rganilayotgan mavzuga doyr ma'lum yoki qisman tushunib etilgan muammoni ifodalaydi. Mazkur metoddan foydalanish jarayonida muammoni echimini topishga yordam beruvchi yo'nalishlar ko'rsatilmaydi va chegaralanmaydi. Bu xususiyat muammoli masalaga xosdir.

Kreativ muammolarni hal qilish jarayoni, ya'ni evristik faoliyat quyidagi bosqichlardan iborat: (1) qiyinchilikni anglash, ya'ni muammoni shu tarzda aniqlash, (2) muammoning mohiyatini aniqlash, mavjud ma'lumotlar va. yechimga ta'sir etuvchi omillar, ya'ni tayyorgarlik, (3) tanqidiy bo'lmagan, keyin esa aks ettiruvchi mulohazalarni o'z ichiga olgan inkubatsiya davri, shuningdek, ma'lum bir yechimga ega bo'lgan o'xshash muammolarni tahlil qilish, (4) yechim haqidagi taxmin yoki mavjud tajriba, bilim va ko'nikmalarga asoslanish va fikr yuritish natijasi bo'lgan "tushunish" deb ataladigan narsa, (5) gipotezani ishlab chiqish va uni amalda sinab ko'rish, ya'ni ushbu gipotezani tasdiqlovchi yoki rad etadigan tajriba, (6) ushbu qarorga olib kelgan jarayon haqida fikr yuritish va boshqa muammolarni hal qilishda to'plangan tajribani qo'llash variantlarini ko'rib chiqish.

Tadqiqot natijalari tahlili. Talabalarning kreativ kompetensiyalarini rivojlantirish quyidagi pedagogic shart-sharoitlar bajarilsa samarali bo'ladi: qulay pedagogic muhit yoratish. Talaba shaxsiga bo'lgan ishki munosabatni o'zgartirish va olarning har birida ijodiy hamda kreativ moyilliklarni ko'rish; muammoli ta'lim asosida talabalarning aqliy faoliyatini tashkil etish; talabalarning kreativ kompetensiyalarini rivojlantirish ushun mustaqil ishlar tizimini tashkil etish.

Yuqorida ta'kidlaganimizdek, kreativ faoliyat natijada yangi mahsulot yoki g'oyani olishni nazarda tutadi, shuning uchun oldingi bosqichda mahsulotni ishlab chiqish va loyihalash faktini hisobga olgan holda evristik faoliyat bosqichlariga tegishli tuzatish kiritish kerak. aks ettirish, shuningdek, natijada paydo bo'lgan mahsulot yoki g'oyani yakuniy bosqichlarida hayotga joriy etish. Kreativ faoliyatga ta'sir qiluvchi omillar quyidagilardir: (1) motivatsion omil, bundan tashqari, motivatsiya darajasining oshishi kreativ echimlar sifatining oshishiga va qo'shimcha vazifalarni mustaqil ravishda belgilashga olib keladi va (2) hissiy omil. Shu sababli, o'quv kreativ faoliyatida o'qituvchiga katta rol berilishi kerak, u nafaqat talabalarning motivatsiyasini ta'minlashi, ya'ni o'quvchilarda doimiy qiziqish uyg'otadigan va ularni hal qilishga kuchli intilishni uyg'otadigan muammoli vazifalarni aniqlashi kerak. ijobiy hissiy baholash bilan ham o'z muvaffaqiyatlarini mustahkamlash, ijobiy natija yo'qligiga adekvat munosabatni o'rgatish, shuningdek, o'quvchilarning individual xususiyatlarini hisobga olish.

Talabalar uchun zarur motivatsiyani yaratish uchun maxsus mashg‘ulotlar o‘tkazish zarurati tug‘ildi. Motivatsiya shu tarzda yaratiladi: o‘qituvchi muammoli vazifani taklif qiladi, o‘quvchilar uni hal qilishga harakat qiladilar, keyin o‘qituvchi hal qilish usulidan samarali foydalanish va uni qo‘llash imkoniyatlarini ko‘rsatadi, tanqidiy fikrlash va uning aqliy funksiyalari haqidagi bilimlarni uzata oladi.

Agarda talabalar qo‘yilgan muammoning mazmunini bilishsa va uni shablon bo‘yicha yecha olsa; tanqidiy fikrlash qobiliyatlarini individual va jamoaviy bosqichma–bosqich rivojlantirish, asosiy fikrlash operatsiyaslari: tahlil va sintez; ıish munozaralar, aqliy hujum, farazlar shaklida olib boriladi. Muammolarni ma’lum usulda hal qilishga harakat qilinsa; tashkiliy va e’tiborning past darajada bolishi, faol pozitsiyaning yo‘qligi, o‘quvchilar esa o‘zlarining ijtimoiy doiralaridagi odamlarning fikr va qarashlariga bog‘liqligi, muammoni hal qilishda cheklangan tajribaga ega ekanligi tanqidiy fikrlashning o‘rtacha darajasini kórsatadi. Samarali fikrlash usullaridan o‘quv jarayonida foydalanish qobiliyati harakat qilish kerak bo‘lgan qoidalarni bilishni talab qiladi. Bu darajada bizni talabalarning tanqidiy fikrlashga taalluqli talablarni qay darajada mustahkam o‘zlashtirgani, ularni muayyan sharoitlarda qay darajada ongli ravishda qo‘llashi qiziqtiradi. Ushbu darajada ratsional bilimlarning motivatsiyasiga erishildi, individual operatsiyaslarni bajarish jarayonida faoliyatni rivojlantirish, sozlash mavjud.

Umuman olganda, kreativlik – bu yangi, original g‘oyalarni yaratish, fikrlashning nostandart shakli, berilgan muammolarga omadli yechimlar topishdir. Kreativ tafakkur esa revolyusion tafakkur bo‘lib, u konstruktiv xarakterni ifodalaydi.

Tadqiqot xulosalari. Talabalarning kreativ kompetensiyalarini rivojlantirish bo'yicha quyidagi xulosalarni shakllantirishga imkon berdi:

1. Kreativlik insonning ijodiy yaratuvchanlik qobiliyati yoki ijodiy iste'dodi sifatida nazariy ta'riflanadi va shaxsning barqaror intellectual xususiyatini tashkil etadi. Kreativ xususiyat insonning umumiy ma'noda xulq-atvornini va uning kundalik amaliyotdagi ijobiy natijasini anglatishi, turli xil individual faoliyat turlarida namoyon bo'lishi asoslandi.
2. Kreativlik shaxsiy fikrlashning shunday turiki, u shaxsga qandayda bir muammo yoki masala yuzasidan birdaniga bir nechta muqobil ijobiy echimlar paydo bo'lishini taqozo etadi, jarayonlar va hodisalar mohiyatidagi o'ziga xoslik sifatlarini anglashga yordam berishi asoslandi.
3. Fanlararo integrative mashg'ulotlarni tashkil etishda tegishli fan o'qituvchilarining ishtiroki psixologik muammoni hal qiladi, bu talabalarni eangi ma'lumotlar blokiga osongina kiritish imkonini beradi. integratsiyalashgan ta'lim texnologiyasini qo'llashning didaktik asoslari takomillashtirildi.

Xulosa ornida, insondagi kreativ tafakkur tabiat, jamiyat va insonni óz-ózini isloh qilishiga kóra quyidagi vazifalarni bajaradi: kreativ tafakkur birinchi navbatda gneseologik vazifani bajaradi. Ya'ni yoshlar ózining ijodiy tafakkuri orqali ózi yashayotgan dunyoni bilishga, voqelikni butunligicha idrok qilishga intiladi. Insonni hissiy a'zolari orqali olingan dunyo tóģrisidagi axborotlarni jamlagan xolda fikr mushohada yuritadi. Bu jarayon inson kreativ tafakkuri gnoseologik vazifasini keng ma'noda talqin etish bólsa, tor ma'noda esa insonlar óz jodiy salohiyati orqali voqelik, predmet yoki xodisa tóģrisida mustahkam bilimga ega bólish, tasavvur, idrok,

sinchkovlik va aqliy zukkolik asosida mavjud bilimlarga tanqidiy yondashib, kerakli xulosa chiqarish kabilarni óz ichiga oladi.

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YURIDIK TA’LIMDA INNOVATSIYALARNI RIVOJLANTIRISH

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Annotatsiya. Maqolada globallashuv sharoitida huquqiy ta’limni modernizatsiya qilish masalalari ko‘rib chiqiladi. Ta’kidlanishicha, hayotning barcha sohalarida innovatsiyalar va texnologiyalarning bosqichma-bosqich joriy etilishi ta’lim xizmatlarini taqdim etish modeli va mazmuniga ham ta’sir ko‘rsatdi.
Kalit so‘zlar. Yuridik ta’lim, globallashuv, yuridik kasb, innovatsiya.

Аннотация. В статье рассматриваются вопросы модернизации юридического образования в условиях глобализации. Отмечается, что постепенное внедрение инноваций и технологий во все сферы жизни повлияло и на модель предоставления и содержание образовательных услуг.
Ключевые слова. Юридическое образование, глобализация, юридическая профессия, инновации.

Annotation. The article discusses the issues of modernization of legal education in the context of globalization. It is noted that the gradual introduction of innovations and technologies in all spheres of life has influenced the model of provision and content of educational services.
Keywords. Legal education, globalization, legal profession, innovation.

Yuridik maktablarni yuridik kasbga kirish ko‘pincha nafaqat oliy ma’lumotga ega bo‘lishni, balki imtihon topshirish yoki amaliyot o‘tash orqali kasbiy maqomga (masalan, advokat yoki sudya) ega bo‘lishni talab qiladigan muayyan yurisdiktsiyalarga bog‘lash tufayli yuridik ta’lim juda o‘ziga xosdir. Bakalavriat dasturlarida o‘qiyotgan talabalarga huquqni o‘qitishga yondashuv, aksariyat hollarda, darsliklarning qoidalarini takrorlash, sud amaliyoti materiallariga asoslangan muammolarni hal qilish, sudlarning huquqiy pozitsiyalarini tahlil qilish va og‘zaki imtihon bilan birgalikda test orqali olingan bilimlarni baholash bilan bog‘liq.

Agar siz tavsiflangan yondashuvning mazmuniga diqqat bilan qarasangiz, unda ba’zi shubhalar paydo bo‘ladi: u o‘quv adabiyotining sifati, o‘qituvchilarning mahorati va talabalarning g‘ayratidan qat’i nazar, ikkinchisini global, yuqori texnologiyali va tez o‘zgaruvchan mehnat bozori muammolariga tayyorlashga qodirmi? Darhaqiqat, yuridik kasb globallashuv va texnologiyalarga yuridik maktablarga qaraganda tezroq moslashgan.

Natijada, o‘qitilayotgan mavzular orasidagi tafovut muqarrar ravishda oshib boradi. Bunga qanday yo‘l qo‘ymaslik kerak? Afzal echim-bu o‘qitish, ilmiy tadqiqotlar va ta’lim faoliyatini boshqarishda turli xil texnologiyalardan foydalanishga tezkor o‘tish.

Taraqqiyotga erishish va O‘zbekistonda yuridik ta’lim modellarini global darajaga ko‘tarish uchun keng ko‘lamli innovatsiyalar zarur bo‘lib, ularsiz bitiruvchilar dunyo huquq-tartibotlari va ularda yuzaga keladigan muammolarni kontseptsiyalashni o‘rganmaydilar va shu tariqa ularni hal qilish imkoniyatlarini taklif qila olmaydilar. Biroq, malakali ish topishda qiyinchiliklarning ko‘payishi yanada jiddiy oqibatlarga olib keladi, bu esa oxir-oqibat yuridik kasbga, yuridik ta’limga va umuman yuridik tizimga bo‘lgan ishonchni kamaytiradi.

Bu erda yuridik maktablar amaliyotga tayyor bitiruvchilarni tayyorlay olmasligi xavfi ham ko‘rinadi. Buning oqibatlari, birinchi navbatda, yangi xodimlarni o‘qitish uchun vaqt va moliyaviy resurslarni sarflashga majbur bo‘lgan ish beruvchilar tomonidan seziladi. Natijada, yuridik maktablar o‘zlarining asosiy vazifalarini bajara olmaydilar, bu esa yuqori texnologiyali va globallashgan mehnat bozori sharoitida yuridik kasbga ta’sir qiladi. Dunyo bo‘ylab yuridik ta’lim tizimlari shunga o‘xshash qiyinchiliklarga duch kelmoqda va ularning har biri ma’lum bir tarzda javob berishga harakat qilmoqda [3; 893 b.]. Yuridik ta’limning to‘liq yangilanishi allaqachon ba’zi mamlakatlarda amalga oshirilmoqda. Biroq, buni istiqbolga qo‘yish kerak, chunki transformatsiyani boshlagan yuridik ta’lim muassasalarining ulushi hali ham ahamiyatsiz.

Shunga qaramay, dunyodagi ko‘plab yuridik maktablar tomonidan qabul qilingan va ularning samaradorligini tasdiqlagan aniq tashkiliy choralarni ta’kidlash mumkin.

Globallashuv shuni ko‘rsatadiki, yuridik maktablarga har biri o‘ziga xos madaniy va huquqiy an’analarga ega bo‘lgan chet ellik talabalar soni ortib bormoqda. Bunday o‘quvchilarga boshqa madaniyat va dunyoqarashga sho‘ng‘ish bo‘yicha haqiqiy tajribani taqdim etish juda muhimdir.

O‘z navbatida, xalqaro talabalarning bilimlari talabalarga bir-birlariga huquqiy an’analarni tushuntirishga imkon beradigan jamoaviy ta’lim usuli doirasida turli xil huquqiy tizimlarni o‘rganish uchun samarali ishlatilishi mumkin. Bunday o‘quvchilarga boshqa madaniyat va dunyoqarashga sho‘ng‘ish bo‘yicha haqiqiy tajribani taqdim etish juda muhimdir.

O‘z navbatida, xorijiy talabalarning bilimlari talabalarga bir-birlariga huquqiy an’analarni tushuntirishga imkon beradigan jamoaviy ta’lim usuli doirasida turli xil huquqiy tizimlarni o‘rganish uchun samarali ishlatilishi mumkin. Shunday qilib, talabalar boshqa davlatlarning me’yoriy tajribasiga hurmat ko‘rsatishni o‘rganadilar,

milliy huquqiy tizim haqidagi tushunchani boshqalar bilan taqqoslab, umumiy va o‘ziga xos narsalarni ajratib ko‘rsatadilar.

Shu nuqtai nazardan, talabalarning o‘zini o‘zi boshqarish tizimini rivojlantirish (masalan, talabalar klublari va boshqa tashabbuslarni rivojlantirish orqali) muhim ahamiyatga ega, buning natijasida ko‘pchilik talabalar professional hamjamiyatda birinchi tajribaga ega bo‘ladilar.

Bugungi kunda muvaffaqiyatga erishish uchun bo‘lajak advokat milliy huquqiy tizimlarni u yoki bu tarzda “qamrab olgan” millatlararo huquqiy tamoyillar, me’yorlar va institutlar haqida tushunchaga ega bo‘lishi muhimdir [4; 608 b.].

Afzallik, shuningdek, global huquq-tartibot asoslarini tushuntiradigan fanlarni bilish bo‘ladi (bunga siyosat, iqtisodiyot, falsafa va antropologiya kiradi). Bundan tashqari, huquqshunoslik bo‘yicha o‘quv dasturlari huquqiy tizimga tobora ko‘proq ta’sir ko‘rsatadigan eng so‘nggi texnologik ishlanmalarga bag‘ishlangan kurslarni o‘z ichiga olishi kerak.

Ammo yuridik maktablar tomonidan bunday keng maqsadga erishish mumkinmi? To‘rt yillik bakalavriat talabalarga o‘z bilimlari va ko‘nikmalarini yuqori raqobatbardosh mehnat bozorining tez o‘zgaruvchan sharoitlariga moslashtirish uchun mustahkam poydevor berish uchun etarlimi?

Kelajakdagi mehnat bozori huquqshunoslardan quyidagilarni talab qiladi:

Muammolarni kompleksli hal qilish. Tarixiy jihatdan huquqshunoslik muayyan muammoli vaziyatga mukammal javob yoki yechim topishga qaratilgan. Biroq, bugungi voqelik turli xil fikrlashdan foydalanishni o‘z ichiga oladi, bu asosiy echimlarning o‘zgarishiga imkon beradi va kutilmagan natijalar va xulosalarga olib keladi.

Tanqidiy fikrlash. Tanqidiy fikrlash sub’ektivizm va egosentrizmdan qochib, kiruvchi ma’lumotlarni so‘roq qilish qobiliyatida namoyon bo‘ladi. Tanqidiy fikrlash uchun muhim fazilatlar kuzatish, tahlil qilish, xulosalar chiqarish va baholash qobiliyati, ma’lumotlar bilan to‘g‘ri ishlash, fikrlashning umumiy mantig‘i. Tanqidiy fikrlash ta’lim yo‘nalishi davomida yaxshilanadi. Yuridik kasbda bunday fikrlash g‘oyalarni izlashda, muammoli vaziyatni hal qilishning barcha variantlarini o‘rganishda va eng yaxshisini tanlashda yordam beradi.

Ijodkorlik. Ijodkorlik-bu odam hali ham robotlar va sun’iy intellekt bilan raqobatlasha oladigan mahoratdir. Ijodkorlik barcha mumkin bo‘lgan echimlarni aniqlash, tanlangan variantni iloji boricha samarali amalga oshirish uchun zarur bo‘lgan ularning maqsadga muvofiqligi va tanqid darajasini baholashdan iborat ijodiy jarayon doirasida rivojlanadi.

Tashkiliy qobiliyat. Ushbu fazilatlar boshqa odamlar bilan munosabatlarni o‘rnatish, vakolat berish, hamkorlik qilish va etakchilik salohiyatini ro‘yobga chiqarish muvaffaqiyatini belgilaydi.

Hissiy aql. Ushbu ko‘nikma boshqa odamlarning his-tuyg‘ularini, ularning motivatsiyasini va his-tuyg‘ularini boshqarish qobiliyatini tushunishdan iborat. Buning yordamida energiya va samaradorlikni yuqori darajada ushlab turish mumkin. Hissiy aql, ayniqsa, qarama-qarshi manfaatlar tez-tez to‘qnashadigan katta jamoada ishlash uchun foydalidir, advokatlar boshqalar bilan hamkorlik qilish va eng yaxshi natijalarga erishish uchun kerak bo‘lishi mumkin.

Qaror qabul qilish. Qaror qabul qilish-bu turli xil koʻnikmalarni muvofiqlashtirishni talab qiladigan murakkab bilim jarayoni. Ushbu jarayon bir necha bosqichlarni oʻz ichiga oladi: muammoli vaziyatni asosiy elementlarni, aloqalarni aniqlash, uni ma'lum bir mojaroni oʻz ichiga olgan butun sifatida idrok etish orqali tahlil qilish; vositalarni va kutilgan natijalarni tahlil qilish va taqqoslash orqali echim topish; yechimni topish; yechimni amalga oshirish.

Qaror qabul qilish jarayonida shaxsiy javobgarlik vaziyatni har tomonlama tahlil qilish, tanlovning barcha oqibatlarini bashorat qilish va ularni qabul qilishga tayyor boʻlish qobiliyati sifatida muhim rol oʻynaydi.

Mijoz bilan samarali aloqa. Advokatning ustuvor yoʻnalishi mijozning muammolarini muvaffaqiyatli hal qilishga qaratilgan boʻlishi kerak. Shunga koʻra, u bilan aloqa maksimal oʻzaro tushunishga erishadigan tarzda qurilishi kerak. Shu bilan birga, samarali aloqa uchun quyidagilar tavsiya etiladi: noaniq, noaniq, noaniq iboralar va soʻzlardan, yuqori ixtisoslashgan atamalardan qochish; ogʻzaki boʻlmagan signallarni (yuz ifodalari, imo-ishoralar, intonatsiya) boshqarish; har doim oʻz xatolaringiz, xatolaringiz ehtimolini tan oling; muloqot qilish uchun eng munosib vaqt va joyni tanlang; oʻz nuqtai nazaringizni qayta koʻrib chiqishga tayyor boʻling; mijozni diqqat bilan tinglang va fikr bildiring [1; 137 b.].

Muzokara qilish qobiliyati Ushbu koʻnikma hissiy aql va boshqalar bilan umumiy til topish qobiliyatini birlashtirishni oʻz ichiga oladi. Muzokaralar olib borishda advokat ularning asosiy maqsadiga – samarali hamkorlikni oʻrnatishga amal qilishi kerak, bunga erishish uchun muzokaralarda sherik har doim shaxs sifatida qabul qilinishi kerak. Bundan tashqari, muvaffaqiyatli muzokaralar barcha ishtirokchilarning ehtiyojlari oʻrtasidagi muvozanatni topishni oʻz ichiga oladi.

Yuridik xizmatlarning asosiy iste'molchilari – davlat organlari, korporatsiyalar va tijorat firmalari bilan hamkorlik qilib, yuridik maktablar ijtimoiy ahamiyatga ega boʻlgan muammoni – murakkab dunyo muammolarini hal qilish vositasi sifatida huquq nuqtai nazarini ilgari surishda huquqiy ta'limni modernizatsiya qilishning faol dirijyorlariga aylanmoqda.

Ta'riflangan strategiyani nafaqat yirik va yaxshi moliyalashtirilgan yuridik maktablar, balki hajmi nisbatan kichik va oʻrtacha byudjetga ega boʻlgan maktablar ham amalga oshirishi mumkin. Biroq, taklif etilayotgan chora-tadbirlar yuridik maktab rahbarlari va oʻqituvchilardan nafaqat malakali mutaxassislarni, balki ertangi kunning advokatlarini, nafaqat doimiy oʻzgarib turadigan voqelikka moslasha oladigan, balki ularni mustaqil ravishda yaratishga qodir boʻlgan nufuzli innovatorlarni ishlab chiqarish istagini talab qiladi.

Ushbu maqsadni amalga oshirish uchun ta'lim dasturi innovatsion boʻlishi kerak: global kontekstda huquqshunoslikni oʻrganish uchun qiyosiy huquq asosida qurilgan va texnologiyaga bagʻishlangan alohida modul bilan.

Shunday qilib, talabalar nafaqat har tomonlama rivojlangan yuristlarga aylanadilar, balki global darajadagi murakkab huquqiy muammolarga yechimlarni yaratib, uzoqni koʻra bilish qobiliyatiga ega boʻladilar.

Shu bilan birga, bunday oʻtishning puxta oʻylangan strategiyasi boshqa manfaatdor tomonlar bilan hamkorlik qilish bilan birgalikda yuridik maktablarga yuridik ta'limni modernizatsiya qilishning faol dirijyori boʻlishga yordam berishi

kerak, natijada butun dunyo bo‘ylab ko‘plab inqiroz hodisalarini bartaraf etish vositasi sifatida huquqning ahamiyatini saqlab qolishga qaratilgan.

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OLIY TA’LIM TIZIMIDA MATEMATIKA FANINI INFORMATSION O‘QITISH JARAYONIDA – O‘QITUVCHINING FAOLIYATI

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Annotatsiya. Ushbu maqolada oliy ta’lim tizimida matematika fanini informatsion o‘qitish jarayonida-o‘qituvchining faoliyati va yangi pedagogik muhitda zamonaviy o‘qitish vositalari yordamida ta’lim jarayonini tashkil etish haqida fikrlar yuritilgan.

Kalit so‘zlari. Informatsion o‘qitish, elektron ta’lim resurslari, o‘qitish texnologiyalari, an’anaviy o‘qitish, muammoli o‘qitish.

Аннотация. В данной статье рассматривается деятельность преподавателя математики в процессе информационного преподавания в системе высшего образования и организация учебного процесса с помощью современных средств обучения в новой педагогической среде.

Ключевые слова. Информационное обучение, электронные образовательные ресурсы, технологии обучения, традиционное обучение, проблемное обучение.

Annotation. This article examines the activities of a mathematics teacher in the process of information teaching in the higher education system and the

organization of the educational process using modern teaching aids in a new pedagogical environment.

Key words. Informative teaching, e-learning resources, teaching technologies, traditional education, problem teaching.

Kirish. Har bir davrning o‘ziga xos qonun-qoidasi, zarurati va talabi bo‘ladi. Bugungi kunning asosiy talablaridan biri ta’lim tizimini tubdan isloh qilishdir. Keyingi yillarda to‘plagan tajribalar shuni ko‘rsatadiki, o‘qitish jarayoniga yangi pedagogik texnologiyalarni joriy qilishdan yuqori samaradorlikka ega bo‘lishga elektron ta’lim resurslaridan foydalanish va kompyuterli o‘qitish texnologiyalarini qo‘llash orqali erishish mumkin.

Ta’lim jarayoniga joriy etilayotgan tub islohotlar, zamonaviy yondashuvlar, barcha o‘quv fanlarining talaba tomonidan samarali, malaka talablari asosida o‘zlashtirilishi o‘quv jarayonida qo‘llaniladigan interfaol vositalar, pedagogik innovatsiyalar, fan o‘qituvchisining kasbiy bilimi albatta, talabalarning fanga oid bilimlarini o‘zlashtirish darajasiga chambarchas bog‘liqdir.

O‘zbekiston Respublikasi Prezidentining «O‘zbekiston Respublikasi rivojlantirish bo‘yicha Harakatlar strategiyasi to‘g‘risida»gi 2017-yil 7-fevraldagi PF-4947-sonli Farmonida belgilangan fan-texnika, ta’lim, texnologiyalar sohasini takomillashtirish, o‘qituvchi-tarbiyachi hamda mutaxassislarning ta’lim sifatini oshirish, matematika va informatika, chet tillari, fizika, kimyo, biologiya, geometriya kabi boshqa muhim hamda talabi yuqori bo‘lgan aniq, tabiy va gumanitar fanlarni chuqurlashtirilgan tarzda information o‘rganish kabi muhim vazifalar belgilab berilgan.

Tadqiqod maqsadi. Matematika faniga informatsion o‘qitish texnologiyasini qo‘llash sharoitida o‘qituvchining faoliyati o‘zgaradi. O‘qituvchi tayyor bilimini bermay, elektron informatsion mustaqil izlanishga undaydigan yangi pedagogik muhitda zamonaviy o‘qitish vositalari yordamida ta’lim jarayonini tashkil etishdan iborat.

Tadqiqodni tashkil qilish uslublari. O‘qituvchi o‘z faoliyatini an’anaviy o‘qitishda mavjud bo‘lmagan qator funksiyalarni joriy etishga to‘g‘ri keladi. Bu o‘z navbatida o‘qitishning kompyuterli o‘qitish texnologiyasi orqali talabalarda ta’sir ko‘rsatish imkoniyatiga ega bo‘ladi.

Interfaol o‘qitishni an’anaviy o‘qitish bilan taqqoslaganda o‘qituvchi va talabaning bir-biri bilan o‘zaro munosabati o‘zgaradi, talabaning fanga bo‘lgan qiziquvchiligi ortib boradi.

Matematika fani o‘qituvchisining asosiy vazifasi talabalarning faolligini oshirishda sharoitlar yaratish bo‘lib hisoblanadi va yangi bilim, ko‘nikmalarni mustaqil o‘zlashtirishda yordamchi funksiyasini bajaradi.

Tadqiqot natijalari va muhokamasi. Matematika fanini o‘qitishda informatsion texnoloyalarini qo‘llash jarayoni bu: didaktikaning tayanch holatlari, ya’ni ko‘rgazmalilik; tushunarlilik; ketma-ketlik; mustahkamlik va rivojlantiruvchi ta’lim tamoyillarini qo‘llash; ma’ruza va amaliy mashg‘ulotlarni amalga oshirish; matematika fani bo‘yicha o‘quv materiallarini o‘rgatishda informatsion va

muammoli o‘qitish metodlarini qo‘llash; olgan bilim va ko‘nikmalarini kompyuter yordamida nazorat qilish va uni baholash uzviylikni o‘z ichiga oladi.

Matematika fanini informatsion o‘qitish jarayonida quyidagi afzalliklar ko‘zga tashlanadi:

1. Har bir darsga alohida tayyorgarlik ko‘riladi.
2. Darsni o‘z vaqtida boshlash va tugatish rejalashtiriladi.
3. Amaliy ishlarni to‘g‘ri bajarish metodikasi ko‘rsatiladi.
4. Dars yakunida o‘quvchini qay darajada o‘zlashtirganligi aniqlanadi.
5. Talabalar o‘tiladigan mavzuga oldindan tayyorlanadi va o‘z ustida izlanadi.
6. Talaba o‘z fikrini erkin ayta oladi, iste’dodini ko‘rsata biladi, natijada yana izlanishga va o‘qishga kuch topadi.

Innovatsion ta’lim texnologiyalarni qo‘llash o‘qituvchi va talaba munosabatlarini tubdan qayta qurishni, ular o‘rtasida hamkorlik, o‘zaro yordam, ustoz-shogirdlik munosabatlarini qaror toptirishni taqoza etadi.

Matematika darslarida funksiyalarni tekshirishda, yani funksiyaning aniqlanish va qiymatlar sohalarini, juft va toqligini, o‘sish va kamayish oraliqlarini topishda va grafiklarning har xil ko‘rinishlarini oson ko‘rish orqali qisqa vaqt ichida ko‘pgina informatsiyalarni berish mumkin. Talabalarga mustaqil ish topshiriqlarini berganimizda, matematik masalalarni yechib o‘z xato kamchiliklarini to‘g‘rilaydi. Testlarni bajarganda esa nechtasiga to‘g‘ri javob bera oldi va bilimi qay darajada ekanligiga amin bo‘ladi.

O‘qituvchi har bir talabaga individual yondashishi, uning bilim darajasini aniqlashi va shu asosda ta’lim metodlarini belgilashi lozim.

Xulosa. Shu bilan birga o‘qituvchi pedagogik jarayonnni informatsion o‘qitishda amaliyotni loyihalash va uni samarali amalga oshirish uchun o‘qituvchi oliy ta’lim tizimida o‘tiladigan mashg‘ulotlar turini yaxshi o‘zlashtirib olgan bo‘lishi lozim. Bularning hammasi o‘qituvchiga pedagogik faoliyatini talab darajasida amalga oshirishga yordam beradi. Haqiqatdan ham, murakkab texnologik jarayonlarni og’zaki bayon etgandan ko‘ra, multimedialar yordamida bir necha marta takrorlanib, shu mavzu uchun mo‘ljallangan pedagogik usullar bilan mavzu yoritilsa, dars qiziqarli, tushunarli va esda qolarli bo’ladi.

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ҲАЛҚАЛИ ИП ЙИГИРУВ МАШИНАЛАРИ ИП ЎТКАЗГИЧЛАРИНИНГ БУРАМ ТАРҚАЛИШИ ВА ИПГА ТАЪСИРИ

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Аннотация. Мазкур мақолада турли шаклдаги ип ўтказгичлар ўрганилган бўлиб, шулардан бурам тарқалиши натижасида ипнинг нотекислиги ўзгаришига кам таъсир этувчи ип ўтказгич тавсия қилинган.

Аннотация. В данной статье исследованы нитепроводника различной формы и среди них рекомендован нитепроводников на который в меньшей степени влияет на изменение неровности нити в результате растекания крутки.

Abstract. Thread guides of various shapes have been studied, and among them a thread guide is recommended, which is less affected by changes in the unevenness of the thread as a result of twist spreading.

Ҳалқали ип йигирув машиналарида ип ўтказгич машинанинг асосий ишчи қисми бўлиб, ипнинг шаклланишида якка ипда толани, пишитилган ипда ипни ип ўқи бўйлаб винт чизигиғи бўйича мувофиқ жойлашувини таъминлайди [1; 85-86 бб.].

Ҳозирги мавжуд ип ўтказгичлар уч гуруҳдан иборат:

- ип ўтказгич билан чўзув асбоби зонасида фақат – бурам тарқалишига таъсир этувчи ип ўтказгичлар;
- шу зонада факатгина ип таранглигига таъсир этувчи ип ўтказгичлар;
- ҳар иккала талабни қондирувчи ип ўтказгичлар.

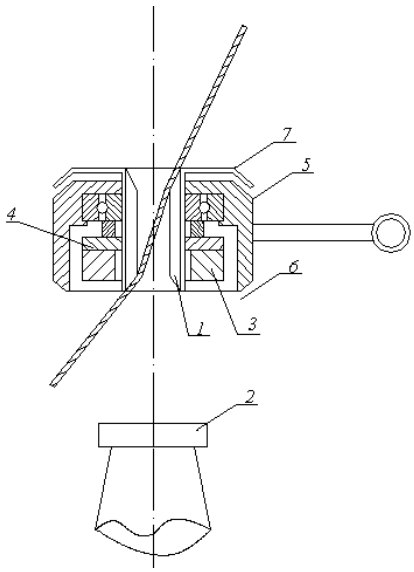
Бурам тарқалишининг орқада қолиши бурамнинг камайиши, ип шаклланишида у иккита асосий параметрга таъсир этиши аниқланган, яъни найча томон йўналган ип ҳаракат тезлигига ва югурдак билан чўзув асбоби толалар тутамини сиқув нуқтаси орасида бурам тарқалишига таъсир этиши исботланган [2].

Ҳар икки параметрнинг ўзгариши оқибатида ип узилади. Кўпгина олимлар ипнинг титраши бурамнинг тез тарқалишига олиб келади ва бунда ип камроқ узилади деб хисоблайди.

Ипни тебранувчи турли конструкциядаги ип ўтказгичлар Рашидов Т.Р., Мардонов Б.М., Ибрагимов Х.Х., Мелибаев У.Х., ва Алишев Ш.К. ларнинг илмий ишларида батафсил таҳлил этилган [4, 5, 6, 7]. Улардан асосийларини қуйида баён этамиз. Улардан бири Архимед спирали асосида валикда ўйиқ бўлиб, ип ўйиқда кичик диаметрдан каттасига, каттасидан кичик диаметрга ўтганида ип бир дақиқада 600-800 маротаба тебраниб бунда бурам тез тарқалади.

Тебраниш амплитудаси 2,2-3,5 мм га тенг, бунда ип ўтказгич билан урчук орасидаги масофа катта бўлади, бу эса машина баландлигини оширади, темир сарфи кўпаяди ва машина таннархи ошади.

Кейинги йилларда кўпгина чет эл олимлари турли хил айланувчи ип ўтказгичларни таклиф этишмокда.

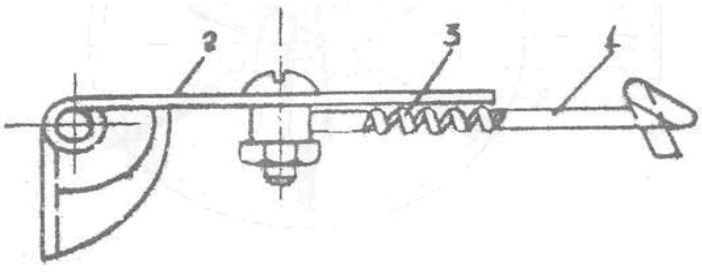


1-расм. Магнит майдонли ип ўтказгич. 1-ипнинг кўзчали ўтказгичи; 2-магнитли урчуқ насадкаси; 3-магнитли ҳалқа; 4-бириктирувчи ҳалқа; 5-подшипник; 6-қўзғалмас корпус; 7-корпус қопқоғи.

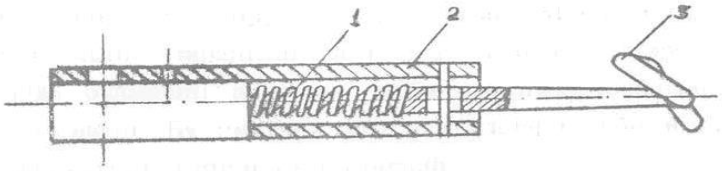
Ўзгармас магнит майдони урчуқ учига ўрнатилади. Шунингдек Spinmaster деб аталувчи магнитли айланадиган ип ўтказгични ипнинг шаклланишдаги таъсирини ўрганилганида бу ип ўтказгичнинг қўлланиши урчуқ тезлигини 30-35% га ошириш мумкинлигини кўрсатди. Аммо юқорида келтирилган ип ўтказгичларнинг барчасида (насадка, магнит икки хил, ҳалқа, подшипник, ричач, тасма в ах.к.) 8 тага қадар деталларнинг қўлланиши ип ўтказгичлар конструкцияси ўта мураккаблиги туфайли уларни амалда қўллаш фойда бермади ва ўзини оқламади.

Россияда таклиф этилган №107009 рақамли муаллифлик гувохномасида таклиф этилган ғайри оддий ип ўтказгичда ип ўтадиган ҳалқага горизонтал текисликда ҳаракатланишидан ташқари ўзининг тик ўқи бўйлаб ҳам ҳаракатлана олади.

Муаллифнинг таъкидлашича, бундай ип ўтказгич ипни титратади. Бурамни текис тарқатади, баллонда содир бўлган динамик зарбани юмшатиб, ип ўтказгич чўзув асбоби олдинги жуфти орасида ип сифатини яхшилаб узилишни озайтиради. Бу конструкцияда массаси катта бўлган ип ўтказгични тутиб туриш учун пружина қаттиклиги юқори бўлганлиги туфайли уни сезгирлиги пасаяди ва у момиқ билан тез қопланади, катта частотали ва титраш таъсирида тез синади.



2-расм. 1-харакатланувчи кўзчали ип ўтказгич; 2-клапан; 3-цилиндрсимон пружина.

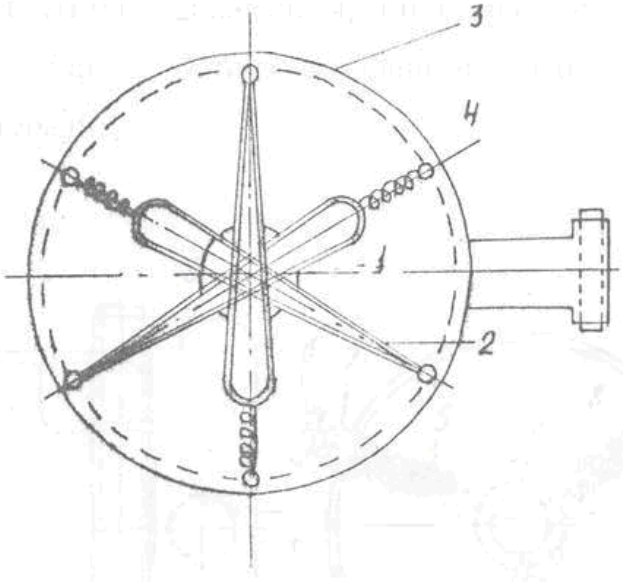


3-расм. Пружинали ип ўтказгич. 1-пружина; 2- ип ўтказгич корпуси;3-ип ўтказувчи кўзча.

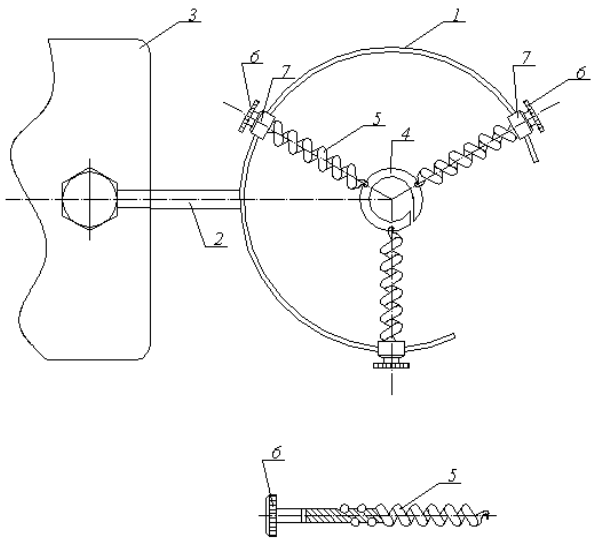
Бу камчиликлар Американинг №3269104 номерли патентида таклиф этилган ип ўтказгич конструкциясида бартараф этилган бўлиб, бурамни текис яхши тарқатади.

Ип ўтказгич чузиш асбоби оралигида бурамни текис тенг яхши тарқалиши учун кайишқоқ ип ўтказгич горизонтал текисликда исталган йўналишда ҳаракатлана олса бурамини тарқалиши учун энг қулай шароит ҳисобланади. Шундай ип ўтказгичлардан АҚШ №2344209 патентида хамда №1335586 келтирилган мослама диққатга сазовордир.

АҚШ патентига кўра пўлат валик 1 га, пўлат втулка кийдирилган бўлиб, унинг сирти Архимед спирали бўлиб, ўйиқдан иборат. Ип спирал бўйлаб, турли диаметрда ўрин алмашганида ип бир минутда 600÷800 маротаба титрайди. Аммо бу ип ўтказгичда ҳам ип узилганида уни ип ўтказгичдан ўтказиш қийин ва кўп вақт сарфланади.



4-расм. Архимед спиралли ип ўтказгич. 1-ип ўтадиган кўзча; 2-ташкил этувчи элементлар; 3-корпус; 4-пружина.



5-расм. Қайишқоқ элементли ип ўтказгич.

Ҳ.Ҳ.Иброҳимов, У.Мелибоев ва бошқаларнинг муаллифлигида таклиф этилган қайишқоқ ип ўтказгичлари қуйидагича тузилган [7]. Ташқи ҳалқа 1, туткич 2 ёрдамида клапан 3 га қотирилган.

Ип ўтказгич ҳалқачаси 4, цилиндрсимон пружиналар 5 ёрдамида 120^0 бурчак остида жойлашган бўлиб, ҳалқачанинг уч еридан тутиб туради. Винт 7 ёрдамида пружиналар таранглиги детал 6 ёрдамида унинг сезгирлиги созланади. Ташқи ҳалқа 1 нинг олди томони очиқлигидан ипни кичик ҳалқа тирқичидан ўтказилган мавжуд ип ўтказгичлардагидан ҳам осон бўлиб, бунда ип ўтказишга сарфланадиган вақт ҳам бир неча баробарга қисқаради.

Ушбу ишда қўлланилган ип ўтказгич конструкцияси таркибли валикдан иборат бўлиб, валик ўқига резинали втулка кийгизилган бўлиб унга мос равишда резина втулка устига пўлатдан ясалган втулка кийгизилган [9, 10]. Ип йўналтиргичнинг (ўтказгичда) ташқи пўлат втулкасига ип тегиб, таранглиги ҳисобига втулкага маълум куч билан таъсир қилади. Бунда ички резинали втулка деформацияланиб амортизация ролини ўйнайди. Ип таранглиги ўзгариши билан резинали втулка чизиқли боғланишда деформацияланади ва ташқи втулканинг тебраниш амплитудасини ортишига сабаб бўлади. Бунда ип ҳам шундай тебраниб, унинг узатилиш нотекислигига олиб келади.

Юқорида келтирилган мулоҳазалар шуни кўрсатадики, машинанинг ҳар бир деталини ўрганишда эътиборни ўша детални амалда қўлланишига эътибор бериш лозим. Кўриб чиқилган ип ўтказгичларнинг барчаси мукаммал, уларни ясаш ҳам осон, иқтисодий самараси ҳам юқори, айримлари ипнинг узилишини 30% гача қисқартирган, ип сифати эса яхшиланган. Айримлари конструктив жиҳатидан ўта содда ва қулай. Аммо чидамсиз, қандай содда ва қулай бўлмасин, хизмат муддати кичик бўлганидан амалда қўллаб бўлмайди, замонавий биргина йигирув машинасида 1000 тадан шундай ип ўтказгич қўлланади. Мутахассис машина детали, мосламаси, механизмини такомиллаштирмоқчи бўлса, қуйидаги факторларга эътибор бериши керак:

1- Деталнинг конструкцияси содда бўлишига;

2- Ишлатишга қулай бўлиши;
3- Чидамлилиги, хизмат муддати юқори бўлиши;
4- Иқтисодий самарадорлиги;
5- Таннархининг пастлиги;
6- Рақобатдошлигига;

Кўриб чиқилган ип ўтказгичларнинг конструкцияси жиҳатидан ўта мураккаб бўлиб, 6-7 деталлардан тузилган ва яхши натижа беришидан қатъий назар амалда қўллаш анча мураккабдир. Ип узилганида ҳам улар ишдан тўхтамайди ва ипни улашни қийинлаштиради.

Юқоридаги ип ўтказгичларнинг умумий камчилиги шундаки, машина тезлиги ўзгарганида, бошқа чизиқли зичликдаги ип ишлашга ўтказилганида уларнинг кайишқоқлигини шу параметрларга созлаб бўлмайди.

Хулоса. Ўрганишлар натижасида тавсия қилинган ип ўтказгич конструкцияси таркибли валикдан иборат бўлиб, валик ўқига резинали втулка кийгизилган бўлиб унга мос равишда резина втулка устига пўлатдан ясалган втулка кийгизилган [9]. Ип йўналтиргичнинг (ўтказгичда) ташқи пўлат втулкасига ип тегиб, таранглиги ҳисобига втулкага маълум куч билан таъсир қилади. Бунда ички резинали втулка деформацияланиб амортизация ролини ўйнайди, натижада ип сифати яхшиланади.

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O‘ZBEKISTONDA IQTISODIY IJTIMOIY GEOGRAFIYA FANINING NAZARIYASI

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Annotatsiya. Iqtisodiy va ijtimoiy geografiya darslarida talabalarga statistik ko’rsatkichlarning mohiyatini, ularni hisoblash, tahlil qilish va izohlash malakalarini shakllantirishning to’rt bosqichi ajratilgan. Har bir bosqichda amalga oshiriladigan ishlar va ularning xususiyatlari izohlangan.

Kalit so’zlar. Iqtisodiy va ijtimoiy geografiya, aholi, bosqich, demografiya, absolut, ko’rsatkich, tug’ilganlar soni, statistika, sanoat, transport.

Annotation. In the lessons of economic and social geography, students are divided into four stages of developing the skills of calculating, analyzing and interpreting the essence of statistical indicators. The work to be carried out at each stage and their characteristics are explained.

Key words. Economic and social geography, population, stage, demography, absolute figure, number of births, statistics, industry, transport.

O‘zbekistonda iqtisodiy geografiya fanining tarixiy shakllanish va rivojlanish jarayonini o‘rganishda sobiq Sovet Ittifoqi davrini ham e’tiborga olmoq zarur. Bu davrda mazkur fan, asosan nemis maktablari ta’sirida, avval Peterburgda rivojlanib borgan. Unda sof iqtisodiy va, xususan, tarmoq hamda statistik raqamlarga ko‘p ahamiyat berilganligi sababli iqtisodiy geografiyada “tarmoq-statistika”, tasviriy yo‘nalish ustuvor bo‘lgan. Shuning uchun bo‘lsa kerak, XX asrning 20-yillarida iqtisodiy geografiya iqtisodiyot fanlari qatoriga kiritilgan.

Fanni cheksiz raqamlar bilan to‘ldirish va geografiyani faqat tarmoqlar tahlili bilan tushuntirish maqsadga muvofiq emas. Asosiy ma’lumotlari iqtisodchi bo‘lgan S.V.Bernshteyn-Kogan va N.N.Baranskiylar iqtisodiy geografiyaning hududiy jihatlariga ko‘proq e’tibor berishning tarafdorlari bo‘lib chiqishgan va, natijada, ular iqtisodiy geografiyani rayonlar yo‘nalishini kuchaytirishgan. Demak, iqtisodiy geografiya chuqurroq geografiylashtirilgan, mamlakat yoki rayonlar ta’rifi va tavsifiga ko‘proq e’tibor qaratilgan.

Mamlakatimizda 1940 yilda Toshkent davlat universitetida (hozirgi – O‘zMU) ochilgan iqtisodiy geografiya kafedrasi professor-o‘qituvchilari bilan hamkorlikda ulkan hududiy-iqtisodiy izlanishlarni olib borgan. Masalan, Farg‘ona vodiysining ijtimoiy-iqtisodiy rivojlanishi, Angren-Olmaliq, Buxoro-Navoiy, Qashqadaryo, Surxondaryo, Mirzacho‘l, Quyi Amudaryo hududiy ishlab chiqarish majmualari to‘g‘risidagi ishlar shular jumlasidandir. Mazkur tadqiqotlarni amalga oshirishda V.M.Chetirkin, G.M.Cherdansev, K.N.Bedrinsev, K.I.Lapkin, S.K.Ziyodullayev,

V.I.Popov, Z.M.Akramov, E.A.Ahmedov, Sh.N.Zokirov va boshqa olimlarning xizmatlari katta bo‘lgan.

O‘zbekistonda, asosan ToshDU ning iqtisodiy geografiya kafedrasida ushbu yo‘nalishlar bilan aloqador bo‘lgan shaharlar rivojlanishi va urbanizatsiya jarayonining mintaqaviy muammolari, iqtisodiy rayonlashtirish, aholishunoslik (demografiya) masalalari ham keng tadqiq qilingan, shuningdek, ilmiy va ilmiy-amaliy anjumanlar tashkil etilgan. Respublikada asta-sekin ilmiy maktab va markazlar ham shakllanib borgan va bu borada Z.M.Akramov, M.Q.Qoraxonov, T.I.Raimov, O.B.Otamirzayev, A.S.Soliyev, A.N.Ro‘ziyev, X.S.Salimov, A.A.Qayumov, Z.N.Tojiyeva, N.Q.Komilova va boshqa olimlar samarali tadqiqotlar olib borishgan.

O‘rta maktabga doir darsliklar avval N.G.Sapenko va N.V.Smirnov, keyinchalik Z.Akramov va P.Musayevlar hammualliflikda, A.Soliyev, A.Qayumov tomonidan yozilgan. Toshkent, Farg‘ona, Nukus, Samarqand, Namangan, Termiz, Qarshi universitet va institutlari o‘rta va oliy maktablar uchun ko‘pgina mutaxassislar tayyorlab berishgan. Bu davrga kelib zamon talabiga moslashib, ijtimoiy geografiya fanining ta’rifi ham o‘zgarib takomillashib borgan. Masalan, avval iqtisodiy geografiya mamlakat va tumanlar xo‘jaligini, ishlab chiqarish kuchlarini joylashtirish xususiyatlarini o‘rgangan bo‘lsa, keyinchalik uning predmeti hududiy ishlab chiqaruvchi majmualar yoki tizimlar, jamiyatni hududiy tashkil etish va boshqarish bilan tavsiflandi.

Mamlakatimizning siyosiy mustaqillikka erishuvi va uning iqtisodiyotini bozor munosabatlariga o‘tishi iqtisodiy geografiya fanining bu davrda rivojlanishiga sabab bo‘ldi. Shuningdek, bu fanning yangi vazifalari ham vujudga keldi. Ular jumlasiga O‘zbekistonning yoqilg‘i energetika, don, yo‘l (transport) mustaqilligiga erishish, qishloq aholi punktlarining ijtimoiy-iqtisodiy rivojlanishi, xo‘jalik tarmoqlarini diversifikatsiya va modernizatsiya qilish, ishlab chiqarish kuchlarini joylashtirishni davlat tomonidan tartibga solib borish, mintaqaviy iqtisodiyot va mintaqaviy siyosat hamda iqtisodiy geografiyaning ekologik muammolari kabi dolzarb masalalarni o‘rganish hisoblanadi. Respublika olimlari iqtisodiy geografiyada siyosiy, ijtimoiy, tarixiy, ekologik yo‘nalishlarni yanada rivojlantirishga jiddiy ahamiyat bermoqdalar. Bularning natijasida noan’anaviy mavzular, jumladan, fan va ilmiy tadqiqotlar, aholiga xizmat ko‘rsatish, tibbiyot geografiyasi bo‘yicha ilmiy ishlar muaffaqiyatli yoqlandi, hozirgi kunga kelib, rekreatsiya va turizm geografiyasi bo‘yicha ham ilmiy tadqiqot ishlari olib borilmoqda.

Shuningdek, iqtisodiy geografiya fani oldida turgan vazifalar ham ko‘p. Masalan, mazkur fanning yangi sharoitda nazariy masalalarini o‘rganish, fanning o‘rni va ahamiyatini ko‘tarish, respublikamiz ijtimoiy-iqtisodiy taraqqiyotining hududiy tomonlarini chuqurroq o‘rganish va bu borada ilmiy-amaliy tavsiyalarni ishlab chiqish, ta’lim muassasalariga o‘qituvchilarni, ularga zamonaviy o‘quv qo‘llanma va darsliklarni tayyorlash, zamonaviy o‘qitish tizimi va metodikalarini ishlab chiqishdan iborat.

Shu boisdan, iqtisodiy geografiyaning fan sifatida tarkib topishi va rivojlanishi jamiyatning yuksalishi va taraqqiy etishi hamda ularning hududiy tomonlari o‘zgarishlari bilan izohlanadi. Mavjud ilmiy manbalarni o‘rganish shuni ko‘rsatadiki,

iqtisodiy geografiyaning shakllanishida, uning tarixiy zaminida 3 yo‘nalish yoki omil asosiy sabab bo‘lgan. Bu ham bo‘lsa, eng avvalo, kameral statistika, standart nazariyasi va tabiiy geografiya.

Iqtisodiy geografiya fanining tarixiy rivojlanishi eng avvalo shu fanni o‘qitish tizimini qay darajada tashkil etilganligi bilan bog‘liq. Shu o‘rinda ta’kidlash zarurki, respublikamizda ko‘pgina fanlarni, masalan matematika, fizika, biologiya, o‘zbek tili va adabiyoti kabi fanlarni o‘qitish bo‘yicha yirik ilmiy maktablar shakllangan. Biroq, bugungi kunda geografiya fanini o‘qitish muammolari bilan sanoqli olimlar shug‘ullanmoqda. Shu boisdan, ushbu fanning rivojlanishi bo‘yicha olib borilayotgan tadqiqotlar bilan parallel ravishda mazkur fanni o‘qitish masalalari bo‘yicha ham tadqiqotlarni amalga oshirish bugungi kunning dolzarb vazifalari sirasiga kiradi.

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MAKTABDA TEXNOLOGIYA VA KASBGA YO‘NALTIRISH TA’LIMI ISLOHOTLARINING ZARURLIGI

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Annotatsiya. O‘quvchilarni zamonaviy texnika va ishlab chiqarish texnologiyasi, xalq xo‘jaligining turli sohalari bo‘yicha yangi bilimlar, mehnat malakalari va kasb-kor ko‘nikmalari, xo‘jalikni yuritishning yangicha usullari hamda ishbilarmonlikni shakllantirish bo‘yicha masalalar yoritilgan.
Kalit so‘zlar. Kasbiy ta’lim, texnika va texnologiya, kasbga yo‘naltirish, pedagogik mahorat, nazariy bilimlar, amaliy bilimlar, mazmuni, vositalari, uslub.

Аннотация. Учащиеся просвещаются по вопросам, связанным с современным оборудованием и технологией производства, новыми знаниями в различных областях народного хозяйства, трудовыми навыками и профессиональными навыками, новыми методами управления экономикой, формированием предпринимательства.
Ключевые слова. Профессиональное образование, техника и технология, профориентация, педагогическое мастерство, теоретические знания, практические знания, содержание, инструментарий, метод.

Abstract. Students are educated on issues related to modern equipment and production technology, new knowledge in various fields of the national economy, labor and professional skills, new methods of economic management, and the formation of entrepreneurship.
Key words. Vocational education, equipment and technology, career guidance, pedagogical skills, theoretical knowledge, practical knowledge, content, tools, method.

Mutaxassis-pedagog kadrlarni oliy kasbiy ta’lim tizimida tayyorlash, qayta tayyorlash, malakasini oshirish, attestasiyadan o‘tkazish hamda pedagogik mahoratini takomillashtirish uchun uning faoliyatini o‘rganish, nazorat qilish va baholash jarayoni muhim jihatlardan hisoblanadi. Shu boisdan ham pedagogik nazorat o‘tkazishning asosiy didaktik vositalaridan hisoblangan test-reyting tizimi uzluksiz ta’lim tizimida hamda mutaxassis-kadrlar kasbiy mahoratini baholashda muhim hisoblanadi. Shu bois, o‘qituvchi-murabbiylarning kasbiy bilim, ko‘nikma va malakalarini shakllanganligini nazorat qilish va baholash pedagogik nazoratning mazmuniy ifodasi sifatida olib qaraldi, hamda bilimlarni o‘qituvchilar tomonidan o‘zlashtirilganlik darajasini hisobga olish, kuzatish, tekshirish va baholashning maqsadi, vazifalari, vositalari va usullarini aniqlash uslublari ishlab chiqildi.

Yosh avlodni zamonaviy texnika va ishlab chiqarish texnologiyasi, xalq xo‘jaligining turli sohalari bo‘yicha yangi bilimlar, mehnat malakalari va kasb-kor ko‘nikmalari, xo‘jalikni yuritishning yangicha usullari hamda ishbilarmonlik asoslari bilan qurollantirishni mehnat ta’limi o‘zining ustivor yo‘nalishlari mazkur qonun doirasida amalga oshiradi.

Hozirgi zamon sharoitida texnologiya ta’limining ilmiy-nazariy va amaliy-uslubiy, moddiy-texnikaviy, ijtimoiy-pedagogik muammolarini hal etish va amalga oshirishda qator ziddiyatlar yuzaga kelgan.

Jumladan:

- ijtimoiy-iqtisodiy, siyosiy, mafkuraviy tuzumda ro‘y berayotgan tub o‘zgarishlar bilan texnologiya ta’limining ilmiy-uslubiy, pedagogik, moddiy-texnikaviy jihatdan zamonaviy ta’minlanishi o‘rtasida;
- ilmiy-texnikaviy jihatdan o‘zgarishlar, zamonaviy ishlab chiqarish texnologiyasi, xo‘jalik yuritishning zamonaviy mazmuni bilan texnologiya ta’limini amalga oshirishning an’anaviy shakllari, yo‘llari, mazmuni, vositalari, uslublari o‘rtasida;
- texnologiya ta’limini amalga oshirishning asosiy qismi bo‘lgan o‘rta maktab bo‘g‘ini bilan uzluksiz ta’limning boshqa bo‘g‘inlari maktabgacha ta’lim-tarbiyaning, o‘rta maxsus va oliy ta’lim va undan keyingi bosqichlarning uzviyligi o‘rtasida;
- texnologiya ta’limining maqsadi va jamiyat oldida tutgan vazifalari metodologik asoslari bilan tarixiy rivojlanishi, milliy madaniyati, ta’limga qo‘yilgan jahon andozalari o‘rtasida;
- texnologiya ta’limining o‘ziga xos xususiyatlari bilan o‘quvchilarning nazariy bilimlarni o‘zlashtirish va amalda qo‘llash mexanizmining didaktik asoslari ishlab chiqilmaganligi o‘rtasida;
- texnologiya ta’limidan yuqori malakali kadrlar tayyorlash tizimining mazmuni va sifati bilan maktab mehnat ta’limi o‘quv kursining mazmuni, shakllari va o‘qitish metodlari o‘rtasida;
- texnologiya ta’limi amalga oshiriladigan o‘rta umumta’lim maktablari va shu maqsadlarda xizmat qiladigan turli xildagi ta’limiy, tarbiyaviy muassasalar faoliyati mazmuni bilan ijtimoiy-iqtisodiy o‘zgarishlarni hisobga olgan holda jamoatchilik, xususiy, shaxsiy, qo‘shma, davlat korxonalari bilan bu ta’limni amalga oshirishga bog‘liq o‘zaro aloqa mexanizmining tuzilishi o‘rtasida va boshqalar.

Yuqorida ko‘rsatib o‘tilgan ziddiyatlar bartaraf etilib borilgandagina, shu bilan texnologiy ta’limining o‘ziga xosligi tiklangandagina uning hozirgi zamon jamiyati rivojlanishida, yoshlarni mehnatga, ma’lum kasb-hunarga, qolaversa, hayotga tayyorlash masalasi dolzarb muammolardan biri deb hisoblash mumkin.

Umumiy o‘rta ta’lim maktablarida o‘quvchilarning texnologiya ta’limi shu nomdagi predmet va shu yo‘nalishdagi ta’limiy-tarbiyaviy tadbirlarni amalga oshirish bilan bajariladi.

I, II, III bosqich maktablaridagi texnologiy ta’limini o‘qitishning maqsad va vazifalari quyidagilardan iborat:

I bosqich boshlang‘ich maktab sharoitida o‘quvchilarda mehnat dunyosi, o‘simliklar o‘stirish, materiallar va yerga oddiy ishlov berish, oddiy asboblar va mehnat malakalari to‘g‘risida sodda tasavvurlar hosil qilish. Bolalar maktabdagi texnologiya ta’limini oiladagi mehnat jarayoni bilan uzviy bog‘lab olib boradilar.

II bosqich asosiy maktabda – o‘quvchilarda umummehnat ko‘nikma va malakalarini shakllantirish, o‘z-o‘zini kasbiy jihatdan aniqlashlari, tanishlarini, mehnat madaniyatini shakllantirishni va rivojlantirishni, xalq xo‘jaligi asoslarini

o‘rgatishni, texnikasi va texnologiyasi bilan tanishtirishni, mehnat faoliyatining turli sohalarida ishtirok etishlarini ta’minlash.

III bosqich tayanch maktabida mehnat ta’limi kursi o‘quvchilarini turli xil qo‘l asboblarini, jihozlarini, moslamalarini o‘rgatishni, mexanizasiyalashtirilgan vositalar bilan ishlashni, mehnat xavfsizligini, sanitariya-gigiyena qoidalari, mehnat qonunchiligi asoslarini o‘rganishini, yo‘l-yo‘riqlar o‘tkazishni va boshqalarni o‘rgatishni ta’minlaydi.

Yuqori sinflardagi o‘tiladigan mehnat ta’limi kursi o‘quvchilarga xalq xo‘jaligining turli sohalari bo‘yicha tashkil qilinadigan amaliy ishlab chiqarish kurslarini o‘qitish jarayonida turli xil kasbiy bilimlar berish, amaliy ko‘nikma va malakalarni hosil qilishni maqsad qilib qo‘yadi. Ushbu kurslarni o‘tgan o‘quvchilar kasbga tegishli hujjatlarni olib, bevosita unumli mehnat jarayonida qatnashish imkoniga va huquqiga ega bo‘ladilar.

Xalq hunarmandchiligining o‘rta maktabda texnologiya ta’limi tizimiga kiritilishi o‘quvchilarga milliy qadriyatlar, an’analar, tarixiy yodgorliklar, xalq ustalarining ko‘p qirrali boy merosini o‘rganish, o‘zlashtirish va ularni amaliy faoliyatini qo‘llab-quvvatlash va davom ettirish vazifasini ko‘ndalang qo‘yadi va hal etadi.

Hunarmandchilikda shogird-ustoz tizimi texnologiya ta’limining amaliy va ishlab chiqarish mazmunidagi an’anaviy sinf-dars mashg‘ulotlariga nisbatan tarbiyaviy mahsuldorligi, samaraliligi, bo‘lg‘usi hunarmand-mehnatkashning shaxsiy xislatlarining shakllanishida ular oilalarining moddiy ta’minlanishida hamda tarixiy qadriyatlarimizning yanada boyishiga ijobiy ta’sir ko‘rsatadi. Bu tizimni oliy o‘quv yurtlaridagi musiqa ta’limida yakka tartibdagi mashg‘ulotlar o‘tkazish bilan taqqoslash mumkin.

Texnologiya ta’limidagi informasion-hisoblash texnikasi, avtomatikaning qo‘llanilishi, mexanizasiyalashtirilgan va elektrlashtirilgan qurilmalar va vositalarning o‘rganilishi o‘quvchilarning hozirgi zamon ishlab chiqarishidagi avtomatik va dasturli boshqarish tizimlari, robototexnika va ishlab chiqarish texnikasini va texnologiyasini ta’limning jahon andozasi, davr talablari darajasiga mos holda o‘rganishini ta’minlaydi.

Keyingi vaqtlarda kam e’tibor berilayotgan, hatto yo‘qolib borayotgan turli xildagi ta’limiy-tarbiyaviy tadbirlar: o‘quvchilar ishlab chiqarish jamoalari, maktablararo o‘quv-ishlab chiqarish ustaxonalari, kombinatlari, o‘quvchilar mehnat jamoalari, mavsumiy ishlarda va otaliq korxonalarining ishlab chiqarish faoliyatida qatnashishlari, qolaversa, otaliq korxonalarining, xususiy va davlat tashkilotlarining maktab bilan bevosita va bilvosita munosabatlari, yordam berish an’analari va boshqalar mazmunan va shaklan qayta ko‘rab chiqilib, qayta ishlanib zamon ruhiga moslashtirilib qayta tiklanishi mehnat ta’limining maqsad va vazifalarini ijobiy amalga oshirishdagi asosiy shart-sharoitlardan hisoblanadi. Texnologiya ta’limini amalga oshirishda maktablar, maktabdan tashqari tarbiyaviy muassasalarining bozor iqtisodiyotida qatnashishiga erishish dolzarb muammolardan hisoblanadi.

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AQLIY HUJIM METODINI QO‘LLASHDA SUN’IY INTELLEKT IMKONIYATLARINI SAMARALI FOYDALANISH

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Annotatsiya. Axborot asri sharoitida sun’iy intellektning rivojlanishi gullab-yashnamoqda va u ta’lim tizimi bilan tobora chambarchas integratsiyalashib bormoqda, bu kelajakdagi ijtimoiy rivojlanishning muqarrar tendentsiyasidir. Ushbu maqolada oliy o‘quv yurtlarida sun’iy intellektdan foydalanishning paydo bo‘lishi hodisalari va o‘qitish metodlari bosqichlari, undagi ba’zi kamchiliklarni bartaraf etishda sun’iy intellektdan samarali foydalanish haqida so’z yuritilgan. Jumladan aqliy hujum metodini o‘tkazishda eng ko‘p uchraydigan kamchiliklarni bartaraf etishda sun’iy intellekt tasniflari va algoritmlaridan samarali foydalanish imkoniyatlari haqida fikr mulohazalar keltirilgan.

Kalit so‘zlar. Sun’iy intellekt, metod, aqliy hujum, tasniflash, algoritm, ta’lim, fan, tarmoq.

Annotation. In the information age, the development of artificial intelligence is flourishing and it is becoming more and more closely integrated with the education system, which is an inevitable trend of future social development. This article talks about the phenomena of the use of artificial intelligence in higher educational institutions and the stages of teaching methods, the effective use of artificial intelligence in eliminating some of its shortcomings. In particular, there are opinions about the possibilities of effective use of classifications and algorithms of artificial intelligence in eliminating the most common shortcomings in conducting the brainstorming method.

Keywords. Artificial intelligence, method, brainstorming, classification, algorithm, education, science, network.

Аннотация. В информационный век развитие искусственного интеллекта процветает, и он все теснее интегрируется с системой образования, что является неизбежной тенденцией будущего общественного развития. В данной статье говорится о явлениях использования искусственного интеллекта в высших учебных заведениях и этапах методики обучения, эффективном использовании искусственного интеллекта при устранении некоторых его недостатков. В частности, существуют мнения о возможностях эффективного использования классификаций и алгоритмов искусственного интеллекта для устранения наиболее распространенных недостатков при проведении метода мозгового штурма.

Ключевые слова. Искусственный интеллект, метод, мозговой штурм, классификация, алгоритм, образование, наука, сеть.

Kirish. Ta’lim, fan va texnikani qo‘llab-quvvatlashdan ajralmasdir. Sun’iy intellektning kirib borishi an’anaviy o‘qitish modellari va usullarini o‘zgartirdi. Sun’iy intellekt texnologiyasi ta’sirida oliy ta’lim tobora ko‘proq axborotlashtirilib, intellekt yo‘nalishida rivojlanmoqda. Talabalar uchun sun’iy intellektni o‘rganish va qo‘llash kasbiy rivojlanishga erishish uchun muhim va zarur vositadir. Talabalarni mustaqil ravishda fikirlashga va kasbiy bilim ko‘nikmalarni qo‘llashga e’tibor berishga o‘rgatish muhimroqdir. Shunda talabalar yaqinlashib kelayotgan aql-zakovat davriga yaxshiroq moslasha oladilar. Oliy ta’limning kelajagi yangi texnologiyalar va yangi aqlli mashinalarning hisoblash imkoniyatlarini rivojlantirish bilan uzviy bog‘liq. Ushbu sohada sun’iy intellekt sohasidagi yutuqlar oliy ta’lim muassasalarida o‘qitish uchun yangi imkoniyatlar va muammolarni ochib beradi.

Tadqiqot maqsadi. Bu ilmiy izlanishning maqsadi o‘qitish metodlarini jumladan aqliy hujum metodini sun’iy intellekt yordamida yanada takomillashtirishdan iborat.

Tadqiqotlarni tashkil qilish uslublari. Aqliy hujum metodini tahlil qilishda, eng ko‘p uchraydigan kamchiliklarni aniqlashda an’anaviy va amaliy uslublardan foydalanildi va maqolada keltirilgan fikr mulohazalar yuritildi.

Tadqiqot natijalari va muhokomasi. Aristoteldan beri qabul qilingan falsafiy pozitsiyalar asosida shakllangan “sun’iy intellekt nima?” degan savolga quyidagicha javoblar bilan fikr mulohazalar keltirib o‘tsak bo‘ladi. XX asirning ikkinchi yarmidan beri kimyo, biologiya, tilshunoslik, matematika bo‘yicha sun’iy intellekt yechimlari yutuqlaridan ta’sirlangan turli nazariy tushunchalarini topamiz. Biroq, ta’riflar va tushunchalarning xilma-xilligi hali ham ko‘p bahsli holatlarni keltirib chiqarmoqda. Aksariyat yondashuvlar bilishning cheklangan istiqbollariga qaratilgan yoki aql tushunchasining siyosiy, psixologik va falsafiy jihatlarini e’tiborsiz qoldiradi. Sun’iy intellektning oliy ta’limda o‘qitish va o‘qitishga ta’sirini tahlil qilish uchun biz ushbu sohaga oid adabiyotlarni ko‘rib chiqishdan kelib chiqqan holda asosiy ta’rifni keltiramiz. Biz sun’iy intellektni o‘rganish, moslashtirish, sintez qilish, o‘z-o‘zini tuzatish va murakkab ishlov berish vazifalari uchun ma’lumotlardan foydalanish kabi

insonga o‘xshash jarayonlarda ishtirok eta oladigan hisoblash tizimlari sifatida belgilashimiz mumkin.

Sun’iy intellekt hozirda jadal sur’atlar bilan rivojlanmoqda, bu allaqachon oliy ta’limdagi xizmatlar va o‘qitish metodlariga ta’sir qilishni boshlagan. Jahonda nufuzli universitetlar sun’iy intellektning yangi paydo bo‘lgan shakli va superkompyuteridan foydalanishadi. Yilning 365 kuni davomida kunning istalgan vaqtida talabalar uchun fanlar kesimida maslahatlar berish tajribalari amalga oshirilmoqda. Kelajakda aqlli axborotlashtirish, massiv axborot ma’lumotlari va algoritm modeli yuqori samarali parallel ishlash tufayli ko‘plab vazifalarni bajaradi. Sun’iy intellekt texnologiyasining implantatsiyasi ta’lim sohasida o‘qitish va o‘qitishni qo‘llab-quvvatlash uchun yanada aqlli vositalarni taqdim etadi. Intellektual ta’lim va o‘qitish o‘quvchilarga misli ko‘rilmagan ta’lim tajribasini beradi.

Aqliy hujum - bu jamoaviy razvedka yordamida yechim topishning mashhur usulidir. Ushbu usuldan startap asoschilari, siyosatchilar, investorlar va ijodiy muammolarni hal qilish kerak bo‘lganlar qo‘llanadi. Aqliy hujum - bu haqiqatta ham samarali usul.

Aqliy hujumni o‘tkazishda eng ko‘p uchraydigan xatolardan biri bu natijalar asosida muvaffaqiyatli g‘oya muallifini mukofotlash istagi bo‘lib hisoblanadi. Bu jamoada keraksiz raqobat hissiyotlarini keltirib chiqaradi, shuningdek, ishtirokchilarni haqiqatan ham hamma narsani, hatto eng vahshiy g‘oyalarni ham ifoda etishiga to‘sqinlik qiladi. Barcha javoblar to‘g‘ri ekanligini tushunish muhimdir va aqliy hujum - bu jamoaviy ish. Har bir insonning hissasi muhim, chunki g‘oyalar jarayonning barcha ishtirokchilari tomonidan ilgari suriladi va to‘ldiriladi. Muvaffaqiyatli miya hujumi sessiyasi uchun mukofotni oldindan kelishib olishingiz mumkin, bunda mukofot kimning g‘oyalari yaxshiroq bo‘lishidan qat’iy nazar, barcha aqliy hujum ishtirokchilari o‘rtasida teng taqsimlanadi. Yana bir keng tarqalgan kamchilik bu bir-birini tinglamasdan va itbor bermasdan fikrlarni yozib olishdir. Aqliy hujum paytida tartibni saqlaydigan o‘qituvchini tayinlash juda muhim, u barcha ishtirokchilarga navbat bilan so‘z beradi va ularni keyingi bosqichga o‘tishga taklif qiladi. Ba’zi odamlar boshqalarni baqirishga majbur qiladigan harakat aqliy hujum sessiyasi samarali bo‘lmaydi.

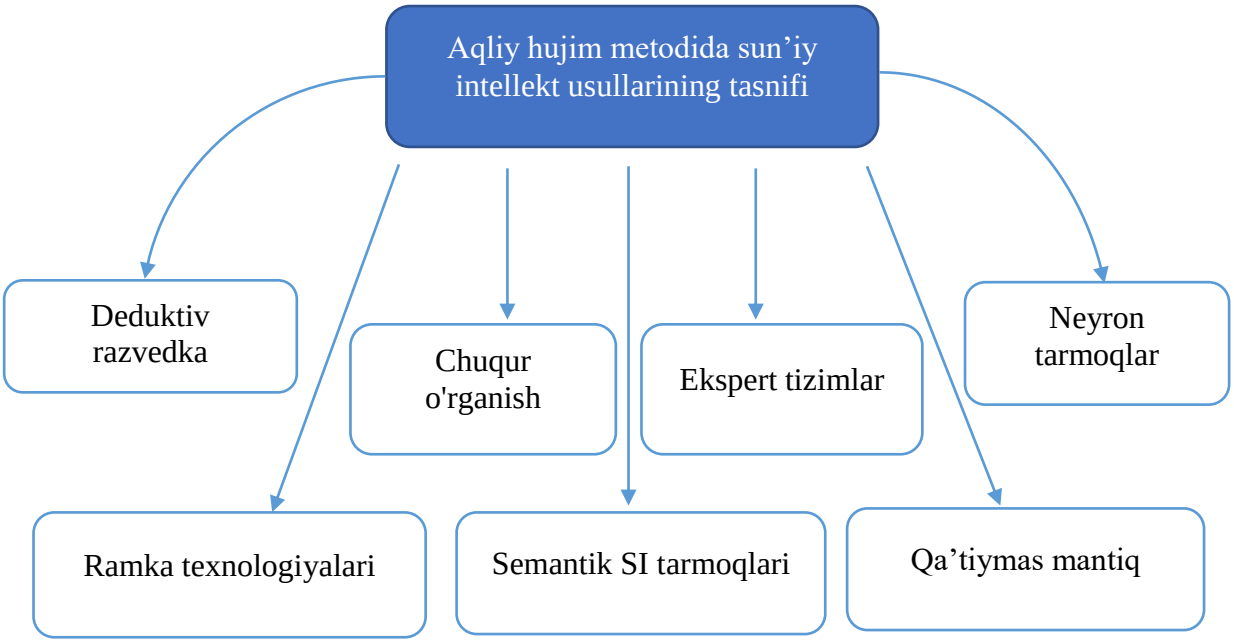
Agar siz aqliy hujumga yangi jamoani jalb qilmoqchi bo‘lsangiz, unda ishtirokchilar bir-birini yaxshi bilmaydi yoki hali o‘zlarining ijodkorlik va etakchilik fazilatlarini kashf qilmagan bo‘lsa, teskari muammo paydo bo‘lishi mumkin va hamma jim bo‘lib qoladi. Bunday holatda, yaxshi o‘qituvchi jarayonni o‘zi boshlashi kerak, birinchi g‘oyalarni taklif qilish yoki aniq ko‘rsatmalarni shakllantirish - masalan, har bir kishi o‘z navbatida gapirishi kerak. Ba’zi holatlarda aqliy hujum usullari bo‘yicha maxsus trening talab qilinishi mumkin. Muhokama boshlangandan so‘ng, jamoaning qolgan a’zolari uchun g‘oyalarni ishlab chiqish va o‘zlarini taklif qilish osonroq bo‘ladi.

Usulning asosiy kamchiligi shundaki, g‘oyalarni izlash tasodifiy va o‘z-o‘zidan sodir bo‘ladi, barcha ma’lumotlarni har tomonlama tahlil qilish kutilmaydi – bu natijada eng yaxshi g‘oya tanlanishiga kafolat yo‘qligini bildiradi. Tajribaga ko‘ra, aqliy hujum jarayonida aytilgan g‘oyalarning faqat kichik bir qismi haqiqatan ham samarali bo‘lib chiqadi. Aqliy hujumning kamchiliklari shundaki, hamma ham

qoralash yoki tanqiddan qo‘rqib, o‘z fikrlarini omma oldida aytishga tayyor emas. Shu bilan birga, jamoaning ko‘proq ovozli a’zolari o‘zlarining kamroq faol hamkasblarini ortda qoldirishi mumkin, bu ularning takliflarini eshitmaslik xavfini tug‘diradi.

Bunday holatda, yaxshi natijaga sun’iy intellekt usullaridan foydalangan holda onlayn aqliy hujum orqali erishish mumkin. Sun’iy intellekt usullariga asoslangan algoritmik dasturiy vositalaridan onlayn foydalanish ko‘p odamlar o‘z fikrlarini erkinroq ifodalashlari mumkin, ayniqsa bunday dars ishtirokchilari fikrlarini anonim qilish mumkin bo‘lsa. Bundan tashqari, agar dasturiy vositalar orqali aqliy hujum o‘tkazilsa va yozib olinsa, barcha g‘oyalar yozib olinadi. Bu mashinaning aqlli bo‘lishi va inson kabi fikrlashi mumkin bo‘lgan usul bo‘lganlikdan axborotni tahlil qilish, yangi mahsulotlarni ishlab chiqish, ijodiy kontseptsiyalarni yaratish kabi vazifalarni samarali bajarishga imkon beradi. Sun’iy intellektning asosiy maqsadi inson ongini yaratishdir va ma’lumotlarni qabul qilish, nutq, matn yoki tasvir ma’lumotlarni tahlil qiladi va natija beradi.

Keltirilgan fikr mulohazalarni amalga oshirishda sun’iy intellekt usullari muhim ahamiyat kasb etadi. Sun’iy intellekt usullarining o‘zi ham turli mezonlarga ko‘ra tasniflanadi.



Aqliy hujumning maqsadi cheklangan vaqt ichida nostandart va samarali echimlarni olishdir. Ular bunga jamoada birgalikda muhokama qilish jarayonida maksimal xilma-xil g‘oyalarni yaratish orqali erishadilar. Sun’iy intellekt bunda keltirilgan tasnif asosida inson miyasining modelini o‘rganish yoki tahlil qilish orqali erishiladi. Ushbu tadqiqotlar asosida mashinalar uchun dasturiy ta’minot ishlab chiqiladi.

Xulosa. Sun’iy intellekt texnologiyasining etukligi ta’lim sohasidagi islohotlarga olib keldi, oliy ta’lim kontseptsiyasini yangiladi, o‘qitish metodlari bilan sun’iy intellekt imkoniyotlarini birlashtirish ta’lim berish tizimida yangi imkoniyatlarni paydo etadi. Sun’iy intellekt bunga keltirilgan tasnif asosida inson

miyasining modelini o‘rganish yoki tahlil qilish orqali erishiladi, natijasi talabalarni baholashda qarorlar qabul qilish samaradorligini oshiradi. Shu sababli, ushbu maqolaning maqsadi sun’iy intellektga asoslangan o‘qituvchilik mahoratini oshirishni o‘rganish, oliy ta’limni rivojlantirish jarayonida muammolar va echimlarni tahlil qilishdir. Biz talabalarni sifatli o‘qitish uchun ushbu texnologiyalarni o‘zlashtirishda ba’zi qiyinchiliklarni aniqlaymiz va tadqiqotning keyingi yo‘nalishlarini o‘rganamiz.

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MEKTEPKE SHEKEMGI BILIMLENDIRIW SHÓLKEMLERINDE BALALARDI MEKTEP TÁLIMINE TAYARLAW MAZMUNI

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Annotatsiya. Maqala mektepke shekemgi bilimlendiriw shólkemlerinde balalardi mektep tálimine tayarlaw mazmuni, «Mektepke tayarlıq» túsinigi, balanı mektepke arnawlı túrde tayınlıǵı haqqında.

Kalit so’zlar. Balanıń mektep tálimine jetikligin aniqlaw, ádep-ikramliliǵi, qızıǵıwshılıǵı, fizikaliq, jeke (ruwxiy), aqiliy, arnawli tayarlıq, psixologiyalıq tayarlıq.

Abstract. Information on children's preparations for school, information on “School preparations”, information on the information on children's school preparation.

Keywords. Determination of the child's school education, morality, interest, physical, spiritual, spiritual, spiritual, spiritual training, psychological training.

Аннотация. В статье содержание о подготовки детей к школе в дошкольных образовательных организациях, понятие «Подготовка к школе», о специальной подготовке детей к школе.

Ключевые слова. Определение интереса ребенка к школьному образованию, нравственной, физической, самостоятельной, умственной, специальной, психологической подготовки.

2017-2021 jıllarǵa mólsherlengen “Ózbekstan Respublikasın jáne de rawajlandırıw boyınsha Háreketler strategiyasi” Qararına muwapıq bala mektepke shekemgi tálimdi shańaraqta, ata-analardıń ózbetinshe tálim beriwi arqalı yamasa turaqlı iskerlik kórsetetuǵin mektepke shekem bilimlendiriw shólkemlerinde, sonıń menen birge mektepke shekemgi bilimlendiriw shólkemlerine tartilmaǵan balalar ushın MSHBSHlarda, mekteplerde, máhállelerde islengen arnawlı toparlar yamasa oraylarda aladı.

5-6 jaslı balanıń mektep tálimine jetikligin aniqlawda mektepke shekemgi jastaǵi balalar tálim-tárbiyası menen shuǵıllanatın pedagoglardiń tiykarǵı waziypasi - balanıń mektepke tayınlıǵı mektepke shekemgi hám mektep dáwirindegi ómir tárizi hámde iskerligi ushın kópir wazıypasın ótewın, shańaraq yamasa mektepke shekemgi bilimlendiriw shólkemindegi tálim-tárbiya sharayatlarında mektep tálimine azarsiz ótkeriwdi támiyinlew zárúr ekenligin esapqa alıwları kerek.

Mektepke shekemgi jastaǵı balanıń mektep tálimine ótiwi onıń turmısı, ádep-ikramliliǵi, qızıǵıwshılıǵı hám munasábetlerinde ózgerislerdi júzege shiǵaradi. Sol sebepli balanı shańaraqtan baslap mektep tálimine tayarlaw, onı onsha qıyın bolmaǵan bilim, kónlikpe hám ilimiy tájriybeler menen tanıstırıw kerek boladı.

Jetekshi qánigelerdiń pikirine kóre «Mektepke tayarlıq» túsinigi balanı mektepke tayarlawdıń tómendegi baǵdarların óz ishine aladı:

- fizikaliq;
- jeke (ruwxiy);
- aqiliy;
- arnawli tayarlıq.

Fizikalıq tayarlıq balanıń sawlıǵı, háreket kónlikpeleri hám sipatı, qol bulshıq etleri hám kóriw-motorikasiniń muwapıqlıǵı, rawajlanǵanlıǵı menen anıqlanadi. Jeke tayınlıǵı, átirap - ortalıqqa, úlkenlerge, teńqorlarına, ósimlikler dúnyasına, tábiy hádiyselerge, jeke mádeniyattıń qálipleskenligin názerde tutadı. Aqiliy tayarlıq bala obrazlı hám logikalıq pikirlewi, oyda sawlelendiriwdiń, adamgershiliktiń, bilimge qızıǵıwshılıqtıń, ǵárezsizliginiń, ózinen-ózi baqlawǵa, hám de oqıw iskerligin baqlaw, esitiw, eslep qalıw, salıstırıw sıyaqlı tiykarǵı túrlerin biliwdi óz ishine aladı.

Balanıń mektepte tálim alıw nátiyjesi onıń ana tilin biliwine hám sóylewiniń qanshelli rawajlanǵanlıǵına kóbirek baylanıslı boladı. Sondayaq pútkil oqıw iskerligi usılarǵa, yaǵnıy sóylewdiń logikalıq rawajlanıwı, balanıń úlkenlerdiń járdemisiz ǵárezsiz pikirlewi, til rawajlanǵanlıǵı jetiskenliklerinde erkin paydalana alıwı, gúrriń qılıw, oy-pikir júrgiziw, óz oyda sawlelendiriwin anıqlama berealıw, túsinikli etip bayanlaw sıyaqlı faktorlar tiykarına qurıladı. Sonıń menen birge, balanıń mektepte tálim alıwı ushın ámeliy intellekt rawajlanıwı yaǵnıy, onıń úlgige qarap sızıw, aytıp turılatuǵın tapsırmanı orınlawı da zárúrli esaplanadi. Hám aqır-aqıbetde, arnawlı

tayarlıq balanı sawatlılıqqa úyretiw jáne onıń mekteptiń 1-klass oqıw programma materialın jetkilikli dárejede iyelew haqqındaǵı túsinigin qáliplestiriwdi názerde tutadı.

Balalardı mektepte oqitiwdiń nátiyjeliligi kóp tárepten olardıń tayarlıq dárejelerine baylanıslı boladı. Mektepte oqıwǵa tayarlıq - mektepke shekemgi bilimlendiriw shólkemi hám shańaraqta mektepke shekemgi tárbiya jasındaǵı balaǵa qoyatuǵın talaplar arqalı anıqlanadı. Bul talabalardiń ayriqsha tárepi oqıwshınıń jańa social psixologiyalıq ornı, ol orınlawǵa tayarlanǵan bolıwı kerek. Jańa wazıypa hám minnetlerden kelip shıǵadı. Mektepke kirisiw bala turmısındaǵı ádettegi turmıs tárizi, átirapdaǵılar menen munasábet sistemasınıń ózgeriwine baylanıslı zárúrli davr bolıp tabıladı. Bala turmısında birinshi bar oraylıq orınnıń social áhmiyetke iye bolǵan oqıw iskerligi iyeleydi. Oǵan ádet bolǵan erkin oyın iskerliginen ayrıqsha, endi tálim májburiy boladı hám birinshi klass oqıwshısınan 4 ayriqsha munasábet talap etiledi tálim iskerliginiń jetekshi túri sipatinde balanıń kúndelik turmıs procesin qayta quradi: kún tártibi ózgeredi, erkin oyınlar waqıtı qisqaradı. Balanıń ǵárezsizligi hám birleskenligi, onıń ıskerligi hám ıntızamlilikka talaplari ayriqsha túrde artadı. Mektepke shekemgi jastaǵı balalıqqa salıstırǵanda oqıwshınıń óz is-háreketi, minnetlemelerin orınlawǵa jeke juwapkershiligi anaǵurlım artadı.

Mektepke ulıwma tayarlıq MSHBSHniń mektepke shekemgi tárbiya jasındaǵı balalardı hár tárepleme tárbiyalawǵa tiyisli dawamlı, maqsetke muwapıq tálim-tárbiyalıq jumıstıń zárúrli juwmaǵı sipatinda kórinetuǵın boladı.

Mektepke ulıwma tayarlıq balanıń mektepke barıw waqıtına kelip intellektual, ruwxıy, estetikaliq hám fizikalıq rawajlaniwinda erisken dárejesi, ol balanıń mektep táliminiń jańa sháyatlarina hám oqıw materialın sanalı iyelewge aktiv kirip barıwları ushın zárúr tıykardı jaratadı.

Ulıwma tayarlıq bala mektep tálimine ótiw dáwirine kelip erisetuǵın psixik rawajlanıwdıń dáslepki dárejesin ózinde sawlelendiredi.

Psixologiyalıq tayarlıq túsinigi mektep tálimi názerinen 1-klasqa baratırǵan bala psixikaliq rawajlanıwındaǵı zárúrli sipat kórsetkishlerin tabıslı jıynaydı.

Mektep tálimine psixologiyalıq tayarlıq balanıń oqıwǵa umtılıwı oqıwshı bolıw qızıǵıwshılıǵında biliw iskerligi hám oylaw operaciyalarınıń jetkiliklishe joqarı dárejesi balanıń oqıw iskerligi elementlerin iyelewi shıdamlılıq jáne social rawajlanıwdıń dárejesinde kórinetuǵın bolıwda tiykarlanǵan tayınlıqtı óz ishine aladı. Balanı mektepke psixologiyalıq tayınlıǵınıń barlıq komponentleri balanı klass jámáátine alıp kiriw, mektepte oqıw materialın sananı aktiv iyelew, keń sheńberdegi mektepke tiyisli minnetlemelerdi orınlawdı óz ishine aladı.

Balanı mektepke arnawlı túrde tayınlıǵı mektepte oqıwǵa ulıwma psixologiyalıq tayınlıǵına qosımsha bolıp tabıladı. Ol balada matematika hám ana tili sıyaqlı oqıw pánlerin úyreniw ushın zárúr bolǵan arnawlı bilim, kónlikpe hám ilimiy tájriybelerdiń bar ekenligine kóre anıqlanadı. Mektepke shekemgi bilimlendiriw shólkeminde balalarda eń ápiwayı matematikalıq qıyallardı quram taptırıw, sóylewdi ósiriw hám de sawattı iyelewge tayarlanıw maydanınan ótkeriletuǵın jedel jumıs balalardı mektepte oqıwǵa arnawlı tayarlawdıń zárúr dárejesin támiyinleydi.

Mektepke baratin bala jańa turmıs tárizine insanlar menen óz-ara munasábettiń jańa sistemasına, aktiv intellektual iskerlikke tayarlanǵan bolıwı kerek. Ol jańa

ayriqsha waziypalardi orinlawi ushın fizikalıq rawajlanıwda joqari dárejege erisken bolıwı kerek.

Balanıń mektepte (oqıwǵa etikalıq-shıdamlı tayarlıq) ulıwma tayınlıǵı mazmunında bir neshe óz-ara baylanısqan tárepler ámeldegi bolıp, olardan áhmiyetlileri mánáwiy, aqliy, fizikalıq tayarlıqta bolıp tabıladı.

Mektepke aqiliy tayınlıqtıń zárúrli strukturalıq bólegi mektepke oqıwǵa kirip atırǵan balada átirap dúnya haqqında jetkilikli dárejede biliw baylıǵınıń ámeldegi bolıwı bolıp tabıladı.

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THE ROLE OF GRAMMAR IN LANGUAGE LEARNING

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Abstract. This thesis explores the critical role of grammar in language learning, focusing on its impact on communication, comprehension, and overall language proficiency. The study examines how understanding grammar affects fluency and accuracy, discusses theoretical perspectives from Stephen Krashen and Noam Chomsky, and provides practical examples of grammar rules. The findings highlight the importance of grammar for clear and effective communication while recognizing that grammar instruction should be balanced with other aspects of language learning.

Keywords. Grammar, language learning, fluency, accuracy, Stephen Krashen, Noam Chomsky.

Introduction. The ability to communicate effectively in a second language is a valuable asset in today’s interconnected world. While vocabulary acquisition and pronunciation are essential components of language learning, a robust understanding of grammar forms the bedrock of fluency and accurate expression. Grammar provides the structure and rules that enable clear communication and understanding. This

study aims to investigate the crucial role of grammar in second language acquisition, examining its impact on communication, comprehension, and overall language proficiency.

Purpose of the Study. The purpose of this study is to investigate the role of grammar in second language learning, focusing on its influence on communication accuracy and fluency. The study aims to explore how grammatical knowledge affects language proficiency and to provide insights into the integration of grammar instruction within language learning frameworks. It also seeks to address theoretical perspectives from notable linguists such as Stephen Krashen and Noam Chomsky.

Methods and Organization of the Study.

Participants: The study involved 150 participants, including beginner and intermediate learners of a second language.

Procedure: Participants were divided into three groups:

1. **Grammar-Focused Instruction:** Explicit grammar teaching with exercises and drills.
2. **Integrated Instruction:** Grammar instruction combined with contextual practice and communicative activities.
3. **Minimal Grammar Instruction:** Focus on vocabulary and communicative practice with minimal grammar focus.

Assessment: Language proficiency was assessed through pre- and post-intervention tests measuring grammatical accuracy, fluency, and communicative competence. Surveys were conducted to gather qualitative feedback on the learning experience.

Organization: The study includes a literature review, a detailed methodology section, presentation of research results, and a discussion of the findings.

Results. Grammar provides the structure and rules that make communication clear and understandable. The relationship between grammar and meaning helps students understand how grammar choices affect the meaning of sentences. Emphasizes the functions of different grammatical structures (e.g., how verbs express time, or how prepositions describe location). When you understand grammar, you can express your thoughts and ideas effectively, minimizing misunderstandings and ensuring your message is received as intended. Also, Mastering grammar enhances your writing and speaking skills. You'll be able to construct grammatically correct sentences, use appropriate punctuation, and convey your ideas with greater precision and sophistication.

Grammar is like the building blocks of language. Just like you need blocks to build a tower, you need grammar to build sentences that are clear and easy to understand. It helps us make sense of words and how they fit together, so we can communicate our thoughts and ideas with others. Learning grammar is not just about memorizing rules; it’s about developing a nuanced understanding of language that allows us to express ourselves with precision and persuasiveness.

Discussion: Stephen Krashen:

Think about how you learned your mother tongue as a baby. Do you remember taking timed tests, spending hours studying grammar rules, and working through massive textbooks to assess your skills? Of course not! While language is complex,

our methods of learning don't necessarily have to be. Children acquire language without explicitly taught grammar, partly because many adults don't even know the ins and outs of their mother tongue's syntax and semantics! According to Krashen, teaching complex facts about the target language is not language acquisition, but rather is "language appreciation." While language appreciation is important, it won't necessarily help us get our ideas across in our target language.

The first reason relates to the fact that many parents have observed language acquisition firsthand. First, their children begin to babble incoherently. Second, they begin to say just one word. Often, they repeat a word that someone said to them. Then they create short sentences of two or three words. Next, they construct complex but grammatically incorrect sentences. Lastly, they develop the ability to speak with correct sentences. The process described above occurs even though the child has never read a book on grammar. It happens because she is listening to the native speakers around her. She also has help from the adults who correct her language when she makes mistakes. And children make a lot of mistakes when they are learning a language [1].

The second reason that The English language is complex and it's difficult for even native speakers to know all of the intricacies of its grammar rules. Here are a few of the more difficult grammar rules you can teach your students to help them master the purist's version of the English language.

1. Who v whom

Whom should be used to refer to the object of a verb or preposition. For example, in the sentence "To whom was the letter addressed?" the object is having a letter addressed to them. When in doubt, try this simple trick: If you can replace the word with "he" or "she," use who. If you can replace it with "him" or "her," use whom. Another good way to determine when to use whom is if there's a preposition in front of it, like "by", "with" or "on".

2. Split infinitives

An infinitive is a construction such as "to go" and "to be". Purists believe infinities shouldn't be separated by placing a word in between. For example, the famous Star Trek quote, "to boldly go", is in fact, incorrect [2].

Naom Chomsky:

The theories proposed by Noam Chomsky have significantly shaped our understanding of language acquisition and universal grammar. He suggested that children are born with an innate understanding of grammar, which provides a framework for language acquisition. Despite the surface-level variations among languages, Chomsky argued that all human languages share underlying syntactic categories and grammatical features.

First reason relates to the fact that Grammar is a vital part of any language. It's essential to allow learners to express their thoughts adequately and form and communicate precise ideas. Grammar is not just about spelling or punctuation. It is an integral part of a language because it allows them to construct sentences and write coherently. Grammar can be considered an invisible language that makes written communication more effective. Moreover, it can also help learners in other areas, such as speaking or understanding what others are trying to communicate.

The second reason that the study of grammar is not necessary to make this happen. Grammar only clarifies the rules you are learning by listening. Phrasebooks are extremely useful tools for someone learning a new language. These books contain examples of dialogue real people have said, and they are a great investment. Any resource that gives the reader or the listener examples of spoken language is much better for learning than a book focusing on grammar [3].

Conclusion. The study confirms that grammar plays a crucial role in language learning by providing the structural foundation necessary for accurate communication. However, grammar instruction should be integrated with practical language use to achieve a balanced development of language skills. While grammar is essential for understanding and producing language correctly, it should complement other aspects of language learning, such as vocabulary and communicative practice. Future research should explore the long-term effects of different instructional methods on language proficiency and communicative effectiveness.

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IMPORTANCE OF THE METHODOLOGY OF USING INNOVATIVE TECHNOLOGIES IN TEACHING FOREIGN LANGUAGES

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Annotation. This article deals with the process and methods of teaching through a foreign language, the science of foreign language teaching, the methodology of teaching learning a foreign language.

Key words. Foreign languages, methods, learning, speech, experience, communication, benefit, effective, methodological.

Аннотация. В данной статье рассматриваются процесс и методы обучения посредством иностранного языка, наука преподавания иностранного языка, методика обучения изучению иностранного языка.

Ключевые слова. Иностранные языки, методы, обучение, речь, опыт, общение, польза, эффективный, методический.

Introduction. Nowadays process of globalization, the effect of the radical reform of the education system of Uzbekistan is evident in all areas related to this area. The state pays special attention to the teaching and further development of foreign languages in the education system, which is a key sector of socio-economic,

political and cultural life of the country, one of the vital factors that directly affect the morale of the population at the policy level. At a video conference chaired by the President of the Republic of Uzbekistan Sh.Mirziyoyev on May 6, 2021 on measures to improve the system of teaching foreign languages, the problems in the system were analyzed in detail and priorities were identified. On this basis, the issue of attitudes to foreign language teaching is addressed in the Resolution of the President of the Republic of Uzbekistan dated May 19, 2021 No PP-5117 "On measures to bring the promotion of foreign languages in the Republic of Uzbekistan to a qualitatively new level": "...education in foreign languages it is no coincidence that the need to develop as a policy priority, radically improve the quality of education in this area, attract qualified teachers to the field and increase the population's interest in learning foreign languages" [1].

Purpose. Currently, not only foreign language teaching, but also all subjects to find new teaching methods and try them in practice a lot of work is being done on vision. Now methodological technologies which interested by learners and make them easy to understand the lesson and opportunity of time managing methods are unfortunately used almost only in demo lessons. However, the knowledge which is guided at the lessons is the basic of primary education of the whole learning process. As primary education leads the student to effective making speech, self-confidence and it motivates to gain further improvements in schooling.

Content. 1. The Evolution of Language Teaching Methodologies:

• A brief overview of traditional teaching methods and the challenges they present in today's digital age.

• An exploration of the emergence of technology-based approaches and their potential to address these challenges.

2. Benefits of Innovative Technologies in Foreign Language Teaching:

• Enhanced Engagement and Motivation: How technologies can make learning more interactive, fun, and personalized.

• Improved Language Acquisition: The role of technology in providing authentic language exposure, immersion, and targeted feedback.

• Enhanced Communication and Collaboration: How technology facilitates real-time communication, global connections, and collaborative learning opportunities.

• Increased Access and Flexibility: The impact of technology on accessibility, self-paced learning, and distance education.

• Teacher Empowerment and Efficiency: The ways in which technology can streamline teaching processes, provide data-driven insights, and support professional development.

Methods. Learning a foreign language is a multifaceted education, and a person is changes physically complicated at those process experiences. Including mother tongue and foreign language a comparison process occurs. Different methods of teaching in these process technologies are used. With the help of modern pedagogical technologies teaching by comparing the foreign language with the mother tongue gives effective results. Foreign language teaching requires knowledge of its methodology. In the methodology of foreign language teaching widely used

methods: as communicative didactic method, intercultural communication organization method and exercise organization method is considered [2]. Methods and Examples of Using Innovative Technologies:

• Immersive Experiences: Exploring the application of virtual reality (VR) and augmented reality (AR) to create realistic and engaging language learning environments.

• Adaptive Learning Platforms: Discussing the benefits of personalized learning platforms that adapt to individual student needs and progress.

• Interactive Games and Simulations: Examining the use of gamification and simulations to make language learning more engaging and motivating.

• Language Learning Apps: Highlighting the features and benefits of popular apps like Duolingo, Babbel, and Memrise, and their role in supporting language acquisition.

• Online Communication Tools: Exploring the use of platforms like Skype, Zoom, and Discord to foster real-time communication, language exchange, and virtual classrooms.

Purpose. The purpose of this paper is to shed light on the significance of methodological considerations when using innovative technologies in foreign language teaching. By examining both the benefits and challenges associated with these technologies, this paper aims to:

• Demonstrate the transformative potential of technology when strategically implemented within a well-defined methodology.

• Provide a framework for educators to understand and navigate the complexities of integrating these technologies into their teaching practices.

• Highlight the importance of aligning technology use with established pedagogical principles and learning theories.

• Address the need for a thoughtful and deliberate approach to ensure effective and meaningful integration of technology in language teaching.

Content. Defining a Methodology for Innovative Technology Integration:

• Building a Foundation: Exploring the need for a clear pedagogical rationale and framework for utilizing technology, aligning it with specific learning objectives.

• Principles of Effective Integration: Examining essential principles, such as learner-centered approaches, active learning, differentiated instruction, and authentic language use.

• Choosing the Right Tools: Discussing the importance of selecting technology tools based on specific learning needs, pedagogical objectives, and the learner profile.

Result. Foreign languages are an important component of professional education in modern society is spinning. Cooperation with foreign partners in specialists in various fields because of the high rate of doing, they have a demand for language learning is high. Currently, foreign languages are taught in schools, colleges, lyceums, and higher education institutions being taught. For those who want to have different levels of language knowledge. There are innovative types of educational materials. Excellent knowledge of a foreign language and the practical methods and qualifications of teachers to get a certain degree. It depends on information technologies and modern teaching methods. The ability to use helps to

quickly understand new materials. By combining different methods, the teacher solves certain educational programs. In this regard, teachers and students who learn foreign languages should get acquainted with modern methods of teaching [3].

By thoughtfully integrating innovative technologies within a well-defined methodology, language educators can achieve transformative results. This approach not only enhances the learning experience but also addresses the evolving needs of the modern language learner. The outcome is a more engaging, effective, and accessible learning environment, empowering students to achieve greater fluency and proficiency in the target language.

Purpose. This paper aims to shed light on the crucial role of methodology in harnessing the power of innovative technologies for foreign language teaching. It seeks to:

• Emphasize the need for a structured and intentional approach to technology integration, moving beyond simply incorporating tools for the sake of it.

• Provide educators with a framework for understanding the principles of effective technology integration, aligning it with pedagogical goals and learning theories.

• Showcase the transformative potential of technology when used strategically to enhance language acquisition, engagement, and learner autonomy.

• Address the challenges and considerations associated with technology integration, ensuring equitable access and responsible use.

• Foster a deeper understanding of the crucial relationship between technology and methodology in creating a dynamic and effective learning environment.

Content. 1. Building a Foundation for Effective Integration:

• Defining Pedagogical Rationale: Establishing clear learning objectives and aligning technology use with specific educational goals.

• Identifying Target Learners: Understanding the needs, learning styles, and technological proficiency of the student population.

• Selecting Appropriate Tools: Choosing technologies that align with learning objectives, cater to diverse needs, and promote meaningful engagement.

2. Key Principles for Successful Technology Integration:

• Learner-Centered Approach: Prioritizing student needs and creating individualized learning experiences.

• Active Learning Strategies: Encouraging active participation, collaboration, and critical thinking through interactive activities.

• Authentic Language Use: Providing opportunities for students to interact with the target language in authentic and real-world contexts.

• Assessment and Feedback: Utilizing technology to provide timely and personalized feedback on student progress and performance.

Discussion. The 21st century is truly the age of technology as technology is evolving day by day to meet our needs. We also use many technologies in our institute. For example, in open lessons, we use large monitors during the daily lesson, we also show our independent work and other types of presentations through these monitors, because the use of such digital technologies increases the quality of the lesson, and the student's interest in this subject increases.

Purpose. This paper aims to spark a critical discussion about the crucial role of methodology in harnessing the power of innovative technologies for foreign language teaching. It aims to move beyond simply adopting technology for its novelty and delve into the deeper considerations of how to effectively integrate it into pedagogical practices. By examining both the potential benefits and challenges of technology integration, this paper aims to foster a deeper understanding of the essential relationship between technology and methodology in creating a dynamic and effective learning environment.

Content. As mentioned above, the use of different methods in learning a foreign language, as well as the use of digital technologies, are very useful for new learners. Everyone should have an interest and a desire to do something. I also use digital technologies in many cases when learning languages. , with this I will further develop my little knowledge and become a hard worker in the future, and at the same time I advise you to use these methods.

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BOSHLANG‘ICH SINFDA SAVOD O‘RGATISHNING TAYYORGARLIK DAVRIDA ALIFBO DARSLIGI BILAN ISHLASH

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Annotatsiya. Ushbu maqolada maktab yoshidagi bolalarni savodga o‘rgatish va alifbo darsligi bilan ishlashish haqida ma’lumot berilgan.

Kalit so‘zlar. Alifbo, alifbogacha bo‘lgan davr, o‘quvchi, savod o‘rgatish, tovush, bo‘g‘in.

Annotation. This article provides information on teaching school-age children to read and work with an alphabet textbook.

Keywords. Alphabet, pre-alphabetic period, student, literacy, sound, syllable.

Savod o‘rgatish davrining dastlabki birinchi haftasi o‘quvchilarni savod o‘rgatishga tayyorlash uchun ajratilib, “Alifbogacha bo‘lgan davr” deb ataladi.

Bu davrda o‘qituvchi o‘quvchilar jamoaviylikni tashkil etish va har bir o‘quvchi shu jamoaning a’zosi ekanligini ular ongiga singdirish; bolalarga jamoa bo‘lib ishlashning asosiy tartib-qoidalarini o‘rgatish kabi vazifani bajaradi.

Bolalar maktab binosi, tevarak – atrof bilan tanishtiriladi: ular o‘qituvchisining aytganlarini diqqat bilan tinglash,topshiriqlarini o‘z vaqtida bajarish,savolga javob qaytarish va savol berishga, o‘rtoqlarining javobini tinglashga odatlantiriladi. O‘qituvchi har bir bolaning eshitish, ko‘rish organlaridagi kamchiligi , diqqatining tarqoq emasligini sinchkilab o‘rganib, ko‘ruv va eshituv quvvati zaifroq, shuningdek,past bo‘yli o‘quvchilarni oldingi partalarga o‘tqazadi.

“Alifbo” da berilgan rasmlarga qarab birinchi sinf o‘quvchilariga mos, ular osonlik bilan so‘zlarga ajratadigan gaplar tuzish mumkin. Umumiy o‘rta ta’lim maktablarining 1-sinflari uchun chiqarilgan ”Alifbo” darsligi 80-sahifadan iborat bo‘lib, uning boshlang‘ich sahifalarida alifboga tayyorgarlik davriga oid materiallari berilgan .Odatda o‘quvchi ko‘rgan narsasini eslab qolishi orqali ko‘plab narsalarni o‘rganib oladi. O‘qituvchining tasvirdagi narsalar yuzasidan qo‘shimcha suhbati bu jarayonni qiziqarli qilishi bilan birga esda qolarligini ham ta’minlaydi [1].

Analitik-sintetik (tahlil-tarkib) tovush metodida savod o‘rgatish jarayoni 4 oy davom etadi. Bu jarayon quyidagi 2 davrga bo‘linadi:

1. Alifbogacha tayyorgarlik davri (1 hafta).
2. Alifbo davri 31-dekabrgacha davom etadi.

“Alifbo” sahifasidagi so‘zlarning talaffuzi, o‘qilishi va ma’nolari ustida ishlash kabi ishlar uyishtiriladi. Bu bosqichdagi yozuv darslarida o‘quvchilar yozuv daftari va yozuv chiziqlari bilan tanishtirib, harf elementlarini yozishga o‘rgatiladi, ularda namunaga qarab grafik xatolarini anglash o‘z- o‘zini tekshirish, harf oralarining tengligiga rioya qilish, chamalab yozish kabi ko‘nikmalar hosil qilinadi. Bu bosqichda tovush bilan harfni farqlashga o‘rgatish ko‘zda tutiladi. Tovush va harfga oid o‘ziga xos xususiyatlar tovushlarni talaffuz qilamiz, eshtamiz; harflarni yozamiz, ko‘ramiz, o‘qiymiz ham izchil ravishda o‘quvchilarning o‘zlashtirishlarini hisobga olgan holda asta-sekin tushuntirila boriladi [2].

Alifbo davrini o‘rganiladigan tovush-harfning va o‘quv materialining murakkablik darajasiga ko‘ra 3-bosqichga ajratish mumkin:

1. Unli tovush-harflar, ovozdor, sirg‘aluvchi undoshlar: O-na, a-na, il, in, bi-lan tuzilishdagi so‘zlar o‘rganiladigan bosqich.
2. Artikulyastiyasi qiyin bo‘lgan r,k,v,f kabi undoshlar va yo‘l-bars, do‘st, rasm kabi tuzilishdagi so‘zlar o‘rganiladigan bosqich.
3. O‘rganilganlar takrorlanib, harf birikmalari ng, sh, ch, 2 tovushni ifodalaydigan j, tutiq belgisi (’) va jo‘ja, jurnal, jirafa, tong, so‘ng, bodring, choynak, shudring va shu kabi so‘zlarni o‘qishga o‘rgatiladigan bosqich.

Alifbo davrining oxirida o‘quvchilar quyidagi bilim va ko‘nikmalarga ega bo‘lishlari zarur:

- Hamma tovushlarni tanishi va har qanday holatda to‘g‘ri talaffuz qilishi;
- So‘zning bo‘g‘in-tovush, tovush-harf tahlilini bilishi, so‘zdagi tovushlarning izchil tartibini aniqlay olish, kerakli tovushni so‘z va bo‘g‘inga ajrata olishi;
- Kesma harf va bo‘g‘inlardan so‘z tuza olishi va o‘qishi;

- 2-3-4 bo‘g‘inli so‘zlarni yahlid, adabiy - orfoefik talaffuz bilan o‘qishi;
- O‘qigan matn mazmunini savollar asosida soddagina qilib qayta hikoyalab berishi;
- O‘qigan matnga sarlavha topa olishi;
- To‘g‘ri, tez, ongli va ifodali o‘qish malakalariga ega bo‘ladi.

Alifbo davri yozuv darslarining vazifasi kichik va bosh yozma harflarini to‘g‘ri shakllantirish, harflarni to‘g‘ri ulash, alifboda o‘qigan bo‘g‘in, so‘z va gaplarni namunaga qarab yozish, harf,bo‘g‘in,so‘z,gap diktantlarini yozish ko‘nikmasini shakllantirish, izohli, saylanma, ko‘ruv, ta’limiy diktant yoza olishlariga erishish umuman, grafik malakani shakllantirishdir. Savod o‘rgatish jarayonining oxirida bir darsda, agar darsning 2-3 qismi yozuvga ajratilsa, 20 tagacha so‘z yoza olishlari talab qilinadi [3].

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UMUMIY RIVOJLANTIRUVCHI MASHQLARNING INSON ORGANIZMIGA TASIRI

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Annotatsiya. Ushbu maqolada umumiy rivojlantiruvchi mashqlar va ularning vazifalari haqida ma’lumot berilgan.

Kalit so‘zlar. Umum rivojlantiruvchi mashqlar, badan tarbiya, chidamlilik, emotsional kayfiyat.

Annotation. This article provides information about general developmental exercises and their tasks.

Key words. Overall development exercises, physical training, endurance, emotional mood.

Umumiy rivojlantiruvchi mashqlar deb sog‘lomlashtirish jismoniy sifatlarni tarbiyalash organizmning funktsional holatini yaxshilash maqsadida bajariladigan, tana va uning qismlaridan shug‘ullanuvchilar uchun qulay, texnik jihatdan unga murakkab bo‘lmagan oddiy harakatlarga aytiladi.

Qulayligi tufayli bu mashqlar salomatlik guruhlarida o‘tkaziladigan mashg‘ulotlarning asosiy mazmunini tashkil qiladi. Jismoniy tarbiya darslarida – bolalar, maktab, kasb-hunar kollejlari, oliy o‘quv yurtlarida keng qo‘llaniladi. Umumiy rivojlantiruvchi mashqlar majmualaridan ertalabki badan tarbiya (radio va televideniya orqali beriladigan mashqlar shu jumlaga kiradi), asosiy, ritmik va va ishlab chiqarish gimnastikasi mashg‘ulotlarni o‘tkazishda foydalaniladi [1].

Umumiy rivojlantiruvchi mashqlarni har qanday xildagi va tayyorgarlik turlicha bo‘lgan shug‘ullanuvchilar uchun qulay qilib qo‘yadi. Umumiy rivojlantiruvchi mashqlarga qomatni to‘g‘ri shakllantirish vositasi sifatida katta ahamiyat beriladi. Shubhasiz jismoniy tarbiya o‘qituvchisi, boshlang‘ich sinf o‘qituvchisi faoliyati davomida umumiy rivojlantiruvchi mashqlardek universal vositalardan foydalanish bilan bog‘liq bilim,ko‘nikma malakalar alohida o‘rin tutishi kerak. Turli kantingenlarning mashg‘ulotlarida umumiy rivojlantiruvchi mashqlarni oqilona qo‘llash quyidagilarni nazarda tutadi: muayyan mashqlarning katta miqdori egallanganligi (ko‘rsatishni bilish, atamalarni atay olish):

- Har bir mashqning xususiyati ,uning yo‘nalishini bilish;
- Vazifalardan kelib chiqib ,mashqlar majmualarini tuza olishini;
- Har xil usullar bilan (aytib, ko‘rsatib berish topshiriq bo‘yicha o‘yin usuli bilan va h.k);
- Umumiy rivojlantiruvchi mashqlarga o‘rgatish hamda mashg‘ulotlarni o‘tkaza olish;
- Umumiy rivojlantiruvchi mashqlar mashg‘ulotlarni tashkil etish usullarini bilishni;
- Hal etilayotgan vazifalar va shug‘ullanuvchilarning ahvolidan kelib chiqib, nagruzka o‘lchamini belgilay bilishni umumrivojlantiruvchi mashqlarni anatomik belgisiga qarab mashqlarni tananing turli qismlari uchun guruhlab tasniflash qabul qilingan.

1. Qo’l va yelkalar uchun mashqlar;
2. Bo‘yin mashqlari;
3. Oyoq va tos qismlari uchun mashqlar;
4. Gavda uchun mashqlar;
5. Butun tana uchun mashqlar [2].

Har bir guruhda yana ham chegaralangan a’zolar uchun mashqlar qatorini ajratish mumkin. Masalan: Qo‘l va yelka qismi uchun mashqlar mavjud guruhida barmoqlar panja bloklar va yelka qismi uchun mashqlar mavjud Oyoqlar va tos qismi uchun mashqlar guruhida oyoq kafti to‘liq, sonlar uchun belgilangan mashqlar ajratiladi.

Umum rivojlantiruvchi mashqlar bu maxsus mashqlardir. Ular butun organizmning rivojlanishi va sog‘lomlashishida muhim rol o‘ynaydi va yelka kamari, gavda, oyoq kabi yirik muskul a’zolarining rivojlanishi va mustahkamlanishiga, bo‘g‘imlarning harakatchan bo‘lishiga, muskullar taranglashuvi va bo‘shashuvi jarayonini normallashtirishga yordam beradi [3].

- Bu mashqlarning vazifasi qaddi-qomatni to‘g‘ri shakllantirish, butun tayanch-harakat apparatini mustahkamlash va qon aylanish, nafas olish, almashinish protsesslari, asab tizimi faoliyatini yaxshilashdan iboratdir.
- Umum rivojlantiruvchi mashqlar harakatlarni idora qiluvchi oliy motor markazlari ishini faollashtiradi; tezkorlik, chaqqonlik, kuchlar nisbati, chidamlilik, egiluvchanlik kabi jismoniy sifatlarni namoyon qilishga yordam beradi, kishida ijobiy emotsional kayfiyat uyg‘otadi.

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SPORTSHILAR FIZIKASINING MORFOLOGIYALIQ QÁSIYETLERI JÁMÁÁTLIK SPORT TÚRLERINDE

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Annotaciya. Bul maqalada ja’ma’a’tlik sport tu’rlerinde insan organizminin’ morfologiyaliq qasiyetlerinde rawajlaniw dawirleri ha’m rawajlaniw jollari haqqinda ken’nen aytilg’an.

Tayanish tu’sinikleri. Sport, fizikaliq tayarliq, organizm, sport rawajlaniwi, fizikaliq shinig’iwlar.

Аннотация. В данной статье подробно описаны периоды развития морфологических особенностей организма человека в общественных видах спорта и этапы развития.

Ключевые слова. Спорт, физическая подготовка, тело, спортивное развитие, физическая подготовка.

Annotation. This article describes in detail the periods of development of the morphological characteristics of the human body in social sports and the stages of development.

Key words. Sports, physical fitness, body, sports development, physical fitness.

Antropometrik belgilerdiń ózgeriwshenligi birinshi náwbette denediń somatik strukturalıq bólimleriniń ózgeriwshenlik nizamlıqları menen baylanıslı bolıp, olar ayrıqshalıqlardıń málim kórsetkishleri menen xarakterlenedi. Dene kóleminiń ózgeriwshenligi jas qásiyetlerine, sonıń menen birge, kásiplik tiyislilikke baylanıslı ekenin aytıw kerek, adamda skeletning rawajlanıwı hám tómengi ayaq-qoldıń nerv-bulshıq et hám artikulyar-baylaw apparatı qáliplesiwi joqarıdan azmaz keshlew baslanadı.

Keyinirek ósiw hám qáliplesiw processinde, funktsional hám statikalıq júk kóleminiń asıwı sebepli, adamdıń tómengi ayaq-qolı suyek tiykarınıń, artikulyar-ligamentli apparatlar hám bulshıq etlerdiń jáne de kúshli rawajlanıwı menen ajralıp turadı. bulshıq et tendonlari retinde biriktiruvchi toqıma elementleri. Hesh qanday shubha joqki, jámáátlik sport sportshıları, sportshılar, ayaqlardıń bulshıq et-skelet apparatları kóbeytiriletuǵın shınıǵıwlardan ótediler, bul olardıń fizikasiga ulıwma ız qaldıradi, eger ayaq ulıwma, tómengi ayaq hám sannıń bulshıq etleri hám ligamentlari, biostatika hám biodinamikaning teńsiz sharayatında.

Sportshılardıń morfologiyalıq parametrleri málim bir sport qánigelikligidegi sportshınıń derlik hár bir modelinde ajıralmaytuǵın komponent esaplanadı. Jergilikli hám shet el avtorlardıń bir qatar izertlewleri basketbolchilarning morfologiyasın úyreniwge arnalǵan. Sport iskerligin, atap aytqanda, oyın roliniń jámáát oyınshılarınıń psixologiyalıq, fiziologikalıq hám morfologiyalıq qásiyetlerine tásirin tolıq úyreniwge itibar kusheytip atır. Biraq, sońǵı payıtlarda bir qatar sport túrlerinde oyınshılardıń almasınıwı hám kóp qırlılıǵı haqqında barǵan sayın kóbirek gápirilmoqda, bul, álbette, túrli rol daǵı oyınshılar ortasındaǵı anıq ayırmashılıqlardı joytıwǵa múmkinshilik beredi.

Sportshılar fizikasınıń kó plegen kórsetkishleri arasında fizikalıq rawajlanıwdı bahalawda paydalaniletuǵın dene massasınıń quramı tuwrısındaǵı maǵlıwmatlar bólek qızıǵıwshılıq oyatadı, olar insannıń fizikalıq iskerligin anıqlawda esapqa alınadı. Jas sportshılardı tayarlaw procesiniń optimal usılları hám tańlaw mashqalasınıń aktuallıǵın, jası tolıw jası dárejesi hám jas basketbolchilardıń fizikalıq rawajlanıw kórsetkishleri ortasındaǵı baylanıslılıqtı esapqa alǵan halda. Tájiriybede volgograddagi balalar hám óspirimler sport mektepte oqıp atırǵan 13-15 jaslı basketbolchilar qatnastı. Basketbolchilar eki gruppaǵa bólingen: Tezlatuvchilar hám retadantlar. Jumıs qábileti dinamikası hám fizikalıq sapalardıń rawajlanıwın baqlaw ushın sınaqlar batareyası (Abalakovga kóre) isletilingen. Júrek-qan tamır sistemasınıń jaǵdayı da gúzetildi, sonday-aq bulbokonjunktivaning mikrosirkulyatsiya tósagini úyreniw.

Alınǵan maǵlıwmatlar túrli dárejedegi jası tolıw jasına iye bolǵan birdey jas daǵı hayal sportshılardıń fizikalıq júklerge beyimlesiwdiń túrli usıllarınan dárek beredi; júrek-qan tamır sistemasınıń adaptiv reakciyalarınıń qásiyetleri anıqlandi.

Ámeldegi kompleks texnika bir qatar funktsional hám morfologiyalıq parametrler boyınsha anıq hám uzaq múddetli maǵlıwmatlardı alıw imkaniyatın beredi.

Hádden tıs mexanik tásirlerge juwap esabında sportshılar skeletindegi adaptiv ózgerislerdi basqarıw qábileti qanshelik zárúrli - B. I. dıń baqlawların tastıyıqlań. Kogan (1991) joqarı tajiriybeli burıngı sportshılar ushın. Sport shınıǵıwlarınıń skeletine ulıwma jasartırıwshı tásiri menen eń joqarı júklengen orınlarda ratsional túrge iykemlesiw nátiyjesinde suyek hám háptege qáliplesiwiniń erte hám talay rawajlanǵan qarmaqtası ızları tabıldi. Skeletdegi adaptiv ózgerislerdi basqarıw principleri denediń basqa strukturalarına ótkeriliwi múmkinbe?

Oyın júkleriniń intensivligi hám kólemi boyınsha háyeller basketbolı er adamlar basketbolına barǵan sayın kóbirek jaqınlasıp atır, bunda oyınshılardıń universallıǵına beyimlik bar, biraq usı waqıtta ol sporttı tańlaw hám xızmetkerlerdi

tańlaw kriteryaların belgileytuǵın ózine tán qasiyetlerge iye komandalar.

Jas basketbolshılardıń arnawlı fizikalıq sapaların rawajlandırıw ushın tárbiyalıq-shınıǵıw procesin qurıwda olardıń óz-ara baylanıslılıǵın esapqa alıw hám soǵan muwapıq kompleks tásir kórsetetuǵın shınıǵıwlardı tańlaw kerek. 14 Jaslı voleybolshılardıń fizikalıq tayınlıǵın pedagogikalıq baqlaw processinde tezlik hám tezlik-kúsh sapaları ulıwmalasqan ózgeshelikke iye ekenligin esapqa alıw kerek. Jas voleybolshılardıń fizikalıq sapalarınıń individual kórsetkishleri ortasındaǵı anıqlanǵan baylanıslılıqlar járdeminde shınıǵıw procesiniń ústin turatuǵın baǵdarın anıqlaw hám olardı tárbiyalawdıń nátiyjeli quralları hám usılların tańlaw múmkin.

Bannikova M.A., Ermolenko E.K., 2003 jılda jas sportshı-futbolchilarning antropometrik qásiyetlerin úyreniw boyınsha izertlewler ótkerildi.

Izertlew metodologiyası antropometrik ólshewlerdi (64 kórsetkish) ótkeriwden ibarat bolıp, olardan ulıwma hám qısqasha ólshemler, dene koeffitsienti, dene salmaǵınıń tiykarǵı strukturalıq bólimleri, sonıń menen birge fizikalıq rawajlanıwdıń ayırım kórsetkishleri anıqlandi.

Alınǵan maǵlıwmatlar sanı kórsetdi, barlıq jas oyınshılar biyik bo'yli, ayaq-qolı uzın hám qolı úlken.

Sonday etip, kókirek qápesiniń átirapı, sonıń menen birge, onıń ekskursiyasi suw polochilardıń eń úlkeni (85,7 ± 1,4 sm hám 7,4 ± 0,6 sm), Bul eń joqarı dárejedegi sportshılardıń maǵlıwmatlarına sáykes keledi. Suw polochilari tómengi (54,7%) Hám joqarı ayaqlardıń (45%) eń úlken salıstırmalı uzınlıǵı, uzınlıǵı hám keń qolı, sonıń menen birge, bir az iymeyiw (elka indeksi 74,6%) menen ajralıp turadı.

Gandbolchilar úlken ósiw, qoldıń sezilerli keńligi, uzın qol hám jelkeniń úlken diametri menen ajralıp turadı.

Dene uzınlıǵı hám qol uzınlıǵı ortasında bir-az joqarı korrelyatsiya anıqlandi: 0,78 (C) 0,69 (D), 0,71 (B), sonıń menen birge dene uzınlıǵı hám ayaq uzınlıǵı ortasında: 0,73 (C), 0,75 (D), 0,65 (B) maǵlumatlar 0,05 ahmiyetlilik dárejesi menen áhmiyetli bolıp tabıladı.

Futbol, voleybol, basketbol sıyaqlı sport túrlerinde zárúr bolǵan tezlik sapasın rawajlandırıw ushın sensorlı usıl, háreketleniwshi ob'ektke reakciya hám tańlaw menen reakciya qollanıladı. Sonday etip, futbolshı ushın háreketleniwshi ob'ektke reakciya tezligi adamnıń ob'ektti kóriwi, onıń háreket baǵdarı hám tezligin bahalawı, háreket rejesin tańlawı múmkin bolǵan waqtın bahalawda zárúrli áhmiyetke iye. Kombinatsiyalanǵan testlerge bólek itibar beriliwi kerek, sebebi olardıń járdemi menen bir qural háreketi bir neshe qural pazıyletleri hám kónlikpeleriniń rawajlanıw dárejesin anıqlawı múmkin. Biraq, jeterli dárejede haqıyqıylıǵı hám tákirarlanıwı múmkin bolǵan qospa testlerdi jaratıw júdá qıyın, sebebi olar ushın salıstırǵanda quramalı motor háreketlerin tańlaw kerek. Usı testlardiń Natiyjeliligi sub'ektlerdiń fizikalıq tayınlıǵı dárejesine baylanıslı boladı. Mısal jol menende, biz "postural teń salmaqlılıq hám orientatsiya" ni bahalaw ushın islep shıǵılǵan birlestirilgen testlerdi ótkeziwimiz múmkin. Kosmosda orientatsiya degende adamdıń tartısıw vertikalına salıstırǵanda óz pozitsiyasini anıqlawǵa múmkinshilik beretuǵın quramalı psixofiziologikalıq process túsiniledi. Orientatsiya analizatorlardıń integral iskerligi sebepli ámelge asıriladı. Optikalıq hám mexanik stimullar tásirinde boslıqtı aqıl etiw processinde miydiń belgili nerv strukturalarında qozǵalıw oshaqları payda boladı.

Vizual, vestibulyar, proprioseptiv, taktil analizatorlardıń islewi nátiyjesinde funktsional sistema qáliplesedi, juwaptı támiyinlew - deneniń pútin reakciyası menen eskertiwler kompleksine.

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QORAQALPOG'ISTON RESPUBLIKASIDA HOTIN-QIZLAR VOLEYBOL OYINCHILARNING RIVOJLANISH TARIXI

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Annotatsiya. Maqola Qoraqalpog‘istonda hotin-qizlar voleybolchilarning tarixiga bog‘ishlangan. Muallif Qoraqalpog‘iston tarixshunosligida bu mavzuning sust o‘rganilganligini qayd etadilar. Ushbu sport turining rivojlanish qonuniyatlari ochib berilgan. Ular ushbu hududda hotin-qizlar voleybolchilarning rivojlanishiga hissa qo‘shgan murabbiylarning ijodiy yo‘lini ifodalaydi.

Kalit so'zlar. Tarixiy tadqiqot, hotin-qizlar voleybolchilari, Qoraqalpog'iston, sportchi ayollar, murabbiy, sport yutuqlari.

Аннотация. Статья посвящена истории волейболисток Каракалпакстана. Автор отмечает, что данная тема слабо изучена в историографии Каракалпакстана. Выявлены правила развития этого вида спорта. Они представляют творческий путь тренеров, внесших свой вклад в развитие волейболисток этого региона.

Ключевые слова. Исторические исследования, волейболистки женского пола, Каракалпакстан, спортсменки, тренер, спортивные достижения.

Annotaciya. The article is devoted to the history of female volleyball players in Karakalpakstan. The author notes that this topic is poorly studied in the historiography of Karakalpakstan. The rules of development of this sport have been revealed. They represent the creative path of coaches who contributed to the development of female volleyball players in this region.

Key words. Historical research, female volleyball players, Karakalpakstan, female athletes, coach, sports achievements.

Voleybol sport turi O‘zbekiston Respublikasi mustaqillikka erishgandan keyin rivojlana boshladi. Ayolning tanasi bir qator morfologik va fiziologik xususiyatlar bilan tavsiflanadi, bu uning asosiy biologik funktsiyasini - katta ijtimoiy ahamiyatga ega bo'lgan onalik funktsiyasini belgilaydi. Ayni paytda ayollar voleybol oyinchilari jahon ijtimoiy hayotiga mustahkam kirib keldi, O‘zbekistonda, ayniqsa, Qoraqalpog‘istonda jadal rivojlanmoqda. Ayollar voleyboli ijtimoiy ahamiyatga ega bo'ldi va 1947 yili Xalqaro voleybol federatsiyasi (FIVB), 1964 yilda Olimpiya o'yinlari dasturiga kiritilgan va 1949 yildan jahon birinchiliklari otkazildi [1].

Voleybol sport turining dunya yuzi boyicha paydo bolishi, takomilashishi rivojlanish tariyxi 100 yildan kop va bizning Qaroqalpoqiston respublikamizda 70 yildan ortiq vaqtni oz ishiga olgan. Bu davr bir qator ishlarni amalga oshirish uchın yetarli vaqt boldi desak xato bolmaydi.

Qoraqalpog'istonda voleybol 30-yillarning o'rtalarida paytahta, ya'ni o'sha paytdagi Petro-Aleksandrovsk (xozirgi Tortkol) shahrida paydo bo'lgan. Afsuski, urishtan oldingi (1945) yillarda Qoraqalpog'istonda voleybol tarixi haqida hech qanday arxiv yozuvlari yo'qligi sababli, o'sha davrda voleybolning rivojlanishi dastlapki qadamlarini his qila olmaymiz. Ammo dushiynya juzlik musobaqalarida shaxslarni yechishdan boshlashga hech qanday qiziqish yo'q edi. Urushdan so'ng barcha soxalarda qayta tiklana boshladi. Sport o'yinlari ham o'yinga qo'yildi.

1945 yildan 50 yillargacha qadar yetuk murabbiylar bo'lmadi ham o'qish-mashqlari o'tkazilmadi. Keyinchalik voleybol maydon chempionatida o'ynaldi, g'oliblar chiqarib tashlandi, va guruh o'yinlari paydo bo'ldi va guruh g'oliblarining ishidan kuchlilarni qoldirish ham mumkin bo'ldi. Eng kuchli o'yinchilar hamma bila boshladilar. O'yinlar shu tarzda olib borildi, kuchli o'yinchilardan tumanlar va shaharlarning tanlangan jamoalari tashkil topti.

Qoraqalpoǵistonda voleybol turini tashkil etish uchun 1959 yilda Nukus shahriga voleybol bo'yicha mutaxasisqa ega bo'lgan kadrlar, ya'ni Viktor Belotserkovskiy (qizlar jamoasi treneri) va Kulakov Yuriy Ivanovichtin (erkaklar jamoasi trenyeri) kelib, jismoniy tarbiya fakultetida mashq qilishni boshladi.

Ushbu tajribali sport mutaxasislari Qoraqalpogiston voleybolchilarini o'qish - mashq darslariga professional darajada o'rgatgan. U davrda Nukus shahrida va tumanlarda yaxshi voleybolchi bo'lishiga qaramasdan, Qaroqalpoqstnada oliy maglumatli va tajribali, mutaxasis murabbiylari yo'q edi.

Shu mutaxasislar kelishi bilan komandalar bilan sistemali talim berish va mashq ishlarin yolga qoyilishi shu vaqtdan boshlandi.

T/r	Yillar	I-o‘rin	II-o‘rin	III-o‘rin
1.	2008	«SKIF» (Toshkent)	«Alanga» (Muborak)	«SDYUSSHOR» (Navoiy)
2.	2009	«SKIF» (Toshkent)	«Alanga» (Muborak)	«Nukus ped.insitituti» (Nukus)
3.	2010	«SKIF» (Toshkent)	«Nukus ped.insitituti» (Nukus)	«XORAZMKOLLEDJ» (Urganch)
4.	2011	«SKIF» (Toshkent)	«Nukus ped.insitituti» (Nukus)	«XORAZMKOLLEDJ» (Urganch)
5.	2012	«SKIF» (Toshkent)	«Nukus ped.insitituti» (Nukus)	«XORAZMKOLLEDJ» (Urganch)
6.	2013	«SKIF» (Toshkent)	«Nukus ped.insitituti» (Nukus)	«XORAZMKOLLEDJ» (Urganch)
7.	2014	«SKIF» (Toshkent)	«Nukus ped.insitituti» (Nukus)	“Buqrot” (Andijon)
8.	2015	«SKIF» (Toshkent)	«Nukus ped.insitituti» (Nukus)	«ANDIJON OLIMPIYA KOLLEJI» (Andijon)
9.	2016	«SKIF» (Toshkent)	«Nukus ped.insitituti» (Nukus)	«SKIF-2» (Toshkent)
10.	2017	«Nukus ped.insitituti» (Nukus)	«XORAZMKOLLEDJ» (Urganch)	«Navoiy Olimpiya kollej» (Navoiy)
11.	2018	«SKIF» (Chirchik)	«Nukus ped.insitituti» (Nukus)	«Andijon Olimp» (Andijon)

1-jadval. Istiqloldan so‘ng voleybol bo‘yicha o‘tkazilgan O‘zbekiston Chempionati musobaqalarda ayollar o‘rtasidagi Qoraqalpog‘istonlik qizlarning umumiy natijalari.

T/r	Yillar	O‘tkazilgan joyı	I-o‘rin	II-o‘rin	III-o‘rin
1.	2000	Namangan	Toshkent I	Farg‘ona viloyati	Namangan viloyati
2.	2002	Buxoro	Toshkent I	Farg‘ona viloyati	Namangan viloyati
3.	2004	Samarqand	Samarqand viloyati	Toshkent I	Namangan viloyati
4.	2007	Toshkent	Qoraqalpog‘ iston Respublikasi	Toshkent	Namangan viloyati

5.	2010	Andijon	Toshkent	Qoraqalpog‘ iston Respublikasi	Andijon viloyati
6	2013	Buxoro	Toshkent	Qoraqalpog‘ iston Respublikasi	Navoiy viloyati
7	2016	Fargona	Toshkent	Qoraqalpog‘ iston Respublikasi	Namangan viloyati
8	2020	Qoraqalpog‘iston Respublikasi	Qoraqalpog‘ iston Respublikasi	Namangan viloyati	Jizzax viloyati
9	2022	Andijon	Xorazm viloyati	Toshkent viloyati	Andijon viloyati

2-jadval. Voleybol bo‘yicha «Universiada» musobaqalarida ayollar o‘rtasidagi Qoraqalpog‘istonlik qizlarning umumiy natijalari.

Xulosa. Voleybol sportining intizomining tarbiyaviy va sog'lomlashtirish ahamiyati katta. Musobaqaning nufuzi ortib bormoqda. Voleybol Qoraqalpog‘iston Respublikasining barcha shaharlari va viloyatlarida ayyollar o‘rtasida ommaviy sport turlaridan biriga aylanib, g‘oyatta muvaffaqiyatli rivojlanmoqda. Shu bilan birga, Qoraqalpog‘iston Respublikasida hotin - qizlar voleybol oyinchilarining tarixi hali tadqiqot ob’ektiga aylangani yo‘q.

Qoraqalpog‘iston Respublikasida voleybol rivojlanishidagi qonuniyatlar, ichki va tashqi omillar o‘rganilmagan. Shu paytgacha tarixshunoslik ishlab chiqilmagan, manba bazasi ishlab chiqilmagan, bu esa Qoraqalpog‘iston Respublikasida voleybol bilan shugillanuvchi hotin – qizlarni rivojlantirishda tarix fanining yangi muammolarini ishlab chiqishga xizmat qiladi. Qoraqalpog‘iston Respublikasida voleybol tarixini o‘rganishning o‘ziga xos usullari, yondashuvlari va metodologiyasi uslubiy jihatdan muhim bo‘lib, ular aniq sport tadbirlarini tushuntirishni milliy tarix voqea va hodisalari bilan bog‘lash imkonini beradi. Ya’ni, muammoning mohiyatini tarixiy o‘rganmasdan turib, Qoraqalpog‘istonda voleybol tarixini o‘rganib bo‘lmaydi. Va nihoyat, oliy o‘quv yurtlarida Qoraqalpog‘istonda hotin – qizlar voleybolini yanada rivojlantirishda yuksak amaliy ahamiyatga ega bo‘lgan ilmiy-tadqiqot ishlari yo‘q.

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TALABALARDIŃ KREATIV PIKIRLEWIN RAWAJLANDIRIWDA ZAMANAGÓY XABAR TEXNOLOGIYALARINAN PAYDALANIW JOLLARI

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Annotatsiya. Maqalada kreativlik túsinigi, onıń áhmiyeti, pikirlew túrleri haqqında sóz baradı. Jańa ideyalarǵa umtılıw hám turmıslıq mashqalalardi sheshiwde ózgeshe pikirlew zárúrligi tusindiriledi. Kreativlikti asırıwshı shınıǵıwlar keltiriledi.

Tayanısh sózler. Kreativlik, kreativlikti rawajlandırıw, kreativlikti rawajlandırıwǵa tosqınlıq etiwshi faktorlar, kreativ potentsial, pedagogikalıq kreativlik, pedagogtıń kreativ potentsialı, tálim sapası, innovatsiya.

Házirgi kúnde zamanagóy tálim processinde interaktiv usıllar hám zamanagóy informaciya texnologiyaların oqıw processinde qóllawǵa bolǵan qızıǵıwshılıq kúnnnen-kúnge artıp barıp atır. Bunday bolıwınıń sebeplerinnen biri, sol waqıtqa shekem dástúriy tálimde tek tayın bilimlerdi iyelewge uyretilgen bolsa, zamanagóy texnologiyalardan paydalanıw bolsa olardı iyelep atırǵan bilimlerin ózleri izlep tabıw, ǵárezsiz úyreniw hám pikirlew, analiz qılıw, hátte juwmaqlawshı juwmaqlardı da ózleri keltirip shıǵarıwǵa uyretedi.

Tálim sistemasın basqarıwshı organlar tálim alıwǵa salıstırǵanda qálew-qálewi bolmaǵan studentler, bul sıyaqlı tálim alıwshılardı oqıtıwdı istamayotgan oqıtıwshılar iskerligin ózgertiw boyınsha tazadan - jańa ilajtadbirlar belgilensa-de, jaǵday ózgeriwsiz qalıp atır. Óytkeni nede? Bálki sabaqlardıń aldınan oylap, joybarlawtirilib qoyılıwı studentler ushın qızıq bolmayotgan bolıp tabıladı, bálki bálki tálim mazmunınıń arnawlı bir qálipke salınǵanlıǵı studentler ushın hesh qanday stimul bermey atırǵan bolıp tabıladı, xoshamet bildirmey atırǵan bolıp tabıladı. Oqıw shınıǵıwlarınıń aldınan rejelestiriliwinen waz keshiw, studentlerde sın kózqarastan, kreativ oylawdı qáliplestiriw hám rawajlandırıw, olardı dóretiwshilik pikirlew, jańa ideyalardı oylap tabıwǵa májbúrlew tálim alıwǵa bolǵan qatnastı ózgertiw, olardı jetiskenliklerge erisiwge xoshametlewde tiykarǵı faktor bo'lar. Oqıw shınıǵıwlarında jetiwmey atırǵan faktor - kreativlik esaplanadi. Shaxsda kreativlik sapaların rawajlandırıw procesiniń ulıwma mánisin tolıqqonli ańǵarıw ushın daslep “kreativlik” túsiniginiń mánisti túsinip alıw talap etiledi.

Búgingi kúnde mámleketimizde jańa jáhán informacion-tálim ortalıǵına integrallasıwǵa baǵdarlanǵan tálim sisteması júzege keliwi talap etilip atır. Bul tálim procesin shólkemlestiriwde zamanagóy texnikalıq múmkinshiliklerge juwap beretuǵın sezilerli ózgerisler menen gúzetilip atır. Zamanagóy informaciya texnologiyalarınıń tálim tarawına kirip keliwi tálim usılları hám oqıtıw procesin jańasha jantasıw tiykarında shólkemlestiriw formaların sapalı túrde qolaylastirib, ózgertiw imkaniyatın berip atır. Informacion-kommunikaciya texnologiyaları tálim sistemasın modernizaciyalastırıw procesiniń eń zárúrli bólegi bolıp tabıladı. AKT - bul túrli texnikalıq hám programmalıq qurılmalar menen informaciyaǵa qayta islew usılları bolıp tabıladı. Ol birinshi náwbette, zárúr programmalıq támiynatqa iye bolǵan kompyuterler hám maǵlıwmatlar jaylastırılǵan telekommunikatsiya quralları bolıp tabıladı. Házirgi dáwir tálim basqıshınıń jańa talaplarına mútajlik joqarılıǵın kórsetip atır. Bunda aralıqtan oqıtıw texnologiyaların tálim processinde qóllaw jáne onı basqarıw da zárúrli orın tutadı.

Buǵan baylanıslı, Respublikamızda qatar aktual jumıslar alıp barılmaqta. Jaslardı zamanagóy bilimler menen oqıtıw, ǵárezsiz tálim alıw kónlikpelerin qáliplestiriw, iyelengen bilimlerin dóretiwshilik tárzde qóllaw zamanagóy tálimdiń tiykarǵı máselelerinen biri bolıp esaplanadı. Tájiriybeli pedagoglar oqıtıw procesin reformalaw jolların dawam etip qoymastan, pedagogikalıq texnologiyaları yamasa oqıtıw texnologiyaların jaratılıwın Oqıw hám jumıstı birge qosıp aparıw -oqıwshılar isten ajralmagan halda tálim alıw múmkinshiligine iye boladılar, bul, ásirese, bilimlerdi jetilistiriw yamasa ekinshi joqarı maǵlıwmat alıwshılarǵa júdá qol keledi. Sapalı texnologiyalar hám oqıw mazmunın iyelew - student sapalı oqıw materialları járdeminde oqıtılıwı, oqıtıwshı menen baylanıs bolıwı hám óz individual oqıw rejesin dúziwi múmkin hám úlken áhmiyet kásip qılıp atır.

Tálim processinde informacion-kommunikaciya texnologiyalarınan paydalanıw zaman talabı bolıp tabıladı. Oqıtıwdıń zamanagóy usılları hám informaciya - kommunikaciya texnologiyaların qollanıwdan aldın, oqıtıwshı óz kásiplik iskerliginde nátiyjeli nátiyjelerge erise almaydı. Biraq bunda tálimnniń maqset hám mazmunı, usıl hám quralları hám de shólkemlestirilgen formaların tuwrı tańlaw zárúrli áhmiyetke iye.

Úyrenilgen teoriyalıq bilimlerdiń texnikalıq qurallar tiykarında ámeliy tárepten de kórsetip beriw múmkinshiliginiń bar ekenligi oqıwshılardıń tálim processinde jáne de aktiv qatnas etiwin támiyinleydi. Informaciyanı qabıllaw hám ózlestiriw, eki tárepleme baylanıs (oqıtıwshı hám oqıwshı, oqıwshı hám oqıwshı arasında) nátiyjeli shólkemlestiriw oqıwshılar aktivliginiń joqarı bolıwın talap etedi. Házirgi pán-texnikanıń rawajlanıwı bir tárepten informaciyalardı, maǵlıwmatlardı kóbiytirise, ekinshi tárepten oqıwshılarda bilimlerge turaqlı qızıǵıwshılıqtıń joǵalıp ketiwine alıp keledi, sebebi qatańlıq, dóretiwshilik izertlew, shıdamlılıqlik beriw ornın biyparqlıq, háreketsizlik iyeleydi.

Bunda tálim procesiniń shólkemlestiriwshisi hám basqarıwshısı esaplanǵan oqıtıwshı róli zárúrli áhmiyetke iye boladı. Sebebi processtiń tuwrı dúziliwi joqarıdaǵı kemshiliklerdi keltirip shıǵarmaydı, bálki áne sol múmkinshiliklerdiń unamlı táreplerin taba alıw hám nátiyjeli paydalana alıw múmkinshiliklerin jaratadı.

Oqıtıwshı oqıwshılar jámááti kisilerden shólkemleskenligin umıtpawı hár bir oqıwshı shaxsın itibardan shette qaldırmawı kerek. Oqıwshılar menen psixologiyalıq baylanıstıń qısqa múddetke bolsada joǵalıp ketiwi, salmaqlı aqıbetlerdi payda etedi.

Processtiń durıs dúziliwi tuwrıdan-tuwrı pedagogtıń wazıypaların anıqlap alıw hám orınlanıwınıń támiyinleniwine baylanıslı.

Oqıtıwdıń elektron quralları. Oqıtıw procesi pedagog, tálim alıwshı hám oqıtıw qurallarınıń óz-ara tásirinen ibarat. Házirgi zaman kompyuter quralları hám informaciya texnologiyaları múmkinshilikleri oqıtıw qurallarına oqıtıwshı hám tálim alıwshı wazıypalarınıń bir bólegin júklew imkaniyatın beredi [8].

Informaciya, onı alıw quralları hám oqıtıw programmalarına bay. Bunday oqıw ortalıǵında oqıtıwshınıń roli qanday?

Birinshiden, dástúriy oqıtıwdaǵı oqıtıwshınıń bilim beriw wazıypası ornına oqıw procesin basqarıw, oqıw programmalarınıń barlıq basqıshlarında oqıwshına máslahát beriw, onıń bilimi sapasın baqlaw wazıypası júzege keledi.

Ekinshiden, tárbiyalaw wazıypası. Tálim bul - professional hám jeke sapalardı rawajlantıratuǵın quramalı hám kóp qırlı process. Shaxstı tárbiyalaw processindegi «jonli» baylanıs insaniyat jámiyetiniń bar ekenligi tiykarı bolıp tabıladı.

Sabaqtı informaciya - kommunikatsiya texnologiyaları tiykarında oqıtıw oqıtıwshı hám tálim alıwshılar jumısın talay ańsatlastıradı.

Insan shaxsınıń óz-ózin basqarıw hám tálim processlerdi jetilistiriw boyınsha informaciyalar texnologiyası tárepinen qolǵa kiritilgen tabıslar júdá zárúrli esaplanadı. Ásirese, maǵlıwmatlar asri bolǵan XX - asirde hám hár bir bólek maǵlıwmattıń salawatın asıwı boljaw etilgen.

Solay etip, tálimde kreativ pikirlew hám zamanagóy informaciya texnologiyaları paydalanıwda kompyuter quralları járdeminde alıp barılatuǵın sabaq dástúriy sabaqtan oqıw procesin shólkemlestiriw hám ol jaǵdayda qollanıladıgen metodlar menen de parıq etedi. Oqıw procesi oqıwshınıń ǵárezsiz bilim alıwına tiykarlanadı. Bul princip oqıtıw processinde qatnasıw etiwshi sub'ektlerdiń qatnasın hám oqıtıwshınıń processdagi rolin anıqlaydı. Sol sebepli de informaciya texnologiyaları, kompyuter tiykarında sabaqlarda qızıǵıwshılıq, ózin-ózi basqarıw, jańa bilimlerdi ózlestirip barıwǵa umtılıw sabaq aqırıǵa shekem saqlanıp qaladı. Kreativ taʻlim texnologiyasında, kreativ taʻlim procesin nátiyjesin asırıw ushın hár túrlı metodlardan paydalanıw kerek. Mısalı: “Aqıl karta”, “Qızǵılt”, “T sxema”, “Zinama-zina”, “FSMU”, “Intellektual húјim”, “Esse”, “Bayan, dóretpe” jazıw, “Blits soraw” sıyaqlı texnologiya hám metodlar. Bunday sabaqlarda oqıwshınıń bilim alıw motivatsiyası asırıp baradı.

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YOSHLARNI SPORT MUSOBAQALARIGA TAYYORLASHNING PSIXOLOGIK OMILLARI

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Annotaciya. Mazkur maqolada sport faoliyatida psixologik muammolar, shaxsning psixik funkciyalari, psixologik tayyorgarlikning umumiy maqsadi, sport iste’dodlarini etishtirish yo‘llarini izlash, shaxsning psixik xususiyatlari, umumiy psixologik tayyorgarlik, maxsus psixologik tayyorgarlik, psixologik mashqlar, psixologik ta’sir o‘tkazish, o‘z-o‘zini anglash, o‘z-uzini tarbiyalash va o‘z-o‘zini takomillashtirish, ayniqsa, sportchilarning musobaqa tayyorgarligida irodaning xususiyatlari ko‘rib chiqiladi va bu bo‘yicha olimlarning mulohazalari tahlil qilinadi.

Kalit so‘zlar. Sport, musobaqa, psixologik xususiyatlar, iroda, motiv va motivaciya, raqobat faolligi, psixologik tayyorgarlik.

Аннотация. В данной статье психологические проблемы в спортивной деятельности, психические функции человека, общая цель психологической подготовки, поиск путей воспитания спортивных талантов, психические особенности личности, общепсихологическая подготовка, специальная психологическая подготовка, психологические упражнения, психологическое воздействие, самосознание, самовоспитание и самосовершенствование, особенности волевых характеристик при подготовке спортсменов к соревнованиям и анализируются мнения ученых.

Ключевые слова. Спорт, соревнование, психологические особенности, воля, мотив и мотивация, соревновательная деятельность, психологическая подготовка.

Annotation. In this article, psychological problems in sports activities, mental functions of a person, the general purpose of psychological training, the search for ways to cultivate sports talents, mental characteristics of a person, general psychological training, special psychological training, psychological exercises, psychological influence, self-awareness, self-education and self-improvement, especially the characteristics of the will in the preparation of athletes for competition are considered and the opinions of scientists are analyzed.

Key words. Sport, competition, psychological characteristics, will, motive and motivation, competitive activity, psychological preparation.

Psixologik tayyorgarlikning umumiy maqsadi sportchining sportda yuqori darajadagi yutuqlarga erishishi uchun zarur bo‘lgan psixik sifatlarni rivojlantirish, unda psixik barqarorlik va mas’uliyatli musobaqalarda ishtirok etishga tayyorlik holatini qaror toptirishdan iboratdir. Biroq sportchini psixologik tayyorlashning maqsadli yo‘nalishi faqatgina shundan iborat emas.

Uning oldiga jahon sport rekordlarini o‘rnatish uchun shart- sharoitlar yaratish, sport iste’dodlarini etishtirish yo‘llarini izlash va shu kabi yana bir qator maqsadlar ham qo‘yilgan.

Psixologik tayyorgarlik jarayonida shaxsning psixik funkciyalari va xususiyatlari takomillashib, sportchining har xil sport turlarida o‘z faolligini namoyish etishiga bog‘liq tarzda uning psixoenergetikasidan imkon qadar to‘laroq foydalanish uchun zarur shart-sharoitlar yaratiladi. Masalan, ayrim sport turlarida psixoenergiyadan muayyan vaqt oralig‘ida asta-sekin foydalaniladi, boshqa bir sport turlarida esa psixik quvvat birdaniga portlash kabi sarflanadi.

Z.G.Gapparovning aytishicha, sportchini umumiy psixologik tayyorlash va sportchini muayyan musobaqaga psixologik tayyorlash kabi turlari farqlanadi [1]. Psixologik tayyorgarlikning har ikkala bo‘limi ham o‘ziga xos vazifalarga ega, biroq ularning hal etilishi bir-biri bilan chambarchas bog‘liqdir.

Umumiy psixologik tayyorgarlikning asosiy vazifalari quyidagilardan iborat:

1. Sportchi shaxsining ijobiy xususiyatlarini shakllantirish va o‘stirish;
2. Sporchining bilishga oid psixik jarayonlarini yuqori darajada rivojlantirish;
3. Sportga oid his-tuyg‘ularni kengaytirish va chuqurlashtirish ularni boshqarish bo‘yicha ko‘nikmalarni shakllantirish;
4. Sportchining irodasini mustahkamlash, uni irodaviy zo‘riqishini safarbar etishga o‘rgatish;
5. Barcha psixik funkciyalarni ongli ravishda boshqarish usullari bilan qurollantirish;
6. O‘z harakatlari va faoliyati, shuningdek organizmning funkciyalarini ongli ravishda boshqarish darajasini oshirish;
7. Sportchilar jamoasida ijobiy “psixologik iqlim”ni yaratish.

Sportdagi psixologik tayyorgarlikning yuqorida tilga olingan vazifalari sportchilarni tayyorlashdagi bu murakkab jarayonlarga xos imkoniyatlarning barchasini qamrab olmaydi, balki umumiy psixologik tayyorgarlikning asosiy tendenciyasini ifodalaydi.

A.Rodionov [2] psixologik tayyorgarlikni uch turini ajratadi:

1. Umumiy psixologik tayyorgarlik;
2. Musobaqaga maxsus psixologik tayyorgarlik;
3. Ma’lum musobaqa jarayonida salbiy ta’sirlardan psixologik himoyalanish.

Umumiy psixologik tayyorgarlik umumiy ko‘rinishda sportchining yuklamalarga psixik moslashuvini optimallashtirishni namoyon etadi.

Umumiy psixologik tayyorgarlik ikki usul bilan amalga oshiriladi:

- ekstremal sharoitdagi faoliyatga shaxs psixik tayyorligini ta’minlovchi universal usullarni sportchiga o‘rgatish: Samarali faoliyatni ta’minlovchi faollik darajasi, o‘z emocional holatinii boshqarish usullari, diqqat koncentraciyasi va

taqsimlanishini ta’minlovchi maksimal irodaviy va jismoniy zo‘r berishni mobilizaciyalash usullari;

- So‘z-obraz meodellari vositasida jangovor musobaqa sharoitini modellashtirish usullarini o‘rgatish.

Maxsus psixologik tayyorgarlik sportchini samarali musobaqa faoliyatiga tayyorgarligini shakllantirishga yo‘nalgan. Bunda quyidagi vazifalarni echishga qaratiladi:

- sportchi uchun muhim bo‘lgan social qadriyatlarga yo‘nalganlik;
- sportchida psixik “ichki tayanch”ni shakllantirish;
- psixik bar’erlarni, ayniqsa ma’lum raqib bilan kurashda paydo bo‘luvchi, engish;
- oldindagi jang sharoitin psixologik modellashtirish;
- bevosita jangdan oldin hirakatning psixologik programmasini yaratish.

Sportchilarni psixologik tayyorgarlik vositalari mavjud bo‘lib unga psixologik mashqlar, psixologik ta’sir o‘tkazish, o‘z-o‘zini anglash, o‘z-uzini tarbiyalash va o‘z-o‘zini takomillashtirish kiradi.

Psixologik tayyorgarlikni amalga oshirishda tipologik tafovutlar o‘rni mavjud. Kuchli asab tizimiga ega bo‘lgan sportchilar asab tizimi nisbatan kuchsizroq bo‘lgan sportchilarga qaraganda me’yoriy sharoitlarda psixologik tayyorgarlikning maxsus individuallashtirilishiga nisbatan kamroq ehtiyoj sezadilar. Asab tizimi “Kuchsiz sportchi” juda katta hajmdagi ishni bo‘lib-bo‘lib bajarganida o‘zining eng yuqori darajadagi ishchanligini namoyish qiladi. Inert sportchilar musobaqada o‘z xatti-harakatlarining batafsil rejasiga ega bo‘lishi lozim, va bu reja juda chuqur o‘ylangan bo‘lishi, har qanday murakkab vaziyat uchun taktik jihatdan tayyorlangan o‘ziga xos uslub-vositalarni ko‘zda tutadi. Harakatchan sportchilar bunday batafsil rejalashtirishga ehtiyoj sezishmaydi, shu sababli ularning oldiga nisbatan umumiyroq shakldagi vazifalar qo‘yiladi. Juda ko‘p mehnat talab qiladigan va haddan tashqari katta hajmli tayyorgarlik ishlari harakatchan sportchilarni charchatib qo‘yadi, ulardagi qiziqishni so‘ndirib, asab quvvatini sarflanishiga va tashabbuskorlik so‘nishiga sabab bo‘ladi.

Ma’lumki, iroda inson faoliyatining o‘ziga xos shakli sanalib, u hayotiy maqsadlarni belgilash hamda xatti-harakatlarni to‘g‘ri tashkil etish kabi funkciyalar uchun o‘ta muhim hisoblanadi. Iroda - inson ehtiyojlari ta’sirida yuzaga keladigan hamda biror faoliyat jarayonida aniq ko‘rinadigan ixtiyoriy harakatlar majmuidir. Hozirga qadar irodaviy sifatlar muammosi bo‘yicha ko‘plab ilmiy koncepciyalar va yondashuvlar mavjud bo‘lsa-da, hali-hanuz uni tushuntiruvchi yagona ta’rif mavjud emas. Shuning uchun insonga xos irodaviy sifatlar va uning shakllanishi masalasi bilan bog‘liq qarashlarda ko‘plab qarama-qarshi fikrlar mavjud. Iroda va irodaviy sifatlar masalasida ko‘plab ilmiy koncepciyalar mavjud bo‘lib, ularda muammo borasidagi o‘ziga xos qarashlarni uchratish mumkin.

A.R.Batırshinaning yozishicha, inson irodasi ma’lum fazilatlar majmui bilan xarakterlanib, u ba’zan maqsadga erishish yo‘lida uchraydigan to‘siqlarni engishga qaratilgan umumiy qobiliyatlar turi sifatida ham namoyon bo‘ladi [3; 214-222 bb.]. Bunda maqsadga muvofiqlik, alohida xususiyat hisoblanib, u insonning ongli va faol harakatlari, maqsadga erishishga bo‘lgan istaklari hamda hayotiy strategiyalari

kabilar bilan chambarchas bog‘liqdir. Ayrim psixologik adabiyotlarda irodaviy fazilatlar tasnifining o‘ziga xos turlari keltirilgan bo‘lib, ular orqali butun bir inson faoliyatining ixtiyoriylik tabiatini tushunib olish mumkin.

Ta’kid joizki, irodaviy sifatlar ta’lim muhitida ham shakllanib, u ta’lim sub’ektlari uchun jiddiy talablar qo‘yish bilan xarakterlanadi. Tadqiqotchi K.Makgonigal bu borada shunday deydi: “O‘quvchilarning ixtiyoriy xatti-harakatlari, asosan, ularga jiddiy talablar qo‘yadigan vazifalarni bajarish ta’siri ostida rivojlanadi. O‘quv faoliyati esa kognitiv jarayonlarda o‘zini yo‘naltirish, mustaqillik kabi ko‘nikmalarni rivojlantirishga yordam beradi.

E.P.Il’inning so‘zlariga ko‘ra irodaviy sifatlar “bir xil turdagi” vaziyatlarda “kuchli irodaning” barqaror, o‘ziga xos namoyon bo‘lishidir. Iroda tug‘ma va orttirilgan shartlarga ega. “Tug‘ma” shartlarga moyillik asos bo‘lib, uni tushuntirish asab tizimi xususiyatlarining tipologik xususiyatlari bilan xarakterlanadi. Irodaviy sifatlarning orttirilgan komponenti sifatida, ontogenezda o‘zlashtirilgan bilim va ko‘nikmalar, tajribalar hamda ixtiyoriy munosabatlarga bo‘lgan qobiliyatlar kabilar kiritiladi [4; 105 b.]. Demak, irodaviy sifatlar bir tomondan asab tizimining tipologik xususiyatlari bilan bog‘liq bo‘lsa, ikkinchi tomondan hayot davomida o‘zlashtirilgan ko‘nikma va malakalar bilan chambarchas bog‘liqdir. Iroda va irodaviy sifatlar masalasida ko‘plab fenomenologik tushunchalarni uchratish mumkin.

L.I.Bojovich esa irodaviy sifatlardan intizomlilik, jasoratlilik, fidoyilik kabilarni alohida e’tirof etib, ushbu sifatlar orqali yoshlar boshqa tengqurlari uchun namuna bo‘la olishlari mumkinligini alohida ta’kidlab o‘tadi [5; 84 b.]. Ushbu mulohazaga muvofiq, iroda va irodaviy sifatlar psixosocial tuzilma sifatida tan olinadi. Bundan tashqari, tadqiqotchilardan V.N.Shlyapnikov irodaviy sifatlarni o‘rganishda o‘ziga xos psixologik koncepciyaga asoslanib, insonning ixtiyoriy tartibga solish xususiyatlarini antropogenez jarayoni orqali tushuntirishni taklif etadi. Muallifning so‘zlariga ko‘ra, irodaviy sifatlar bu – birgalikdagi faoliyat va mehnat munosabatlari asosida shakllangan tarixiy-madaniy tushunchadir [6; 147-154 bb.]. Ya’ni o‘tmishda o‘z boshimchalik bilan amalga oshirilgan ishlar va aqliy, ixtiyoriy amalga oshirilgan hodisalar buning yaqqol ifodasidir.

Bundan tashqari B.N.Smirnov irodaviy sifatlar masalasiga to‘xtalib o‘tar ekan, unga xos o‘zboshimchalik va tartibga solish funkciyalarini umumlashtirib, ularni ichki va tashqi faoliyatni nazorat qilishga bo‘lgan qobiliyat turlari deb ta’riflaydi [7; 28-32 bb.]. Darhaqiqat, irodaviy sifatlar – barqaror, ijtimoiy ahamiyatga ega bo‘lgan, ayrim motivlarni o‘ziga bo‘ysundiradigan ichki nazorat sohasi hisoblanadi.

V.A.Petrovskiy irodaviy sifatlar masalasini tadqiq etar ekan, uni quyidagicha ta’riflaydi: “Iroda va irodaviy sifatlar inson faoliyatida tartibni saqlabgina qolmasdan, balki uni o‘zgartirish va kuchaytirish, samaradorlikka etaklash, shuningdek, harakatlarda ongning ta’sirini oshirish kabi vazifalarni bajaradi”. Bundan tashqari, irodaviy sifatlar va kognitiv jarayonlar o‘rtasida muntazam aloqalar mavjud. Ya’ni iroda sezgi, idrok, xotira, tafakkur, xayol, diqqat hamda psixomotor tizimlar bilan doim aloqada bo‘ladi [8; 116 b.]. Shuning uchun inson ehtiyojlari iroda orqali qondiriladi va uning nazorati ostida bo‘ladi. Biroq irodaviy sifatlar shunday tuzilmaki, ular doim qo‘llab-quvvatlashga muhtojdir. Ta’kid joizki, irodaviy sifatlarni shakllantirish hamda jismoniy tarbiyaning inson faoliyatidagi roli masalasi sharq

allomalari asarlarida ham keng talqin etilgan. Quyida ayrim allomalarning asarlari mazmuniga e’tibor qaratishga harakat qilamiz.

Abu Ali ibn Sinoning aytishicha, har qanday narsa va hodisa ichki yoki tashqi sabablar bilan harakatga keladigan bo‘lsa, demak, insonning yashashi va harakatida ham birorta sabab bo‘lishi kerak, bunday sabablardan biri “ruhiy quvvatdir”, deb ta’kidlaydi. Bundan tashqari, buyuk alloma bolani gigienik tarbiyalashning umumiy tizimida jismoniy mashqlar etakchi o‘rin egallaydi va buni u davolash usuli deb ataydi. Muallifning nazaricha, “ruhiy quvvat” iroda xususiyatini ifodalab, u har qanday xatti-harakatlarning natijasiga etishishga keng imkon beradi [9; 124 b.]. Ushbu mulohazalardan ko‘rish mumkinki, sport va jismoniy tarbiya, inson salomatligi bilan bog‘liq masalalar ona diyorimizda asrlar mobaynida shakllangan qadriyatlardan biri sifatida amal qilingan.

Sharqning buyuk allomasi Abu Nasr Forobiyning yozishicha, o‘smir bolalarni jismoniy kamol toptirishda, avvalambor, yuksak axloqiy fazilatlarni shakllantirish hamda irodaviy chiniqtirish, shak-shubhasiz, baxt-saodat yo‘liga olib chiquvchi kuchli quroldir, shuningdek, bunday sifatlar insonni yovuz buzg‘unchiliklar ko‘chasiga kiritmaydi, aksincha, ularga nisbatan shafqatsiz jang olib boradi [10; 77 b.]. Demak, Abu Nasr Forobiy nafaqat qomusiy olim, balki psixologiya ilmiga katta hissa qo‘shgan alloma ham sanaladi. Buyuk sarkarda, hukmdor bobokalonimiz Amir Temur inson faoliyatida, irodaviy tarbiya va chidamlilik haqida shunday deydi: “Shiddatli kishilarni do‘st tut, chunki Tangri taolo jasur kishilarni ardoqlaydi. Bunday insonlar har qanday qiyinchiliklarni shahd bilan qarshi oluvchi kishilardir” [11; 58 b.]. Darhaqiqat, Buyuk Sohibqiron nazarida, barkamol shaxs uchun faqat axloqiy barkamollik emas, balki chidamlilik, sabr-toqat, mardlik, jasurlik, epchillik sifatlari ham shakllangan bo‘lishi kerak. Ayni shu sifatlarni sportchi o‘smirlar shaxsida rivojlantirish, zamonaviy sport oldida turgan dolzarb vazifalardan biridir.

Yuqorida tahlil etilgan nazariy qarashlardan kelib chiqib shuni aytish mumkinki, irodaviy sifatlar bu shunchaki oddiy xususiyatlar emas, balki ular o‘z mazmunida ko‘plab psixologik komponentlarni birlashtirgan fenomenologik tushunchadir. Xulosa qilib aytganda, irodani o‘rganishda quyidagilarni hisobga olish maqsadga muvofiqdir. Ya’ni shaxsning bilimlari, afzalliklari, e’tiqodi, ehtiyojlari va qaror qabul qilish qobiliyati va boshqalar. Chunki inson biror ishni amalga oshirishni niyat qilsa, ana shu vazifani amalga oshirishga kirishishning o‘zi, ixtiyoriy harakatlarga o‘tishning dastlabki bosqichi sanaladi. Bir so‘z bilan aytganda, irodaviy sifatlar niyatlarni amalga oshirishni nazorat qiluvchi, uni tartibga soluvchi va ishning davomiyligini ta’minlovchi psixologik jarayondir.

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INNOVATIVE DIRECTIONS FOR THE DEVELOPMENT OF THE HIGHER EDUCATION SYSTEM IN MODERN CONDITIONS: INTERNATIONAL EXPERIENCE AND TRENDS

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Аннотация. Эволюция высшего образования подвержена влиянию многочисленных вызовов и возможностей XXI века, от цифровой трансформации и глобализации до растущей необходимости в инклюзивности и устойчивом развитии. В данном исследовании критически рассматриваются инновационные направления, формирующие развитие систем высшего образования по всему миру. Опираясь на международный опыт и тренды, работа подчеркивает ключевые стратегии, такие как цифровые образовательные среды, образование, основанное на компетенциях, и партнерство между промышленностью и академическими учреждениями, которые переопределяют образовательный ландшафт. Исследование использует сравнительный анализ систем высшего образования в разных странах для выявления лучших практик и новых тенденций, которые могут быть приняты или адаптированы в других контекстах. Результаты подчеркивают важность гибких и устойчивых образовательных моделей, которые учитывают разнообразные потребности обучающихся, акцентируют внимание на непрерывном обучении и интегрируют новые технологии и педагогические подходы. Работа вносит вклад в продолжающиеся дебаты о будущем высшего образования, предоставляя обоснованные рекомендации для политиков, педагогов и учреждений.

Ключевые слова. Высшее образование, Цифровая трансформация, Образование, основанное на компетенциях, Партнерства между

промышленностью и академическими учреждениями, Непрерывное обучение, Педагогические инновации.

Abstract. The evolution of higher education is influenced by numerous challenges and opportunities in the 21st century, ranging from digital transformation and globalization to the growing need for inclusivity and sustainability. This study critically examines the innovative directions that are shaping the development of higher education systems worldwide. Drawing on international experiences and trends, it highlights key strategies such as digital learning environments, competency-based education, and industry-academia partnerships that are redefining the educational landscape. The study utilizes a comparative analysis of higher education systems in different countries to identify best practices and emerging trends that could be adopted or adapted in other contexts. The findings underline the importance of flexible and resilient educational models that cater to diverse learner needs, emphasize lifelong learning, and incorporate new technologies and pedagogical approaches. The study contributes to ongoing debates on the future of higher education by providing evidence-based recommendations for policymakers, educators, and institutions.

Key Words. Higher Education, Digital Transformation, Competency-Based Education, Industry-Academia Partnerships, Lifelong Learning, Pedagogical Innovation.

Introduction. Higher education systems around the world are undergoing significant changes due to a combination of technological, economic, and social factors. The increasing pace of digitalization, globalization, and demographic shifts has compelled institutions to reconsider traditional models of teaching and learning. These dynamics are not only challenging the status quo but also opening up new opportunities for innovation in education. The development of higher education in modern conditions is, therefore, not just a matter of improving current practices but also reimagining the role of universities in society. One of the critical drivers of change is the rapid advancement in technology. Digital tools and platforms have transformed the way knowledge is created, disseminated, and consumed. This has enabled the rise of new learning environments, such as massive open online courses (MOOCs), virtual classrooms, and blended learning models, which combine traditional face-to-face teaching with digital content delivery. These developments have made education more accessible, flexible, and personalized, catering to a wider range of learners' needs and preferences. However, they have also raised concerns about the digital divide, equity, and the quality of online education, especially in regions with limited technological infrastructure.

Globalization has also played a significant role in reshaping higher education. The international mobility of students, faculty, and knowledge has increased significantly, creating a more interconnected and competitive global education market. This has led to a greater emphasis on developing global competencies, such as intercultural communication, critical thinking, and adaptability, which are essential in today's interconnected world. Furthermore, universities are increasingly

positioning themselves as global institutions, establishing campuses, partnerships, and collaborations across borders to attract talent and resources. While this trend offers new opportunities for growth and innovation, it also presents challenges related to maintaining quality standards, ensuring inclusivity, and managing cultural differences.

In this context, it is crucial to explore innovative directions for the development of higher education that can address these challenges and capitalize on emerging opportunities. This study aims to analyze international experiences and trends to identify best practices and provide actionable insights for policymakers, educators, and institutions. The research focuses on three main areas: digital transformation, competency-based education, and industry-academia partnerships. By examining these areas, the study seeks to highlight the potential of innovative approaches to enhance the quality, relevance, and accessibility of higher education in the 21st century.

Purpose of the Study. The purpose of this study is to critically examine the innovative directions that are influencing the development of higher education systems in contemporary contexts. Specifically, the study aims to:

Analyze the impact of digital transformation on teaching and learning practices in higher education;

Investigate the role of competency-based education models in fostering student engagement and outcomes;

Explore the potential of industry-academia partnerships in enhancing the employability of graduates and the relevance of curricula;

Identify best practices from international experiences that can be adapted to different educational contexts;

Provide evidence-based recommendations for policymakers, educators, and institutions to enhance the quality and inclusivity of higher education.

Literature Review. The literature on the development of higher education systems is expansive, encompassing multiple disciplines such as educational theory, sociology, economics, and information technology. A key theme emerging from this body of work is the transformative impact of digital technologies on teaching and learning practices. Digital transformation is increasingly seen as a cornerstone of educational innovation, with many scholars highlighting its potential to enhance both accessibility and quality. For instance, Bates (2019) argues that digital tools, such as learning management systems (LMS) and massive open online courses (MOOCs), have democratized education, making it accessible to a broader audience. However, Bates also points to the limitations of these tools, particularly in regions with inadequate digital infrastructure, where the digital divide can exacerbate educational inequalities. The shift towards digital learning has also brought about a new pedagogical paradigm that emphasizes student-centered learning. According to Garrison and Vaughan (2018), blended learning, which combines face-to-face instruction with online components, fosters greater engagement and interaction among students.

Another major trend in the literature is the growing emphasis on competency-based education (CBE). CBE is a model that focuses on the mastery of specific skills

and competencies rather than traditional time-based metrics [8; pp. 31-40]. Industry-academia partnerships are another innovative direction explored in the literature. These partnerships have become increasingly important as universities seek to enhance the relevance of their curricula and improve graduate employability. Perkmann et al. (2020) argue that collaboration between higher education institutions and industry can lead to mutual benefits, including the co-creation of knowledge, the transfer of technology, and the development of new educational programs that reflect the needs of the labor market.

Methods and Organization of the Study. This study employs a comparative analysis approach to examine innovative directions in higher education systems. The methodology involves a combination of qualitative and quantitative methods to ensure a comprehensive understanding of the trends, practices, and challenges in higher education innovation. The primary data collection method includes a review of secondary sources such as academic literature, policy documents, and institutional reports from various countries. These sources were selected based on their relevance to the study's objectives and their contribution to understanding the global landscape of higher education.

In addition to secondary data, the study incorporates semi-structured interviews with key stakeholders in higher education, including university administrators, policymakers, educators, and students. The interviews were conducted to gain insights into the practical challenges and opportunities associated with implementing innovative approaches in higher education. The participants were selected using purposive sampling to ensure that they represented a diverse range of perspectives and experiences. The data collected from the literature review and interviews were analyzed thematically. The thematic analysis involved identifying patterns and themes related to digital transformation, competency-based education, and industry-academia partnerships. The findings are organized into three main sections: the impact of digital transformation on higher education, the role of competency-based education, and the benefits and challenges of industry-academia partnerships. This structure allows for a critical examination of the innovative directions in higher education and their implications for policy and practice.

Research Results and Discussion. The study's findings highlight several key trends and challenges in the development of higher education systems. First, the impact of digital transformation on higher education has been significant but uneven. While digital tools have enhanced accessibility and flexibility, they have also created new challenges related to equity, quality, and digital readiness. For example, the rapid shift to online learning during the COVID-19 pandemic revealed stark disparities in access to digital resources and skills among students and educators [5; pp. 1-20]. These disparities have raised concerns about the potential for digital transformation to widen existing inequalities in higher education. Therefore, it is crucial for institutions to adopt a more strategic approach to digital learning, one that prioritizes inclusivity and supports all learners [4; pp. 93-104].

The study also found that competency-based education (CBE) is gaining traction as an alternative to traditional time-based models. CBE has the potential to make higher education more relevant to the needs of the labor market by focusing on

the mastery of specific skills and competencies. However, the implementation of CBE is not without challenges. The shift to a competency-based model requires substantial changes to curriculum design, assessment methods, and faculty roles, which can be resource-intensive and complex [9]. Additionally, there is a risk that a narrow focus on skills could undermine the broader educational goals of fostering critical thinking, creativity, and citizenship [12]. Therefore, it is essential for institutions to strike a balance between developing practical skills and maintaining a commitment to holistic education. The study further highlights the importance of industry-academia partnerships in enhancing the relevance and impact of higher education. Such partnerships can provide students with practical experience, facilitate knowledge transfer between academia and industry, and contribute to economic development [11; pp. 1-23]. However, these partnerships also present challenges, including potential conflicts of interest, the risk of commercialization of academic research, and concerns about academic freedom [6; pp. 26-41]. To mitigate these challenges, it is important for universities to establish clear governance structures and maintain a balance between academic and commercial interests [3; pp. 203-219].

Conclusion. In conclusion, the study finds that while there are significant opportunities for innovation in higher education, there are also substantial challenges that need to be addressed. Digital transformation offers the potential to make education more accessible and flexible, but it also poses risks related to equity and quality. Competency-based education can enhance the relevance of higher education to the needs of the labor market, but it requires careful implementation to avoid undermining broader educational goals. Industry-academia partnerships can provide mutual benefits but need to be managed carefully to prevent conflicts of interest and protect academic integrity. The study recommends that policymakers, educators, and institutions adopt a more strategic approach to innovation in higher education. This includes investing in digital infrastructure and training to support digital transformation, adopting competency-based education models that balance practical skills with holistic education, and fostering industry-academia partnerships that are transparent and mutually beneficial. By embracing these innovative directions, higher education institutions can enhance their relevance, inclusivity, and impact in a rapidly changing world.

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OLIY TA’LIMDA MUSTAQIL ISHLARNI TASHKILLASHTIRISHDA AQL-XARITASI (INTELLEKT-XARITA)DAN FOYDALANISHNING AHAMIYATI

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Annotasiya. Maqolada hozirgi kunda oliy ta’limda, mustaqil ta’limni tashkillashtirishda innovatsion texnologiyalarni qo’llashda Intellekt-xarita texnologiyasining ahamiyati haqida ma’lumotlar keltirilgan. Shuningdek, talabalarning mustaqil ishlarini tashkillashtirishida “Intellekt-xarita texnologiyasi”ni qo‘llash va keltirilgan intellekt-xarita nafaqat ma’lumotlarni jamlabgina qolmasdan, talabalarda mavzu yuzasidan yangi ma’lumotlar olish imkoniyati paydo bo‘ladi va o‘zlashtiriladi. Undan tashqari talabalarda mavzuga oid bilim ko‘nikma shakllanishida va ularning “tasavvur” qilish, “ijodiy fikrlash” ko‘nikmalarining rivojlanishiga ham yordam beradi.

Kalit so’zlar. Innovatsion texnologiya, intellekt-xarita, interaktiv metodlar, an’anaviy ta’lim, pedogogik texnologiya, pedagogik mahorat, ijodiy fikrlash.

Аннотация. В статье представлена информация о значении технологии Интеллект-карта в использовании инновационных технологий в организации самостоятельного образования и высшего образования сегодня. Также

возможно использование технологии «Интеллект-карта» при организации самостоятельной работы студентов, причем представленная интеллектуальная карта не только собирает информацию, но и студенты имеют возможность получить новую информацию по предмету и усвоить ее. Кроме того, знание предмета студентами помогает в формировании умений и развитии их навыков «воображения» и «творческого мышления».

Ключевые слова. Инновационная технология, интеллект-карта, интерактивные методы, традиционное образование, педагогическая технология, педагогическое мастерство, творческое мышление.

Abstract. The article provides information about the importance of Intellect-map technology in the use of innovative technologies in the organization of independent education and higher education today. Also, the use of "Intellect-map technology" in the organization of students' independent work, and the presented intellectual-map not only collects information, but students have the opportunity to get new information on the subject and learn it. In addition, students' knowledge of the subject helps in the formation of skills and the development of their "imagination" and "creative thinking" skills.

Key words. Innovative technology, intelligence-map, interactive methods, traditional education, pedagogical technology, pedagogical skills, creative thinking.

Kirish. Hozirgi kunda ta‘lim jarayonida interaktiv metodlar, innovatsion texnologiyalar, pedagogik va axborot texnologiyalari o‘quv jarayonida qo‘llashga bo‘lgan qiziqish, e’tibor kundan kunga kuchayib bormoqda, bunday bo‘lishining sabablaridan biri, shu vaqtgacha an’anaviy ta’limda o‘quvchi va talabalarni faqat tayyor bilimlarini egallashga o‘rgatilgan bo‘lsa, zamonaviy texnologiyalar ularni egallayotgan bilimlarini o‘zlari qidirib topishlariga, mustaqil o‘rganib, tahlil qilishlariga, hatto xulosalarni ham o‘zlari keltirib chiqarishlariga o‘rgatadi. O‘qituvchi bu jarayonda shaxsning rivojlanishi, shakillanishi, bilim olishi va tarbiyalanishiga sharoit yaratadi va shu bilan bir qatorda boshqaruvchilik, yo‘naltiruvchlik funksiyasini bajaradi. Ta’lim jarayonida o‘quvchi-talaba asosiy figuraga aylanadi. Shuning uchun oliy o‘quv yurtlari va fakultetlarida malakali kasb egalarini tayyorlashda zamonaviy o‘qitish metodlari - interaktiv metodlar, innovatsion texnologiyalarning o‘rni va roli benihoya kattadir. Pedogogik texnologiya va pedagog mahoratiga oid bilim, tajriba va interaktiv metodlar o‘quvchi-talabalarning bilimli, yetuk malakaga ega bo‘lishlarini ta’minlaydi.

Hozirgi davr ta’lim taraqqiyoti yangi yo‘nalish - innovatsion faoliyatni maydonga olib chiqdi. Yuksak rivojlangan texnologiyalar asri deb yuritilayotgan XXI asrga kelib, ta’lim jarayoniga innovatsiyani keng joriy qilish masalasiga e’tibor yanada kuchaytirildi. O‘zbekistonda ham so‘nggi yillarda innovatsiya boshqa sohalarga qaraganda birinchilardan bo‘lib ta’lim tizimiga kirib keldi.

“Mustaqil ta’lim – ta’lim tizimida ta’limning shunday bir shaklidirki, bunda talabalarning o‘quv faoliyati pedagog tomonidan boshqarilib, topshiriqlar beriladi, maslahatlar uyushtiriladi va bajarilishi nazorat qilinadi” deb ta’kidlaydi [4].

F.A.Disterveg o‘quvchilarni aqliy kuchlarini rivojlantirish g‘oyasini ko‘rib chiqib, shuni ta’kidlab: “Rivojlanish va ta’lim hech bir insonga berilishi va yetkazilishi mumkin emas. Har kim bunga shaxsiy faoliyati bilan erishishi kerak. Inson o‘zining mustaqil yo‘l bilan egallamagani - uniki hisoblanmaydi”, – deb fikr bildirgan.

Oliy ta’lim muassasasi ishchi dasturi (sillabus)da auditoriyadan tashqari vaqtda bajariladigan mustaqil ishlar quyidagi turlarda amalga oshirilishi tavsiya etiladi:

- esse (dolzarb mavzu bo‘yicha shaxsiy fikrini tanqid, publitsistik va boshqa janrlarda yozma bayon qilish) tayyorlash;
- taqdimot tayyorlash;
- referat tayyorlash;
- glossariy tuzish;
- anjumanlarga tezislar tayyorlash;
- ta’lim yo‘nalishi (mutaxassislik)ning xususiyatidan kelib chiqqan holda mustaqil ishlarning boshqa turlaridan foydalanish mumkin.

Mustaqil topshiriqlarni tashkil etishda aql-xaritasi (intellekt-xarita)dan foydalanish talabalarning mantiqiy fikrlash, tasavvurni rivojlantirish hamda ma’lumotlarni vizuallashtirish qobiliyatlarini rivojlantiradi. Bu esa talabalarning ijodiy fikrlash ko‘nikmalarini oshiradi.

Ijodiy fikrlash – muammoning yechimini topish, yangi narsani yaratish maqsadidagi fikrlashdir. Dj.Gilfordning fikricha, ijodiy fikrlash uchun yangilikni ko‘ra bilish va idrokning moslashuvchanligi muhimdir. **Intellekt xarita** (aqliy xarita, bog‘lanish diagrammasi, fikrlar xaritasi, assotsiativ xarita, aql xaritasi) — bu g‘oyalar, tushunchalar, ma’lumotlarni asosiy va ikkilamchi mavzulardan tashkil topgan xarita sifatida taqdim etishning grafik usuli.

Talabalarga «ijodiy fikrlashni» o‘rgatish ularning «tasavvurini» rivojlantirishdan boshlanadi. Hech qanday ijodiy mahsulot tasavvursiz bo‘la olmaydi degan edi L.S.Vigotskiy.

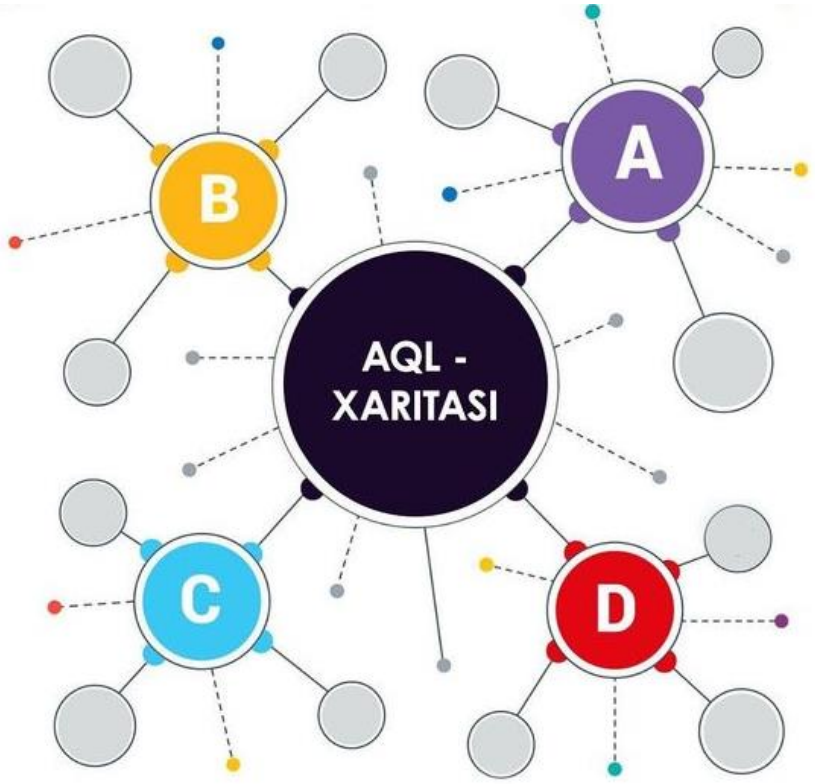
Tadqiqot maqsadi talabalarning mustaqil ta’lim topshiriqlarini bajarishida intellekt-xarita metodidan foydalanish ko’nikmalarini rivojlantirishdan iborat.

Tadqiqotni tashkil qilish uslublari intellekt-xaritalar, aqliy hujum, baholash.

Tadqiqot natijalari va muhokamasi. Ta’lim jarayonida talabalarning ijodiy fikrlash ko‘nikmalarini rivojlantirish muammolari xorijiy mamlakatlar olimlari tomonidan ko‘p vaqtlardan buyon o‘rganib kelingan, lekin ular o‘z ilmiy-tadqiqot ishlarida auiditoriydan tashqari topshiriqlarda, jumladan mustaqil ta’limni tashkil etish jarayonida ta’lim oluvchilarning tasavvur va nostandart fikrlashini rivojlantirishda intellekt xaritadan foydalaniib vizuallashtirish o‘rganilmagan.

Aql xaritasi tarixi. Fikrni xaritalash kontseptsiyasiga tegishli Britaniyalik psixolog Toni Buzan, uni 1970-yillarda ommalashtirgan. Biroq, bilim va g'oyalarni ifodalash uchun diagrammalardan foydalanish yunonlar va rimliklar kabi qadimgi sivilizatsiyalarga borib taqaladi. Buzan bu usullarni takomillashtirib, atamani kiritdi aqlimiz xaritasi u ishlab chiqqan o'ziga xos yondashuvni tasvirlash uchun. Uning aqliy xaritalari ijodkorlik va xotirani saqlashni kuchaytirish uchun radial tuzilma, ranglar, tasvirlar va kalit so'zlardan foydalanishga urg'u berdi. Buzan aql

xaritasini joriy qilganidan beri u turli sohalarda, jumladan, ta'lim va shaxsiy rivojlanishda keng qo'llanildi.



Xulosa qilib shuni aytish mumkinki, talabalar mustaqil ta’lim topshiriqlarni intellekt xaritalar yordamida topshirishi tashkil etishi ularning tasvvur qilish qobiliyatini hamda ijodiy fikrlash ko‘nikmalarini rivojlantirishga yordam beradi. Chunki intellekt xarita:

- Muammoga aniqlik kiritadi;
- Muammoni yechish uchun zarur bo‘lgan ma’lumotlarni tartibga soladi;
- Vaziyatni to‘la tasavvur qilishga va tasvirlashga yordam beradi;
- Barcha zarur ma’lumotlarni saqlash vositasiga aylanadi;
- G‘ayrioddiy yechimlarni rag‘batlantiradi.

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XX АСР БОШЛАРИДА ҚОРАҚАЛПОҒИСТОН ҲУДУДИДА ХАЛҚ ТАЪЛИМИ ТИЗИМИДАГИ ЎЗГАРИШЛАР

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Аннотация. Мақолада муаллиф томонидан XX аср бошларида Амударё вилоятидаги таълим ҳолати, жумладан мактаблар, интернатлар, мачит ва уларда дарс берган домлалар архив хужжатлари асосида ўрганилиб мазкур даврда таълимга бўлган эътибор ва камчиликлар тадқиқ қилинган.

Таянч сўзлар. Амударё вилояти, мактаб, мачит, интернат, саводсизликни тўгатиш, С.Мажитов, К.Ауезов.

Аннотация. В данной статье автор на основе архивных документов изучает состояние образования в Амударьинском регионе в начале XX века, в том числе подробно рассматривается история школ, интернатов, мечетей, а также учителей, преподававших в них, вместе с тем анализированы проблемы и недостатки существовавшие в этот период.

Ключевые слова. Амударьинская область, школа, мечеть, интернат, ликвидация безграмотности, С.Мажитов, К. Ауезов.

Abstract. In the article, the author studied the state of education in the Amu Darya region at the beginning of the 20th century on the basis of archival documents, and also analyzed the history of schools, boarding schools, mosques and their teachers, studied shortcomings and education at that time.

Key words. Amudarya region, school, mosque, boarding school, illiteracy, S.Mazhitov, K. Auezov.

XX аср бошида Амударё вилоятида (ҳозирги Қорақалпоғистон Республикаси ҳудуди) 160595 аҳоли яшаб, шундан шаҳарда 7290, қишлоқларда 153305 киши истиҳомат қилган. Ҳукумат таълим тизими маълумоти бўйича Амударё вилоятида шаҳарли эркаклар орасида саводлилик даражаси 21%, хотин-қизлар орасида 10,2% ни ташкил этган. Ушбу жараён қишлоқларда еркаклар орасида 2,5%, хотин-қизлар орасида 0,2% ни ташкил этган [1; 68 б.].

1920-йили Амударё вилояти халқ таълими бўлимида 19 нафар ходим ишлаб, улардан: Енгулатов Хафис бўлим бошлиғи, аввал маҳаллий мусулмон мактаби ўқитувчиси бўлган. Лавр Клугин бўлим бошлиқ ёрдамчиси, аввал ер ўлшовчи бўлиб ишлаган. Скородумов Анатолий котиб, аввал ўқитувчи бўлган. Сатаенко Мария қўл ҳунари ўқитувчиси, аввал ҳам ушбу касбда ишлаган. Шунингдек Беляева Александра, Масич Маргарита, Кузьмина Антонина,

Мануилова Нина, Кандарова Мария, Бекенина Зина, Равилова Азия, Аюпова Разия, Бурнашева, Кожуров Нуржан, Шариф Назаров каби ўқитувчилар бор эди [2; 48 б.].

Ушбу рус таълимидан ташқари, Чимбой участкасидаги ҳар бир волостликда аҳоли зижлигига қараб маҳаллий мусулмон мачитлари бўлган ва улар қўйидагича эди:

№	Волостликлар	Мачитлар	Домлалар	Ўғил болалар	Қиз болалар	Жами
1	Ишим волостлиги	16	16	198	46	244
2	Чимбой волостлиги	43	43	294	137	431
3	Наупир волостлиги	19	19	77	31	108
4	Кук кўл волостлиги	8	8	10	8	18
5	Янгибозор волостлиги	32	32	172	137	309
6	Нўкус волостлиги	21	21	195	64	259
7	Кўк ўзак волостлиги	25	25	272	103	375
8	Қўнғирот волостлиги	26	26	85	55	140
9	Даўқара волостлиги	7	7	71	25	96
10	Бесжоб волостлиги	16	16	64	32	96
11	Талдиқ волостлиги	18	18	59	33	92
12	Кегейли волостлиги	23	23	161	70	231
13	Чимбой қишлоғи	17	17	175	66	241
	Жами	271	271	1833	807	2640

Ушбу жадвалда 271 мачитдаги ҳар бир домла учун ўртача 10 нафар талаба тўғри келадиганлиги кўринади. Жадид номаёндаларидан бири Ахмад Заки Валиди 1920-йили Чимбой шаҳрида бўлганлигида ушбу ҳудудда жудаҳам бой маданий муҳит бор эканлигини ёдга олади [3; 383 б.].

Бундан ташқари Чимбойда маҳаллий училищеда 100 нафар талаба ўқиб, ўларга бир нафар еркак домла ва бир нафар аёл домла дарс берган. Ушбу училищеда ўрташа ҳар бир домлага 50 нафар талаба тўғри келган.

1922-1923 ўқув йилида Шўрохон уезди маркази Тўрткул шаҳрида биринчи босқичли мактабнинг биринчи ва иккинчи гуруҳида 264, мусулмон мактабларида 108, Шўрохон болалар уйида (детдом) 40, Шаббоз болалар уйида 24, Тўрткул интернатида 50 бола ўқиб таълим олган.

Чимбой уезди маркази бўлган Чимбой шаҳрида 1 та мактаб интернати бор бўлиб, унда 135 нафар ўқувчи таълим-тарбия олган. Интернатларда ўқувчилар оталиққа олган боғ-боқча ерлари ҳам бор эди. Тўрткўл интернатида етикчи ва тикувчи устохоналари ишлаб турган. Шунга қарамасдан ушбу 6 та мактаб ва интернатлар яхши ускуналанмаган, асосан интернатларнинг ҳолати ўта ёмон аҳволда эди. Барча ўқув масканлари учун фақат 11 та домла дарс бериб, маҳаллий домлалар озчиликни ташкил этган, шунингдек етарли маблағ ажратилмаганлиги сабабли мусулман мактаблари ўта оғир шароитда ишлаган. Масалан Тўрткўл болалар уйида 48 нафар ўзбек ва қозоқ болаларига дарс берувчи домлалар маҳаллий тилда гапирмайдиган татар ва европаликлар бўлган. Вилоят таълими учун вилоят бюджетидан 25 фоиз маблағ ажратилган, лекин маҳаллий бюджетда маблағ етишмовчилиги сабабли ажратилган маблағнинг ярими берилганлиги сабабли мавжуд ҳолат яънада оғирлашган [4; 121 б.].

1923 йили Амударё вилояти бўйича билдирилган баёнатда вилоятда мактаб ёшидаги болалар сони 45.000 нафар бўлиб, шулардан 621 таси ўқишга жалб қилинганлиги маълум қилинади ва вилоятнинг бугунги ҳолатидан келиб чиқиб, таълим тизими яқин вақтларда маълум даражага кўтарилиши қийин эканлиги таъкидланади. Сабаби таълимни яхшилаш тўғридан-тўғри маблағга бориб тақалар эди.

Амударё вилояти Ижроий қўмитаси «Маънавиятчилик ҳафталиги» ўтказиш комиссияси талаби бўйича коммунал бўлим ва қишлоқ хўжалик кредит ташкилотларига интернатларга ғамқорлик қилиш ҳақида топшириқлар берган. Аммо ушбу жараён ўзини оқламаган, сабаби барча ўқув масканлари етарли даражада ўқитувчилар билан таъминланган, шунингдек улар орасида маҳаллий мусулмон ўқитувчилар йўқ эди.

1923-йили Чимбой шаҳридаги интернат-мактабга ўқишга борган Қалли Аймбетов ушбу йилларни шундай ёд олади: «Биз турган уйнинг олдида эшиги жанубга қараган мактаб бор эди, у мактабга ҳар куни кўзига кўз ойнак, бошида кўзи терисидан папоқ кийган бир нечта татар ўқитувчилари қадам ташлайди. Интернат болалари бир қатор саф тортиб, қадам ташлаб, кўшиқ айтиб мактабга ҳар куни келиб турарди. Мактабга боришимдан татар ўқитувчилари менга ғамқорлик қилишди, қўлимга дафтар билан қалам беришди». «Дастлабки пайтлари – китоб, қалам жуда кам бўлиб, етишмасди. Кейинчалик купайиб, ҳар бир болага биттадан етадиган бўлди» [5; 103 б.]. Шунингдек Абу Бакир Диваев бостириб чиқарган «Қиз Жибек», «Алпамыс», «Қоблан» дастонлари ва яъна бошқа адабий китобларни Чимбойга кўчиб келган татар савдогарлари сота бошлади» [6; 104 б.] - деб маълумот беради олим.

Амударё вилояти халқ таълим бўлими мурожати билан Туркистон АССР халқ таълим комиссариати биринчи даражали 3 та мактаб, 10 та болалар уйини 98 штати билан мактаб тизимини ташкил этишни белгилайди. Коммунал бўлим 1923-йилга Чимбойда 100 нафар ўқувчига мулжалланган интернат солишни режалаштирди.

Чимбойда очилиб 1912-1922 йиллар оралиғида маҳаллий аҳолининг 400 дан ортиқ болларини ўқитган Башқуртстонли Аббас Амантаев раҳбарлик

қилган жадид мактаби ўз даврида катта абройга эга бўлган. Бизнинг улкамиздаги жадид мактабларида диний таълим билан бирга дунёвий илмлар ўқитилган. Уларда кўпинча турк-татар тилидаги дарсликлар фойдаланилган. Арифметикани «Ҳисоб амаллари», географияни «Видоят джуграфия», адоб ахлоқ ва медицина илмлари «Илм-и ахлоқ» китобларидан урганилган. Ушбу янги усул мактаблари халқ орасида илм-фанга, таълим олишга қизиқишни орттирди, аҳоли саводхонлигини маълум даражага кўтарди. Жадид мактабларида ўқиш араб ва форси тилларида эмас, балги татар, ўзбек, қорақалпоқ тиллари оралашган таризда олиб борилган. Саводхонликни яхшилаш мақсадида Навоий, Физулий, Ажиниёз ва Бердақ асарларидан кенг фойдаланишган. 1920-йиллари ота-онасидан етим қолган болалар учун мактаб интернатлар ташкил этилган бўлиб, шўндай мактаб интернат ташкилотчиларининг бири Ҳамза Ҳокимзода Ниёзий бўлиб, Хўжайли шаҳрида бир муддат иш олиб борган.

Шунингдек, 1921-йили Тўрткулдаги 4 ойлик ўқитувчилик курсни тамомлаган қорақалпоқ халқининг кўрнакли давлат арбоби ва маънавиятчиси Қ.Аўезов Чимбойда мактаб интернат ташкил этди, ва унда раҳбарлик, ўқитувчилик ишларини олиб борди. Қорақалпоғистон Автоном области халқ таълими бўлими бошлиғи вазифасини бажариш вақтида улкада таълим тизимини яхшилашга ўз ҳиссасини қўшди.

Вилоят халқ таълими бўлимида 1924 йилнинг бошида 21 қишлоқ мактаби ва 37 саводсизликни тугатиш пунктлари очилди. Шунинг билан ҳаммаси бўлиб вилоятда 25 та қишлоқ мактаби ва 40 та саводсизликни тугатиш пунктлари бўлди. Лекин уларнинг ҳаммаси халқ хўжалик ҳисобига шартнома асосида берилган. Шаҳар бошланғиш мактаблари вилоятда 3 та, шундан биттаси 2 босқишли мактаб. Ушбу шаҳар мактабларида маҳаллий аҳолининг 300 та боласи ва европаликларнинг 189 боласи таълим олган. Мактабларда ўқитувчиларга ойлик маош 40 рубл, саводсизликни тугатиш пунктларида ишлаганликлари учун яъна 20 рублдан маош тўланган. Бундан мақсад вилоятга янги ўқитувчиларни тортиш бўлган.

Профессор Жумек Уринбаевнинг маълумотларига асослансак Амударё вилоятида маҳаллий миллат орасида дастлабки таълим берувчи мактабларнинг ташкилотчилари ва ўқитувчилари С.Мажитов, Е.Кожуров, Ю.Ахмедов, Х.Салимов, Қ.Аўезов, Т.Жалимбетов, Д.Толесинов, Т.Толеев ва бошқалар бўлди [8; 152 б.].

Халқ таълими тизимининг ривожланишида 1924-йили Тўрткўлда очилган педагогик техникум катта аҳамият касб этди. Маҳаллий тилда ҳужжатларни олиб боришга ўтиш жараёни натижасида қорақалпоқ тилида илк мактаб дарслиги Сейфулгабит Мажитов томонидан яратилди. Бунгача 1924 йили араб графикаси асосида қорақалпоқ тилидаги илк газета «Эркин Қорақалпоғистон» газетаси босиб чиқарилди.

Таълим тарбия ишларида катта тажрибага эга С.Мәжитов 1925-йили Тошкентда реформаланган араб алфавити асосида «Әлипбе» «Оқыў китабы» ва «Егеделер саўаты» каби илк қорақалпоқ тилидаги дарсликларни босмадан чиқариб мактабларда саводқонликни кўтаришда катта қисса қўшди.

Хулоса қилиб айтсак, тарихимизда бизга маълум бўлган таълим тизимида жанбозлик кўрсатган, аҳолини замонга мос равишда саводли қилиш учун жонини фидо қилган тарбиячилар, ўқитувчилар фаолиятини, хизматларини ўрганиш олдимизда турган вазифаларнинг бири ҳисобланади, сабаби ҳар қандай билимнинг асоси бу мактаб ва ўлардаги ўз касбининг фидойи узтозлари. Шундай экан, яхши, сифатли таълим бериш асосида етук кадр тайёрлаш келажагимиз учун қўйилган яъна бир улуғ қадам ҳисобланади.

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ROSSIYA IMPERIYASINING O’RTA OSIYONI BOSIB OLISHI, YOHUD VATAN BOSHIDAGI ZULMAT

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Annotatsiya. Maqolada Orta Osiyoning Chor Rossiyasi tomonidan bosib olinish jarayonlari, sabablari tahlil etiladi.

Kalit so'zlar. O'rta Osiyo xonliklari, Turkiston, shahar nizomi, Qizil imperiya, Duma.

Аннотация. В статье анализируются процессы и причины завоевания Средней Азии Царской Россией.

Ключевые слова. Среднеазиатские ханства, Туркестан, городской устав, красная империя, дума.

Abstract. The article analyzes the processes and reasons for the conquest of Central Asia by Tsarist Russia.

Keywords. Central Asian khanates, Turkestan, city charter, red empire, duma.

Prezdentimiz Sh.Mirziyoyev aytganlaridek “Xalq tarixi unitilmaydi u urf odat, an’analarda xalqning kundalik turmushida saqlanib qoladi”, shunday ekan xalqimizning haqqoniy tarixini yoritish muhimdir. Shu o’rinda Rossiya imperiyasing O’rta Osiyoda yuritgan mustamlakachilik siyosati ham alohida masaladir.

O'rta Osiyo xonliklari Rossiya imperiyasi qo'shinlari tomonidan XIX asrning ikkinchi yarmidan boshlab bosib olinib, Turkiston mulki bosqinchilar mustamlakasiga aylantirilganligi masalasi «oq imperiya»ning (1721-1917) va «Qizil imperiya»ning (1917-1991) ko'pgina mafkurachilari, siyosatdonlari, davlat arboblari, sharqshunos va tarixchi olimlari tomonidan mutlaqo xato talqin qilib kelindi. XVI asrning podsho Ivan IV, ya'ni Ivan Grozniy hukmronlik qilgan davridan boshlab to oq podsho Nikolay II saltanatigacha bo'lgan davr mobaynida Rossiya imperiyasi Boltiq bo'yi, Ukraina, Sibir, Kavkaz, Kavkazorti o'lkalari, O'rta Osiyo hamda Qozog'iston yerlarini katta kuch bilan, ba'zan aql bovar qilmaydigan qirg'inlar, vahshiyliklar evaziga bosib olganligini yashirib, go'yo bu o'lkalar Rossiyaga ixtiyoriy qo'shilgan yoki qo'shib olingan degan safsatalarni sobiq ittifoq qulab, uning tarkibiga kirgan millatlar o'z taqdirini haqiqatan o'zlari hal qiladigan bugungi erkin zamona kelguniga qadar zo'rlab targ'ib va tashviq qilishda davom etdilar. Shu soxtakorlikni «isbotlash»ga, ko'klarga ko'tarib madh qilib, xalq fikrini chalg'itishga qaratilgan mingminglab kitobu risolalar, ilmiy maqolalar yozildi, badiiy to'qimalar amalga oshirildi. O'tmishga, tarix haqiqatiga nisbatan bunday xiloflik, tuhmat va bo'htonlar nihoyat fosh bo'lib, haqqoniy tarixiy adabiyotlarga, hujjatlarga yo'l ochildi.

Jahon tarixida rus imperiyasi nisbatan ancha yosh imperiya hisoblanadi. Podsho Pyotr birinchi 1721-yilda Rossiyani imperiya deb e'lon qilgan bo'lsa, 1917-yilgi oktyabr' to'ntarishini amalga oshirishi bilan V.I.Lenin bu saltanatning vorisi, yanada dahshatliroq davomchisi bo'lgan qizil imperiyaga asos soldi. Holbuki, paydo bo'lgan kunidan boshlab (hatto hali g'oya darajasida bo'lganida ham) butun dunyoda to'ntarish yasab, tanho hukmron bo'lish niyati bilan insoniyatga dag'dag'a qilib kelgan o'sha «qizil imperiya» egallab turgan behad katta hududda qadimda ko'plab imperiyalar hukmronlik qilib yoki ta'sir o'tkazib kelganlar: Rum, Yunon, Germaniya, Vizantiya imperiyalari, Pol'sha, Litva, Shved qirolliklari, qator Osiyo, ya'ni Fors, Xitoy, Turk imperiyalari shular jumlasidandir. Shu o'rinda aytib o'tish joizki, turkiy xalqlarning ota-bobolari o'tmishda o'n olti buyuk imperiya ko'rganlar: Buyuk Xun, Boti Xun, Yevropa Xun, Ko'kturk, Avar, Hazor, Uyg'ur, Qoraxoniylar, G'aznaviylar, Buyuk Saljuqiylar, Xorazmiylar, Oltin O'rda, Buyuk Temur, Bobur, Usmoniylar imperiyalari. Bu o'rinda rus xalqi uch yuz yilga yaqin davr mobaynida mo'g'ul-tatar xonliklari qaramligida bo'lganligini ham unutmaslik kerak.

XIX asrning birinchi yarmida O‘rta Osiyo xonliklari o‘rtasidagi uzoq vaqt davom etgan o‘zaro urushlar ularning iqtisodiy va harbiy jihatdan zaiflashib ketishiga olib koldi. Shunday vaziyat oxir-oqibat xonliklarning istilo qilinishlarini osonlashtirdi.

Shunday qilib, XIX asrning o‘rtalariga kelib xonliklar o‘rtasidagi o‘zaro urushlar, ichki nizo va ziddiyatlar, davlat boshqaruvining uzoqni ko‘zlab ichki va tashqi siyosat olib bormaganliklaridan ahvolga tushib qoldi. Shunday vaziyatda Rossiya imperiyasi hukumati o‘zining siyosiy, iqtisodiy va geopolitik manfaatlarini ko‘zlab O‘rta Osiyoga harbiy mustamlakachilik harakatlarini boshlaydi. O‘rta Osiyoning Rossiya imperiyasi tomonidan bosib olnishi to‘rt bosqichda amalga oshirildi. Birinchi bosqich, 1847-1865-yillarda Rossiya imperiyasi tomonidan Qo‘qon xonligining shimoliy-g‘arbiy viloyatdan va Toshkent shahri istilo qilindi. Istilo etilgan hududlarda Orenburg general-gubernatorligi tarkibiga kiruvchi Turkiston

viloyati tashkil etildi. Ikkinchi bosqich, 1865-1868-yillari qamrab olgan bo‘lib, bunda Qo‘qon xonligi va Buxoro amirligiga qarshi istilochilik harakatlari amalga oshirildi. Uchinchi bosqich, 1873 -1879-yillar davomida Xiva va Qo‘qon xonligi yerlarini bosib olishdan iborat bo‘ldi. To‘rtinchi bosqich, 1880-1885-yillarda turkmanlarning bo‘ysundirilishi edi. Shunday qilib, 1864-1885-yilarda 20 yildan ortiq vaqt davomida Rossiya imperyasining uzoq davom etgan harbiy tayyorgarligi natijasida bosqinchilik urushlari olib borildi. O‘rta Osiyo xonliklari hududining kata qismini (1583255kv. km) bosib olinib, mustamlakaga aylantirildi [1; 22 b.].

O‘rta Osiyoni bosib olish maqsadida Pyotr I zamonidayoq Qozog‘istonning zabt etilgan hududlarida harbiy qafalar va istehkomlar qurila boshlangan edi. 1717-yilda Omsk, 1718-yilda Semipalatinsk, 1720-yilda Ust-Kamenogorsk, 1742-yilda Orenburg qal’alari quriladi. Faqat XVIII asrning o‘zida Chor ma’murlari yovuz niyat bilan hozirgi Qozog‘iston hududlarida 46 ta katta va 96 ta kichik harbiy qal’a va istehkomlar qurganlar. XVIII asrning boshlarida har uchala Juzning qozoqlari qalmiq (jungar)larning doimiy bosqini ostida og‘ir ahvolga tushib qoladi. 1723-yilda ro‘y bergan og‘ir ocharchilik qozoqlarning o‘z mustaqilliklarini saqlab qolishlarini xavf ostiga solib qo‘yadi. Oqibatda katta Juz jungarlarga siyosiy qaram bo‘lib qoladi. O‘rta Juz Buxoroga ko‘chib borib Buxoro xonligiga, Kichik Juzning bir qismi esa Xiva xonligiga tobe bo‘ladi. Bunday og‘ir vaziyat Katta va Kichik Juzning xoni Abulxayrxonni o‘z hokimiyatini saqlab qolish va qalmiqlar xataridan saqlanish ilinjida chor hokimiyati bilan yaqinlashuvga majbur etadi. Ana shu tariqa 1731-yilda Kichik Juz, 1731-1740-yillarda esa Katta Juz qozoqlarining aksariyati rus davlatinin tobeligiga o‘tadi [2].

Bu Pyotr I orzu-armonlarining ro‘yobga chiqishining boshlanishi edi. Qozoqlarning rus fuqaroligini qabul qilishlari chor mustamlakachi ma’murlarining Turkiston yerlarini egallash borasidagi bosqinchilik harakatlariga qulay shart-sharoitlar yaratadi. Biroq Yevropadagi davlatlar o‘rtasidagi vaziyatning tobora taranglashib va chigallashib borishi, rus-turk urushi (1806-1812), rus-shved urushi (1808-1809), rus-fors urushi (1805-1813) va nihoyat Napoleonga qarshi 1805-1812-yillardagi to‘qnashuv va urush, qolaversa, chor samoderjaviyasiga qarshi dekabristlar nomini olgan dvoryanlar qo‘zg‘oloni va uni bostirish chor hukumatining Turkistonga nisbatan bosqinchilik siyosatini ma’lum muddatga ortga cho‘zilishiga sababchi bo‘ladi. Biroq 1830-yillardan ma’lum darajada Yevropadagi janjalli voqealardan qo‘li bo‘shagan chor hukumati yana o‘zining ayg‘oqchilik va yovuzlik niyatlarini O‘rta Osiyo hududlariga qaratadi. 1839-1840-yillarda podsho Nikolay I ning homiyligi va fatvosi bilan Orenburg harbiy gubernatori V.A.Perovskiy kata qo‘shin bilan Xivani bosib olish niyatida yo‘lga chiqadi. Maqtanchoq va bosartusarini bilmaydigan Perovskiy qo‘shini tarkibida 2 ta zambarak, 40 arava, 5325 askar, 10 ming tuya bor edi. Ammo og‘ir obi-havo sharoiti, yoqilg‘ining yo‘qligi, oziq-ovqat tanqisligi, kiyim-kechaklarning yaroqsizligi natijasida Perovskiy qo‘shinlari yo‘l-yo‘lakay katta talofatlar berib Xivaga yurishni to‘xtatib orqaga qaytadi [3; 184 b.].

1855-1857-yillardagi Qrim urushi munosabati bilan chor ma’murlari O‘rta Osiyoni zabt etish bo‘yicha katta miqiyosdagi harbiy harakatlarni olib borolmaydilar.

Qrim urushidagi mag‘lubiyat O‘rta Osiyoning Rossiya uchun siyosiy va strategic jihatdan qanchalik katta ahamiyatga ega ekanligini ko‘rsatdi.

Rossiya O‘rta Osiyo uchun olib boriladigan raqobatli kurashda Buyuk Britaniya qirolligini nafaqat siyosiy-iqtisodiy va strategik jihatdan balki harbiy jihatdan ham mag‘lubiyatga uchratish va Qrim urushidagi mag‘lubiyat tufayli xalqaro maydonda bo‘shashib qolgan obro‘sini tiklashi ham mumkin edi. Chunki hind xalqining butun mamlakatni qoplab olgan va inglizlar tomonidan zo‘rlik bilan bostirilgan 1857-yilgi qo‘zg‘oloni Buyuk Britaniyaning Hindistondagi mavqeyi uncha mustahkam emasligini ko‘rsatdi. Shu boisdan Rossiya hukmron doiralari o‘rtasida O‘rta Osiyo muammosini tezroq hal qilishga chorlovchi xat, da’vat va takliflar 1860-yillarda tez-tez ko‘zga tashlanadigan bo‘lib qoldi. Jumladan, Orenburg general-gubernatori Katenin tashqi ishlar vaziriga yozgan xatida “O‘rta Osiyo mulkiga hukm-ronligimizni o‘rnatishimiz uchun albatta Turkiston va Toshkentni egallashimiz shart” deb ko‘rsatdi. Uning fikricha, Toshkentni qo‘lga kiritish Buxoro mulklariga qurolli kuchlar bilan borish uchun albatta zarurdir [4; 83 b.].

Chimkentda bir kecha-kunduz qattiq jang bo‘ladi. Muhammad Solih o‘zining “Tarixi jadidi Toshkand” asrida yozishicha: “So‘ngra to‘rt tomondan askarlar otdan tushdi va karnay sadolari ostida rus askarlariga qarshi hujumga o‘tiladi. Himoyachilar 2-3 ming qadam yugurgach, dushmanning to‘p va miltiqlaridan yomg‘irdek yog‘ilgan o‘qlar ostida qoldilar”. Oqibatda 12 ming kishi halok bo‘ladi va yaralanadi. Ammo general Chernyayev boshchiligida chor qo‘shinlari urushni davom ettira olmay Turkistonga qaytishga majbur bo‘ladi. Jinay degan joyda bo‘lgan jangda ham vatanparvarlarning qo‘li baland keladi. Vatan himoyachilari Iqon qal’asi uchun bo‘lgan jangda ham g‘alabaga erishadilar. Alimqul boshchiligida yurt himoyachilari urushni davom ettirish maqsadida tayyorgarlik ko‘rayotgan bir paytda Buxoro amiri Muzaffarxonning Qo‘qonga hujum qilganligi to‘g‘risida xabar oladi.

Natijada lashkarboshi Alimqul qo‘shinning katta bir qismini Chimkentda qoldirib o‘zi Qo‘qonga qaytishga majbur bo‘ladi. Albatta bu hol dushmanga qo‘l keladi va Chernyayev 1864-yil 21-sentabrda Chimkentni jang bilan egallaydi. Shahar mudofaachilaridan ko‘p kishi qirib tashlanadi [5; 107 b.].

Shu paytga qadar ikki yo‘nalishda mustaqil harakat qilib kelgan chor armiyasining ikki qo‘shini Chimkent shahrida tutashadi. Istilyo qilingan yerlar hisobiga 1865-yilda Orenburg general-gubernatorligi tarkibida Turkiston viloyati tashkil etiladi; uning tepasiga general Chernyayev qo‘yiladi.

1877-yilda Toshkentda shahar Nizomi joriy etilgan, unga muvofiq shahar boshqaruvi Dumaga o‘tgan edi. Duma a’zolarining 1/3 qismi shaharning “Osiyo” bo‘lagidan 2/3 qismi esa “yangi” Toshkent aholisi tomonidan saylangan edi. Natijada shaharning 80 ming mahalliy aholisidan bo‘ldi. Shahar xo‘jaligini yuritishga oid barcha ishlar ana shu Duma qo‘liga o‘tdi. Duma ustidan rahbarlik qiluvchi shahar boshlig‘ini general-gubernator taqdimiga ko‘ra Harbiy vazirning o‘zi tasdiqlar edi. 1886-yil 12-iyulda imperator Aleksandr III tasdiqlagan Turkiston o‘lkasini idora qilish to‘g‘risidagi yangi Nizom arzimas o‘zgarishlar bilan 1917-yilga qadar amal qildi. Nizom to‘rtta asosiy bo‘limdan iborat bo‘lgan: o‘lkaning ma’muriy tuzilishi, sud tuzilishi, yer tuzilishi soliqlar va yig‘imlar. Bu "nizom" general-gubernatorlik hududiy birliklari nomlarini o‘zgartirishni va ularni bundan buyog‘iga ham birxillashtirib borishni nazarda tutar edi.

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БОЛАЛАРНИНГ ЖИСМОНАН РИВОЖЛАНИШИДА ХАРАКАТЛИ ЎЙИНЛАРНИНГ ЗАРУРЛИГИ

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Бола оддийгина нарсалардан турли хил ўйинлар ўйлаб топиб, ҳаммадан кўра яхшироқ ўйнайди. Унинг ҳаёлида ёғоч бўлаги ёки чойнакнинг синган қопқоғи эртакдаги уй ёки мўъжазгина қўлча қиёфасида акс этиши мумкин.
Масару Ибука

Аннотация. Ушбу мақолада мактабгача тайёрлов гурухлари учун мактабгача ёшдаги болаларда турли харакатли ўйинлар ўтказиш бўйича ўрганилганлик даражаси, уларни ташкил этиш йўллари, усуллари ҳамда ўйинларни яратилиши ҳақида сўз боради.

Калит сўзлар. Мактабгача таълим, бола, харакатли ўйин, тарбия, ўйин, қоида.

Аннотация. В этой статье обсуждается уровень обучения дошкольных групп проведению различных двигательных игр у дошкольников, способы их организации и создание игр.

Ключевые слова. дошкольное образование, ребенок, игра, воспитание, игра, правило.

Annotation. This article discusses the level of learning for preschool groups to conduct a variety of movement games in preschool children, ways to organize them, and the creation of games.

Key words. Preschool, child, action play, parenting, play, rule.

Мактабгача таълим тизими олдига янги вазифаларни қўйди, чунки фарзандларимизни мактабгача таълим ёшидан бошлаб билимли, жисмонан бақувват ва маънан етук, баркамол қилиб тарбиялаш муҳим вазифалардан

биридир. Мактабгача тайёрлов гурухлари учун Мактабгача ёшдаги болаларда харакатли ўйинлар ўтказиш бўйича ўрганилганлик даражаси ҳақида сўз борар экан муаммонинг баъзи қирралари ўрганилди.

Ҳаракатли ўйинларнинг келиб чиқиши қадим халқ педагогикасига бориб тақалади. Илк мактабгача ёшли болалар оилаларда боланинг дастлабки ҳаракати билан боғлиқ овунмачоқлар, эрмак ўйинлар ёрдамида тарбияланганлар. Ундан каттароқ ёшдаги болалар ҳаётида ранг-баранг ҳаракат мазмунига эга бўлган халқ ўйинлари катта ўрин олган. Буларнинг ҳаммаси ҳозирга қадар бадиий жозибадорлигини, тарбиявий аҳамиятини сақлаб келмоқда ва қимматли ўйин фольклорини ташкил этади.

Болаларнинг ҳар томонлама ривожланишида ўйин асосий фаолият тури бўлиб ҳисобланади. Ўйин бу бола фаолиятининг ёрқин тури, ўйин жараёнида унинг иродаси, ҳиссиёти, эҳтиёжи, қизиқишлари, таъсирчанлиги, яъни бутун шахсияти шаклланади.

Қадимдан ўзбек ҳалқи болаларига турли ҳалқ ўйинларни ўйнатиб ўргатиб келганлар ва ўйинлар орқали уддабуронлик, чаққонлик, топқирлик, меҳршафқатлилик каби фазилатларни таркиб топтириб, меҳнатга ўргатиб борганлар. Ўйин доимо ҳаётни акс эттиради, шунинг учун унинг мазмуни ижтимоий воқеликда ўзгариб туради. Ўйин мақсадга қаратилган ўйланган ижодга йўналтирилган жараёндир. Шунга кўра ҳам кўп ўйнаган болалар кейинги фаолиятларга ўқишга ва меҳнатга тайёрланиб турадилар.

Ҳаракатли ўйинлар мазмунида бола дунёқарашини кенгайтирувчи ва тасаввурини аниқлаштирувчи кўплаб билиш материали мавжуд. Бироқ бола ташқи дунёни тўғри идрок қилиши учун (ўйиннинг барча шартларига риоя қилган ҳолда) образнинг тўғри характеристикаси ва ҳаққоний ўйин вазияти зарур. Бунинг учун, ўйинни тушунтиришда эмоционал тарзда баён этилади. Халқ ўйинлари бунинг ажойиб намунаси ҳисобланади. Улардаги ўйин вазияти болани қизиқтиради ва тарбиялайди, Сюжетга эга бўлмаган ва фақат муайян ўйин топшириқ шу тариқадан тузилган ўйинларда ҳам боланинг сенсор қобилиятини, тафаккурини, мўлжал олишини ривожлантиришга ёрдам берувчи кўплаб билиш материали мавжуд («Ким ўзар», «Тўп отиш» ва ҳоказо).

Қоидалар катта тарбиявий аҳамиятга молик. Улар ўйиннинг боришини белгилайди, болалар ҳаракат фаолнятини, уларнинг ҳатти-ҳаракати, ўзаро муносабатларини йўлга солади, ахлоқий-иродавий сифатларни тарбиялашга ёрдам беради. Қоида ўйинда. муайян шароит яратади. Бунда, бола ўйинга тегишли раҳбарлик қилинганда ўзида ҳосил қилинган сифатларни намоён қилмасдан туролмайди. Масалан, болалар «Айёр тулки» ўйинида фақат тулки: «Мен шу ердаман» деганидан сўнггина доирадан чиқиб турли. томонларга қочишлари мумкин. Бу қоида болаларда диққатни, ўзини тута билишни, чидамлиликни, берилган сигналга тезкор реакцияни, фазода мўлжал олишни ҳосил қилади.

Қоидаларни оғишмай бажаришни талаб қилиш мақсадга эришишдаги эгоистик эмоциялар ва кайфиятни енгишга ёрдам беради. «Қоида бола ҳатти-ҳаракатини бошқарадиган ва йўналтирадиган биринчи талаб ҳисобланади.

Ўйинларда теран ҳиссиёт, ўртоқлик ва меҳр-муҳаббатнинг дастлабки нишоналари пайдо бўлади».

Дастлаб болалар ўйин вазифаларини тезроқ бажариш пайида бўлиб қоидаларни унутиб қўядилар, бундан ташқари ютуққа ва унга энг осон йўл билан эришишга интилиш ҳам қоидани бузишга сабаб бўлади. Бу ўз навбатида ўйинчиларда норозилик уйғотади, зиддият туғдиради ва болалар ўртасидаги муносабатни ёмонлаштиради.

Болаларни қоидаларнинг ижтимоий аҳамиятини англашга, чидам билан тайёрлайдиган тарбиячи раҳбарлигида улар ҳалоллик, адолатлилик, дўстлик, ботирлик, ўзини тута билиш, қатъиятлик, ирода каби яхши сифатларни шакллантиришнинг самарали воситасига айланади. «Бола томонидан аста-секин ўзлаштириладиган бундай ҳаётий муҳим ахлоқий сифатлар бола шахсининг ички маънавий мулкига айланади». Буларнинг ҳаммаси қоидали, ҳаракатли ўйинларни болаларни ахлоқий тарбиялашнинг таъсирчан воситаларидан бири сифатида белгилашга асос бўлиб хизмат қилади.

Ўйинда фазони идрок этиш ўзининг асосий формаларида намоён бўлади: бевосита; ҳиссий билиш - сенсор (ҳиссий-образли) ва билвосита (мантиқий тафаккур, тушунча). Масалан, бола томонидан ҳаракат йўналишини мустақил танлаш ва ҳаракатни ўйин қоидасида қатъий белгиланган йўналишда бажариш бир томондан ўйин вазиятини (бевосита идрок қилинадиган) ва кўриш-мотор реакциясини (ўйин ҳаракатларини) дарҳол баҳолашни, иккинчи томондан ўз ҳаракатларини фазо ўйин муҳитида англаш ва тасаввур қилиш ҳамда ўша кўриш-мотор реакциясини намоён этишни талаб қилади. Ҳаракатли ўйинда бу икки компонент ўзаро харакатда бўлади, ўйин қоидалари бола ҳаракати учун фазода олдиндан мўлжал олишнинг зарур имкониятини яратади; болаларнинг тезкор реакцияси ҳамда фазода мўяжал олишини талаб қилади («Икки аёз», «Сеҳрли таёқча», «Жасур болалар», «Маймунлар ва овчилар» ва ҳоказо ўйинлар). Бундай реакция боладаги ўз фаолияти ва ҳаракатларини муайян муҳитга мослаш қобилиятининг ривожланганлик даражаси билан белгиланади. Бунда болага тарбиячи ёрдам бериши лозим. Бунда тарбиячи болани аста-секин ўйин вазияти ва қўйилган вазифага эришиш заруратини ҳисобга олган ҳолда бирмунча муваффақиятли ҳаракат усулини топишга ўргатади.

Атроф-муҳитда мўлжал олишга ўйин вазифасини бажариш йўлида атайин яратилган тўсиқлар ҳам ёрдам беради. Бу болаларда маъқул ҳаракат усулини масофани етарлича ривожланган кўз билан баҳолаш ва ҳаракатларни бажариш вақтини ҳисобга олишга таянган ҳолда мустақил танлаш қобилиятини ҳосил қилади.

Ҳаракатли ўйинларнинг ҳозирги даврдаги аҳамияти ниҳоятда катталигини билишимиз керак. Шуниндек, Республика миқёсида ташкил этилаётган турли спорт тадбирларида миллий ҳаракатли ўйинларнинг тарбиявий жиҳатларидан ўринли фойдаланиш билан бирга оила ва мактабгача тизимда миллий ҳаракатли ўйинларга эътиборни кучайтириш лозим булади.

Мактабгача тарбия ёшидаги болаларни жисмоний тарбиялашида ҳаракатли ўйинларни ташкил қилиш керак. Жумладан, ҳаракатли ўйинларга раҳбарлик қилиш пухта эгаллаш ўйинларни муваффақиятли ўтказиш тўғрисида

режа асосида ташкил этиш керак. Ўйиннинг мазмуни ва қоидаларини қисқа, аниқ ва ифодали тушунтириш, олдиндан суҳбатлар ўтказиш натижасида тарбиячи болалар онгида ўйин тўғрисида маълум тасаввур пайдо бўлишига эришади. Фикримизча, ўйин тавсифини, қоидаларини тушунтириш жараёнида унинг маънавий-маърифий, ахлоқий, тарбиявий жиҳатлари алоҳида назарда тутилиши керак. Асосий мақсад ҳаракатли ўйинни жисмонан бажаришгига эмас, ундан маънавий озуқа олиш ҳам бўлиши лозим. Бунинг учун тарбиячи ҳар бир ўйиннинг мазмунидан келиб чиқадиган маънавий-маърифий хислатларни қисқа, мазмунли жумлаларда тушунтириши керак.

Ҳаракатли ўйинларни ташкил қилишда тарбиячилар томонидан назорат қилади. Ҳар бир тарбиячи ўйинларни ташкил қилишда учираган муаммони хал қилишни ёритишиш йулларин топади, ўз нуқтаи назарини баён қилган. Юқорида қайд этганимиз ва бошқа бир қатор мавжуд манбаларнинг аҳамияти беқиёсдир. Улардан таълим-тарбия жараёнида ўринли фойдаланиш жисмоний тарбия ўриқчиларига асосий бурчи ҳисобланади. Ўзбекистон Республикасидаги мактабгача таълим тарбия тизимида эришган датлабки кунлари жисмоний тарбия бўйича болаларимизни ривожлантириш учун ҳаракатли ўйинларни ташкил қилиш ва ўргатишни такомиллаштириш талаб этади. Бизнингча, ҳаракатли ўйинларни ўргатишдаги асосий мақсад баркамол авлоднинг жисмонан ва маънавий-маърифий жиҳатдан ҳам камолотини таъминлашга хизмат қилиши лозим. Чунки маънавий соғлом фарзандларгина юрт тинчлиги, Ватан равнақи, халқ фаровонлиги учун жонкуяр инсонлар бўлиб этишади. Зеро, биринчи Президент Ислом Каримовнинг «Юксак маънавият – энгилмас куч» асарида таъкидланганидек, «…миллий ғоямиз шу юртда яшаётган барча одамларнинг олижаноб ниятларини, ҳаётий манфаатларини мужассам этадиган юрт тинчлиги, Ватан равнақи, халқ фаровонлиги деган юксак тушунчаларни ўз ичига олади». Миллий истиқлол ғояси тамойилларини ёшлар онгига сингдириш эса ҳар бир соҳа мутахассиси, жумладан, мактабгача таълим ташкилоти тарбиячилари ва жисмоний тарбия мутахасисининг ҳам асосий вазифаларидан ҳисобланади.

Мактабгача таълим ташкилоти томонидан амалга оширилаётган тадбирлар, белгиланган вазифаларнинг мазмунида ҳам илк мактабгача таълим тизимидаги мактабгача ёшдаги болаларни ҳар томонлама баркамол қилиб тарбиялаш назарда тутилган. Буни хозирги кунда қабул қилинган ва ижроси изчил таъминланаётган қарорлар, фармонлар ва буйруқлар мисолида ҳам кўриш мумкин.

Мактабгача таълим ташкилотининг 6-7 ёшли мактабгача ёшдаги болаларда орасида харакатли ўйинлар ўтказиш методикасин мактабгача ёшдаги болаларнинг жисмонан ривожланишида харакатли ўйинларнинг аҳамияти мухим.

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STEAM – YONDASHUVI NAFAQAT O‘QITISHNI, BALKI FIKRLASHGA UNDAUSHI G‘OYA

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Bugun biz davlat va jamiyat hayotining barcha sohalarini tubdan yangilashga qaratilgan innovatsion rivojlanish yo‘liga o‘tmoqdamiz.
Shavkat Mirziyoyev

Bugungi kunda maktabgacha ta’limning markaziy muammosi bola erkinligini ta’minlash, ularni har tomonlama rivojlangan holda maktab ta’limiga samarali tayyorlash, ta’lim-tarbiyaviy jarayondagi mustaqil faoliyatini shakllantirish, uning shaxsini rivojlantirish orqali ta’lim maqsadiga erishishdan iborat. O‘zbekiston Respublikasi Prezidentining 2020-yil 6-noyabrdagi “O‘zbekistonning yangi taraqqiyot davrida ta’lim-tarbiya va ilm-fan sohalarini rivojlantirish chora-tadbirlari to‘g‘risida”gi PF-6108-sonli farmoniga ko‘ra innovatsion ta’lim jarayoniga o‘tish, ta’lim tizimiga yuqori samarali xalqaro amaliyotni joriy etish, o‘zaro uzviy bog‘liq fanlarni birlashtirish, zamonaviy kadrlarga bo‘lgan ehtiyojni inobatga olgan holda intensiv til, AKT va ta’lim berishning yangi kasbiy kompetensiyalarni o‘zlashtirish uchun zarur bilimlar bazasini shakllantirish kabi masalalar vazifa qilib olindi. Ta’lim sifati va taraqqiyoti uchun rivojlangan davlatlarning ta’lim tizimidan andoza olish, bizning mentalitetimizga xos va mos jihatlarini ishlab chiqish hamda amalda qo‘llash orqali biz ta’lim sifati va

samaradorligini yanada oshirishimizga, ko‘zlangan natijaga erishishimizga yordam beradi.

STEAM yondashuvining o‘quv samaradorligiga ta’siri shundaki, uning asosiy g‘oyasi shundan iboratki, o‘rganish paytida nafaqat miyamiz bilan, balki qo‘limiz ham ishlashi kerak. STEAM yondashuvining afzalligi shundaki, bolalar turli mavzularni samarali o‘zlashtirish uchun ham miyani, ham qo‘llarini ishlatadilar. Ta’limga STEAM yondashuv nafaqat o‘qitishni, balki fikrlashga undashni talab etadi. STEAM yondashuvi bizning ta’limga bo‘lgan qarashimizni o‘zgartirmoqda. Amaliy faoliyat orqali, o‘quvchilar o‘zlarining irodasini, ijodkorligini, moslashuvchanligini rivojlantiradi.

STEAM o‘zi nima…? degan savol tug‘iladi. STEAM tabiiy fanlar, texnologiya, muhandislik san’ati, ijodkorlik va matematika sohalarining integratsiyalashuvi hisoblanadi. Ushbu texnologiya kognitiv faoliyat jarayonida intellectual qobiliyatlarni rivojlantirish va ilmiy-texnik ijodkorlikka jalb etishga qaratilgan innovatsion ta’lim texnologiyasidir.

- Kognitiv tadqiqot faoliyati jarayonida intellektual qobiliyatlarni rivojlantirish va ilmiy-texnik ijodkorlikka jalb qilish zamonaviy dunyoda kompetentsiyalarni va qulay o‘zini o‘zi anglashni shakllantirishga, kelajakda hayotning yuqori sifati uchun sharoit yaratishga qaratilgan.

- Tanqidiy fikrlashni rivojlantirish zaruriy ma’lumotlarni olish, tahlil qilish, olingan ma’lumotlarni amaliy faoliyatda qo‘llash ko‘nikmalarini shakllantirishga qaratilgan jarayon sifatida qaraladi.

- Individual yondashuv bilan sintezda jamoada ishlash malakalarini shakllantirish umumiy maqsadlarga erishish, muzokaralar olib borish, savollar berish, bahslashish uchun individual intellektlarni birlashtira olishdir. Umumiy ijobiy natija o‘ziga ishonch va jamoaviy ish samaradorligi hissini shakllantiradi, jarayonga va umumiy va shaxsiy ish natijalariga qadrli munosabatni tarbiyalaydi. Maktabgacha yoshdagi bolalar STEAM faoliyati uchun juda mosdir. Maktabgacha yoshdagi bolalar atrofdagi hamma narsa qanday ishlashini bilishni, amaliy mashg‘ulotlarni, tajribalar o‘tkazishni ko‘proq xohlashadi. Bolalar bu yoshda kattaroq tushunchalarni tushunishga qodir. Shuningdek, ular o‘z dunyosida nima sodir bo‘layotganini chuqurroq o‘ylab ko‘rishlari va ularni nima qiziqtirayotganini aytib berishlari mumkin. Bu davrda bola bilan STEAM mashg‘ulotlarini o‘tkazish uchun ajoyib imkoniyat. Bolaga imkoniyat berish, o‘zining xayoti dunyosiga sho‘ng‘ishiga qo‘yib berish lozim. Bizning kundan kunga taraqqiy etib borayotgan zamonaviy dunyomiz aholining STEAM sohalarida ko‘proq ma’lumotga ega bo‘lishini talab qiladi. STEAM esa maktabgacha yoshidagi bolalarga asosiy tarkib bilan bog‘liq bo‘lmagan, masalan, jamoa bilan ishlash, qat’iyat va mehnatsevarlik, ijodkorlik va zukkolik, mantiqiy tafakkur, tanqidiy fikr kabi ko‘nikmalarni o‘rgatadi. Maktabgacha yoshdagi bolalar ham STEAM bo‘yicha asosiy tushunchalarni o‘rganish qobiliyatiga ega. Maktabgacha yoshdagi bolalar uchun STEAM ta’limining eng foydali jihatlaridan biri shundaki, STEAM faoliyatida hosil qilingan ko‘nikmalar, masalan, san’at, fan yoki matematikada o‘rganilgan jarayon ko‘nikmalari har qanday fan sohasida va kundalik hayotda qo‘llanilishi mumkin bo‘lgan asosiy ko‘nikmalardir. Maktabgacha

yoshdagi bolalar qiziqish va ijodkorlik hissi bilan ilm-fanga tabiiy moyillikka ega. Maktabgacha davr bolaning o‘sish, rivojlanish, o‘zini namoyon etishga intilish, o‘rganish, bilishga ishtiyoqi kuchli bo‘lgan davridir. Aynan shu davrda bolaning insoniy sifatlari va aqliy salohiyati rivojlanishi uchun poydevor yaratiladi. Maktabgacha yoshdagi bola bilan ta’lim-tarbiya qanchalik erta boshlansa, samarasi shunchalik barvaqt namoyon bo‘ladi va bolaning butun hayotiga ijobiy ta’sir qiladi. Bolaga ta’limni o‘z vaqtida berish lozim. Bolaning yoshiga muvofiq ravishda shunday ta’lim berish kerakki, bunda uning barcha hissiyot a’zolari jalb etilgan bo‘lsin. Ya’ni bola rivojlanish jarayonida mustaqil ravishda o‘zi teginish, ko‘rish, eshitish, hidlash, mazasini bilish, amalda bajarish, tajribalar o‘tkazish imkoniyatiga ega bo‘lishini ta’minlash zarur. STEAM ta’limi davlat ta’lim standartiga muvofiq amalga oshiriladi. Bu bolalarning turli xil ishlarda kognitiv qiziqishlarini shakllantirishga imkon beradi. Maktabgacha ta’lim tashkilotlarida STEAM ta’limi loyiha va eksperimental tadqiqot faoliyatini tashkil etish orqali amalga oshirilishi mumkin. STEAM muhitiga sho‘ng‘ish qurilishdan boshlanishi mumkin, bunda pedagoglar turli materiallardan (yog‘och, qog‘oz, metall, plastmassa) elementlardan foydalangan holda boshlang‘ich texnik ko‘nikmalarga ega bo‘ladilar, muhandislik tamoyillari bilan tanishadilar. Pedagoglarga bolalarda ijodkorlik va fazoviy fikrlashni rivojlantirishga yordam beradi. Maktabgacha yoshdagi bolalarda amaliy ko‘nikmalarni rivojlantirishdan tashqari, STEAM texnologiyasi bolalar uchun haqiqiy hayotiy vaziyatlarni boshdan kechirish uchun sharoit yaratadi. Aynan STEAM texnologiyasining ushbu xususiyati maktabgacha yoshdagi bolalarning intellektual qobiliyatlarini rivojlantirish bo‘yicha ishlarni tashkil etish uchun samarali muhit yaratadi. Texnik sxemalar, Lego konstruktorlari, yog‘och konstruktorlar, fleksagonlar, agamograflar, STEAM o‘yinchoqlari voqelikni taqlid qiladi, bolalar e’tiborini tortadi, ularni samarali birlashtirilgan amaliy faoliyatga, jumladan, tadqiqot-dizayn, matematika va ijodkorlikka jalb qiladi. STEAM ta’limi olti moduldan iborat. Har bir modul birlashtirilganda STEAM ta’limi maqsadlarini amalga oshirishni ta’minlaydigan aniq muammolarni hal qilishga qaratilgan, kognitiv tadqiqot faoliyati jarayonida intellektual qobiliyatlarni rivojlantirish va maktabgacha yoshdagi bolalarni ilmiy-texnik ijodkorlikka jalb qilish.

1.“*F.Frebelning didaktik tizimi” o‘quv moduli.*

- Atrofdagi dunyo ob’ektlari bilan tajriba o‘tkazish;
- Geometrik jismlar va figuralar bilan harakatlar orqali matematik haqiqatni o‘zlashtirish;
- Fazoviy munosabatlarni o‘zlashtirish;
- Turli burchak va proyeksiyalardan loyihalash.

2.*"LEGO - dizayn" o‘quv moduli.*

- Amaliy va aqliy eksperimentlar, umumlashtirish, nutqni rejalashtirish va o‘z faoliyati jarayoni va natijasini sharhlash qobiliyati;
- ona tilida ravon so‘zlash (so‘z boyligi, nutqning grammatik tuzilishi, fonetik tizim, semantik tuzilish haqidagi elementar g‘oyalar) - yangi tasvirlarni yaratish, tasavvur qilish, analogiyadan foydalanish qobiliyati.

3.*“Matematik rivojlanish” o‘quv moduli.*

- bolalarning yosh va individual xususiyatlarini quyidagi yo‘nalishlarda hisobga olgan holda matematik rivojlanish muammolarini kompleks hal qilish: o‘lcham, shakl, makon, vaqt, miqdor va sanoq.

4.*"Robotexnika" o‘quv moduli.*

- mantiqiy va algoritmik fikrlashni rivojlantirish;
- dasturlash asoslarini shakllantirish;
- rejalashtirish, modellashtirish qobiliyatlarini rivojlantirish;
- axborotni qayta ishlash;
- mavhumlik va naqshlarni topish qobiliyatini rivojlantirish.

5. *"Multstudiya "Men dunyoni yarataman" o‘quv moduli.*

- AKT (axborot-kommunikatsiya texnologiyalari) va raqamli texnologiyalarni rivojlantirish;
- media texnologiyalarini rivojlantirish;
- badiiy va texnik ijodning sintezi asosida ishlab chiqarish faoliyatini tashkil etish.

6. *“Jonli va jonsiz tabiat bilan tajriba o‘tkazish” o‘quv moduli.*

- eksperimental faoliyatda atrofdagi dunyo haqidagi g‘oyalarni shakllantirish;
- vizual hissiy idrok etish jarayonida barcha tirik mavjudotlarning birligini anglash;
- ekologik ongni shakllantirish.

STEAM fan, texnologiya, muhandislik, san’at va matematikani anglatishini hisobga oladigan bo‘lsak, ushbu sohalarning ba’zilari yosh bolalarda tushunish uchun qiyin bo‘lib tuyulishi mumkin. Qaysidir ma’noda, bu haqiqat. Yosh bolalar ko‘paytirishni yoki kompyuterlar qanday ishlashini tushunishga tayyor bo‘lmasligi mumkin. Biroq, ular o‘yin va muhokama orqali STEAM maktabgacha yoshdagi ko‘nikmalar va tushunchalarni o‘rganib, so‘ngra bu ko‘nikmalarni ko‘proq o‘yin orqali qo‘llash orqali kelajakda o‘rganish uchun mustahkam poydevor yaratadi.

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MAKTABGACHA TA’LIM TASHKILOTLARIDAGI BARCHA TEXNIK VOSITALAR BIZNING QO`LIMIZDAGI ENG YAXSHI TA’LIM QUROLIDIR

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Annotatsiya. Ushbu maqolada maktabgacha ta’lim tashkilotlari tarbiyachilarini va maktabgacha katta yoshdagi bolalarni ta‘lim standartdagi, o‘quv dasturdagi asosida mantiqiy fikrlashga, amaliy ko‘nikmalarni shakllantirishga, bir so‘z bilan aytganda, ularni maktabga tayyorlashga o‘rgatish maqsadga, ularning echimlari hamda amaliyotga keng tadbiqi yoritib beriladi.

Kalit so’zlar. Mobil telefon, planshet**,** televizor, kompyuter, texnika, texnologiya, axborot texnologiyalar.

Аннотация. Дошкольная образовательная организация должна обеспечить, чтобы педагог (воспитатель) при формировании у детей духовно-нравственных представлений, глубоком понимании содержания и сущности образования учитывал его в учебно-воспитательной деятельности с детьми и следовательно, прежде всего, поднимал культуру, духовно-нравственный потенциал подрастающего поколения, пробуждал его национальную идеологию. Ведь только человек, осознавший себя, постигший духовность нации, узнает свой народ, нацию, Родину, семью. Осознает долг, ответственность, обязательство перед народом и нацией.

Ключевые слова. Креативная адаптация, стратегия развития, национальное образование, инновации, методическая подготовка, педагогическая практика, концепция.

Abstract. A preschool educational organization should ensure that a teacher (educator), when forming spiritual and moral ideas in children, a deep understanding of the content and essence of education, takes it into account in educational activities with children and, therefore, first of all, raises the culture, spiritual and moral potential of the younger generation, awakens its national ideology. After all, only a person who has realized himself, who has comprehended the spirituality of the nation, recognizes his people, nation, Homeland, family. He is aware of the duty, responsibility, obligation to the people and the nation.

Keywords. Creative adaptation, development strategy, national education, innovation, methodological training, pedagogical practice, concept.

Prezident Shavkat Mirziyoyev tomonidan mamlakatimizda maktabgacha ta’lim tizimini rivojlantirish bo‘yicha alohida ta‘lim standartlari, o‘quv dasturlarini ishlab chiqish va barcha yondashuvlarni tubdan qayta ko‘rib chiqish, ularni qayta takomillashtirish, ta‘lim sifatini mutlaqo yangi bosqichga olib chiqish bo‘yicha vazifalar belgilab berildi. Amaldagi ta‘lim-tarbiya jarayonining mavjud ma’lum bir yo‘nalishlar asosida texnologiyalarini takomillashtirish va targ‘ib qilish, kundan kunga rivojlanayot ijtimoiy jamiyatda inson ehtiyojlaridan kelib chiqib zamonaviy talablariga javob beradigan mutaxassislarni tayyorlash bugungi kun talabi bo’lmog’i lozim. Qayd etilganidek, belgilab berilgan vazifalarni amalga oshirishda pedagog xodimlarning malaka darajasini yuksaltirish, ta’lim tizimini tubdan isloh qilish muhim ahamiyatga ega. O‘zbekiston Respublikasi Prezidenti Sh.M.Mirziyoyev 2017-2021 yillarda maktabgacha ta’lim tizimini yanada takomillashtirish borasida qarorlar qabul qildi. Unda ilg‘or xorijiy tajribani hisobga olgan holda bolalarni har tomonlama intellektual, axloqiy, estetik va jismoniy rivojlantirish sharoitlarini yaratish, maktabgacha ta’lim sifatini oshirish, maktabgacha ta’lim tashkilotlarida bolalarni maktabga sifatli tayyorlashni tubdan yaxshilash, ta’lim-tarbiya jarayoniga jahon amaliyotida keng qo‘llaniladigan zamonaviy ta’lim dasturlari va texnologiyalarini joriy etish, pedagogik kadrlarni tayyorlash va malakasini oshirishni ta’minlash bo`yicha farmoyish qabul qilindi.

XXI asr texnika va texnologiyalar asri. Bu zamonda yangiliksiz, izlanishsiz, yaratuvchanliksiz inson mustaqil individ sifatida hayotda o`z o`rniga ega bo`lolmaydi.

XXI asr texnika va texnologiyalar asri hisoblanadi. Bugungi kunda har bir oilada texnik qurilmalar – masalan, mobil telefonlari, televizor, kompyuter, planshet va boshqalar kundalik iste’molda keng qo`llanadi. Shunisi diqqatga sazovorki, kichik yoshdagi bolalar kattalarga nisbatan bu qurilmalardan tez va oson foydalanishadi. Ammo, maqsadga yo`naltirilganlik darajasi juda oddiy. Shu ma’noda, maktabgacha ta’lim tashkilotlarida to`liq texnologiyalar bilan ta’minlanish bosqichiga o`tilmoqda. Bu esa ta’limda ko`rgazmali qurollardan, zamonaviy texnologiyalar asosida foydalanish imkoniyatini kengaytiradi. Ayniqsa, maktabgacha tarbiya tashkilotlarida bolalar

uchun o`yin dasturlarining bilimga qaratilgan turlaridan foydalanish maqsadga muvofiq.

Darhaqiqat, bugun barcha texnik vositalar bizning qo`limizdagi eng yaxshi qurol, bilimlar manbai hamda imkoniyatlar kalitidir. Faqat, maktabgacha ta'lim tashkilotlaridanoq undan to`g`ri va ongli foydalanish, ma'naviyatimizni yuksaltirishga qaratilgan uzluksizlik va uzviylik asosidagi dasturlar yaratishga loqayd bo`lmasakgina bu hamkorlik porloq istiqbolga xizmat qiladi.

Maktabgacha ta'lim tizimida bolalarning qiziqishi inobatga olingan holda hatto aniq bir yo'nalish boyicha ularni guruhlarga ajratish va ma'lum sohaga yo`naltirish mumkin. Alohida guruh tashkil qilinishi yoshligidanoq ma'lum sohalarga qiziquvchan bolalar bilan ishlash maqsadini ham osonlashtiradi.

Bunda bolalar ruhiyatiga, kayfiyati hamda qiziqishlariga hatto ularning bir xildagi kiygan kiyimlari ham ta'sir qilishi nazarda tutilsa, kichkintoylarda o`ziga bo`lgan ishonch, faxr tuyg`ulari yanada barqarorlashuvini yaqqol sezamiz. Masalan, bo`lajak vatanparvar bolajonlarning barchasi kichkintoy harbiylarga xos kiyimda bo`lishi o`zilariga ham katta zavq, mas'uliyat bag`ishlaydi.

Mutaxassisligi boshqa bo`lgan maktabgacha ta'lim tashkilotlarida ham xuddi shu kabi islohotlar o`tkazilishi mumkin. Masalan, har bir guruh uchun lohida rangdagi kiyimlar tanlanishi mumkin.

Bundan tashqari, bolalarga konlarni, qazilma boyliklarni izlab topish haqida tasavvur uyg`otish maqsadida turli o`yinlar tashkil etiladi: tuproqning yuzaroq qismiga qandaydir buyumni yashirish va uni mashaqqat bilan topgan bola rag`batlantirilishi muhim. Hatto, kichkintoylarga uni sekin, ohistalik bilan qidirish kerakligi, bo`lmasa zarar yetkazib qo`yish mumkinligi ta'kidlanadi. Bunday mashg`ulotlar bolalarni toza havoda chiniqtirish, tuproqda mashq bajarish bilan birga ularda topag`onlik qobiliyatini ham shakllantiradi.

Shuningdek, Maktabgacha ta'lim tashkilotlarida bolalar uchun alohida ingliz va rus tili xonalarini tashkil etish foydadan xoli emas. U yerda guruhlar navbat bilan mashg`ulot o`tkazishadi. Bolalar barcha innovatsion texnologiya vositalari, o`yinchoqlar, ko`rgazmalar vositasida mashg'ulot olib borsalar, jihozlarga ham shikast yetmaydi, nurlanishning oldi ham olinadi. Muhimi, bunday alohida xonalar bo`ylab yurish bolalarga yaxshi ta'sir qiladi. Ularda ana shunday xonalarga bo`lgan intilish darsga bo`lgan qiziqishning ortib borishiga sabab bo`ladi. Xonaga kirganda bolalar o`zlarini xuddi chet elga tushib qolgandek his qilishlari uchun xona devorlari ham aynan shunday beztiladi. O`yinchoqlar berilganda tarbiyachi har bir o`yinchoqning inglizcha nomini aytib asta sekinlik bilan bolalarga o`rgatishi kerak.

Multfilmlarning inglizcha variantlari qo`yilishi ham til o`rganishni ancha mustahkamlaydi. Binobarin, endigi bo`lajak tarbiychi pedagog axborot texnologiyalari va chet tillarini yaxshi bilishi ayni muddao hisoblanadi. Aks holda, ingliz tili mashg`ulotlarini aynan tarbiyachi emas, balki maxsus ingliz tili o`qituvchilari olib borsalar samarali natijalarga erishiladi.

Maktabgacha ta’lim tizimidagi islohotlar jamiyat va mamalakat taraqqiyoti bilan jadal suratda rivojlanib boradi. Shunday ekan, endilikda juda katta doimiy ish o`rinlariga ega maktabgacha ta’lim tashkilotlarida ehtiyoj paydo bo`ladi. Bunda uzoqroqda yashaydigan bolalarni olib keluvchi alohida avtobuslar tashkil qilish, bundaytashkilotlarining ish tartibi va dasturlari haqida fikr yuritish ham alohida muammolardan hisoblanadi.

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ОЛИЙ ТАЪЛИМ ЖАРАЁНИГА ИННОВАЦИОН ЁНДАШУВНИНГ БОСҚИЧЛАРИ

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Аннотация. Талабаларни ўқитишда замонавий метод ва янгиша усулларда фойдаланиш, уларни замон талаби бўйича таёрлаш ва ўқитиш, уларнинг билим кунликмаларни янада ошириш бугинги куннинг далзарб масалаларидан бири ҳисобланади. Янги педагогик усиллардан хар бир дарс давомида мавзу ва амалий дарсларни ўқитиш зарурят тўғдирмоқта.

Калит сўзлар. Замонавий таълим технологиялар, инновацион таълим технологиялари, фаолият йўналиши, янги ғоя, инновация, педагогик жараён.

Annotation. The use of modern methods and new methods in teaching students, their training and education in accordance with the needs of the time, the further improvement of their knowledge is one of the most important issues of our time. It is necessary to teach topics and practical activities in each lesson from new pedagogical methods.
Key words. Modern educational technologies, innovative educational technologies, area of activity, new idea, innovation, pedagogical process.

Аннотация. Использование современных методов и новых методов в обучении студентов, их обучение и воспитание в соответствии с потребностями времени, дальнейшее совершенствование их знаний является одним из важнейших вопросов современности. Необходимо преподавать темы и практические занятия на каждом уроке из новых педагогических методов.
Ключевые слова. Современные образовательные технологии, инновационные образовательные технологии, сфера деятельности, новая идея, инновация, педагогический процесс.

Кириш. Замонавий таълим технологиялари орасида инновацион таълим технологиялари муҳим ўрин тутади. Луғавий жиҳатдан “инновация” тушунчаси инглиз тилидан таржима қилинганда (“innovation”) янгилик киритиш деган маънони англатади. Мазмунан эса тушунча негизида “инновация” тушунчаси муайян тизимнинг ички тузилишини ўзгартиришга қаратилган фаолиятни ифодалайди.

Барча соҳаларда бўлгани каби таълим тизимида ҳам инновациялар негизида ўқитиш жараёнига нисбатан янгича ёндашувларнинг моҳияти ёритилади. Хўш, инновацияларнинг ўзи қандай кўринишларда намоён бўлади?

Инновациялар қуйидаги кўринишларда намоён бўлади:

- янги ғоялар;
- тизим ёки фаолият йўналишини ўзгатиришга қаратилган аниқ мақсадлар;
- ноанъанавий ёндашувлар;
- ғайри оддий ташаббуслар;
- илғор иш услублари [3; 45-49 бб.].

Шунга кўра, таълим инновациялари – бу маълум таълим соҳаси ёки ўқув жараёнида мавжуд муаммони янгича ёндашув асосида ечиш мақсадида қўлланилиб, аввалгидан анча самарали натижани кафолатлай оладиган шакл, метод ва технологиялар.

Таълим тизимида қўлланиладиган инновациялар қуйидаги гуруҳларга ажратилади:

1. Фаолият йўналишига кўра: педагогик жараёнда ёки таълим тизимини бошқаришда қўлланиладиган инновациялар.
2. Киритилган ўзгаришларнинг тавсифига кўра: радикал, модификацияланган ҳамда комбинацияланган инновациялар.
3. Ўзгаришларнинг кўламига кўра: тармоқ (локаль), модул ва тизим инновациялари.

4. Келиб чиқиш манбаига кўра: жамоа томонидан бевосита яратилган ёки ўзлаштирилган инновациялар [4; 78-79 бб.].

Таълим тизимида ёки ўқув фаолиятида инновацияларни қўллашдан сарфланган маблағ ва кучдан имкон қадар энг юқори натижани олиш мақсади кўзланади.

Инновацияларнинг ҳар қандай янгиликдан фарқи шундаки, у бошқариш ва назорат қилишга имкон берадиган ўзгарувчан механизмга эга бўлиши зарур.

Барча соҳаларда бўлгани каби таълим тизимидаги ҳар қандай янгилик ҳам инновация бўла олмайди. Бу ўринда “новация” ва “инновация” тушунчалари фарқланади.

Агар фаолият қисқа муддатли, яхлит тизим хусусиятига эга бўлиб, фақатгина тизимдаги айрим элементларни ўзгартиришга хизмат қилса у новация (янгиланиш) деб юритилади.

Бордию, фаолият маълум концептуал ёндашув асосида амалга оширилиб, унинг натижаси муайян тизимнинг ривожланишига ёки уни тубдан ўзгартиришга хизмат қилса, у ҳолда у инновация деб юритилади.

Инновациянинг амалиётга киритилиши инновацион жараёнларда амалга оширилади. Инновацион жараён инновацион ўзгаришларга тайёгарлик кўриш ва уни амалга ошириш жараёнидир.

Таълим тизимида инновационлар қуйидаги ўзгаришларга олиб келади**:**

- педагогик тизимнинг тамомила ўзгариши;
- ўқув жараёнининг ўзгариши;
- педагогик назариянинг ўзгариши;
- ўқитувчи фаолиятининг ўзгариши;
- ўқувчи фаолиятининг янгиланиши;
- педагогик технологиянинг ўзгариши;
- таълим мазмунининг янгиланиши;
- ўқитиш шакл, метод ва воситаларининг ўзгариши;
- таълим тизими бошқарувнинг ўзгариши;
- таълим мақсади ва натижаларнинг ўзгариши.

Педагогнинг инновацион фаолияти. Таълим жараёнидаги ҳар қандай инновацион ўзгаришлар, таълим тизимига янгиликларнинг киритилиши бевосита ўқитувчи фаолиятини янгилаш ва ўзгартириш орқали амалга оширилиши. Педагогнинг бу борадаги фаолияти “инновацион фаолият” деб юритилади.

Инновацион фаолият – бу янги ижтимоий талаблар билан анъанавий меъёрларнинг мос келмаслиги ёки янги шаклланаётган ғояларнинг мавжуд ғояларни инкор этиши натижасида вужудга келадиган мажмуали муаммоларни ечишга қаратилган фаолият. Бу каби фаолият узлуксиз равишда янгиликлар асосида ишлаш бўлиб, у узоқ вақт давомида шаклланади ва такомиллашиб боради. Инновацион фаолиятнинг асосий белгилари қуйидагилардир [1]:

- ижодий фаолият фалсафасини эгаллашга интилиш;
- педагогик тадқиқот методларини эгаллаш;
- муаллифлик концепцияларини яратиш қобилияти;
- тажриба-синов ишларини режалаштириш ва амалга ошира олиш;

- ўзидан бошқа тадқиқотчи-педагоглар тажрибаларини қўллай олиш;
- ҳамкасблар билан ҳамкорлик;
- фикр алмашиш ва методик ёрдам кўрсата олишлик;
- зиддиятларнинг олдини олиш ва бартараф этиш;
- янгиликларни излаб топиш ва уларни ўз шароитига мослаштириб бориш.

Инновацион фаолият – педагогнинг руҳий, ақлий, жисмоний кучини маълум мақсадга йўналтириш асосида назарий билим, амалий кўникма ва малакаларни эгаллаш, амалий фаолиятни назарий билимлар билан тўлдириб бориш, билиш, лойиҳалаш, коммуникатив нутқ ва ташкилотчилик маҳоратини ривожлантиришни талаб этади.

Фикрига кўра инновацион (ижодий) ёндашув:
- ижодий фаоллик;
- фаолиятга янгилик (ўзгартириш) киритишга технологик ва методологик жиҳатдан тайёргарлик;
- янгича фикрлаш;
- юксак муомала маданиятига эга бўлишни ифодалайди [4; 21-22 бб.].

Таълим тизимидаги инновацияларни педагогик жараёнга татбиқ этиш тўрт босқичда амалга оширилади:
1. Муаммони таҳлил асосида аниқлаш.
2. Мўлжалланаётган таълим тизимини лойиҳалаш.
3. Ўзгаришлар ва янгиликларни режалаштириш.
4. Ўзгаришларни амалга ошириш.

Инновацион фаолият – илмий изланишлар, ишланмалар яратиш, тажриба-синов ишларини олиб бориш ёки фан-техника ютуқларидан фойдаланган ҳолда янги технологик жараён ёки янги такомиллаштирилган маҳсулот яратишдан иборат.

Инновацион фаолият янги ғояни излашдан бошланади. Педагогик инновация таълим-тарбия жараёнидаги муҳим ва мураккаб масала ечимига йўналитирилганлиги сабабли педагогдан янгича ёндашувни талаб қилади.

Ўқитувчини инновацион фаолиятга тайёрлашда бир қатор психологик тўсиқлар мавжуд. Буларнинг биринчиси ўқитувчининг ўзи кўниккан фаолият чегарасидан ташқарига чиқиши жуда қийинлиги, яъни ўқитувчиларда ижодкорликнинг етарли эмаслиги бўлса, яна бир сабаб янги ва номаълум нарсалар ҳар доим одамларда чўчиш ва хавфсирашни келтириб чиқаришидир.

Инновацион фаолият ўқитувчининг ҳамма муваффақиятини белгиловчи асосий фаолият бўлиб, у шахснинг касбий, методик маҳоратини сифатли қайта қуриш демакдир.

Педагогда таълим жараёнига инновацион ёндашувни қарор топтириш босқичлари. Ўқитиш жараёни ёки таълим тизимига инновацион ёндашувни қарор топтириш ўз-ўзидан рўй бермайди. Бу жараён бир неча босқичда кечади. Улар қуйидагилардир [5]:

1-босқич: тайёр методик тавсиянома (мавжуд инновация)лардан фойдаланилади;

2-босқич: мавжуд тизимга айрим янги ғоялар, методлар киритилади;

3-босқич: янги ғояни амалга ошириш мазмуни, шакл ва методлари ишлаб чиқилади;

4-босқич: педагог ўқитиш ва тарбиялашга оид ўз концепцияси ёки методикасини ишлаб чиқади.

Педагогларнинг инновацион фаолияти қуйидагилар билан белгиланади:

- янгиликни қўллашга тайёргарлиги;
- педагогик янгиликларни қабул қилиши;
- новаторлик даражаси;
- коммуникатив қобилиятнинг ривожланганлиги;
- ижодкорлиги.

Шу билан бирга педагогнинг инновацион фаолиятини унинг мотивацияси, малакавий тайёргарлиги, педагогик тажриба-синов ишларини амалга оширишга оид билим ва малакалари, педагогик фаолиятдаги муаммо (тўсиқ)ларни бартараф эта олиш маҳорати билан ҳам белгиланади.

Ўқитувчи инновацион фаолиятининг асосий белгиларидан бири унинг ижодий фаоллиги, ижодкорлиги ҳисобланади. Ўқитувчидан янгиликларни ўзлаштириб бориш билан бирга уларни ўз фаолиятида қўллаши ва педагогик жамоа ўртасида тарғиб қилиши талаб этилади [2; 53-55 бб.].

Педагогларда инновацион фаолият кўникмаларини шакллантиришда жамоадаги психологик муҳит, жамоа аъзоларининг жаҳон таълим янгиликларидан хабардорликлари муҳим аҳамиятга эга.

Хулоса. Педагогнинг таълим жараёнига инновацион ёндашувининг натижалари қуйидагиларда кўринади:

- фаолият мақсадини аниқ белгилаб олишида;
- ностандарт вазиятларда тезкор қарорлар қабул қилишида;
- ўқув ёки илмий-тадқиқот жараёни билан боғлиқ масалаларни самарали ечиш усулларини эгаллай олганлигида;
- муаммоларни ҳал этишда энг самарали восита ва методларни танлай билишида;
- ўз устида мустақил ишлашни режалаштира олишида;
- фаолият натижасини назорат ва таҳлил қила олишида;
- замонавий ахборот технологияларидан фойдаланиш малакасининг мавжудлигида;
- янги ғояларни излаб топа олишида.

Таклиф. Жисмоний тарбия маърузаларини утиш вактида электрон доскаларнинг булиши максадга мувофиқ булади. Сабаби машғулотлардаги машқларни расмлар билан курсатиш дарснинг самарадарлигини оширади.

Мактаб ёшидаги болаларнинг жисмоний тарбиясига оид инновацион технологиялардан фойдаланган ҳолда укув қулланмаларнинг ишлаб чиқилиши зарур булади.

Уқув жараёнида уларга фақат жисмоний машқлардан ташқари инновацион умумий фанларни уқитиш вақтида да, жисмоний тарбиядаги узига хос маданиятни узига хос машқларни курсатишни таклиф этилади.

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INTEGRATSIYALASHGAN TA'LIM JARAYONINI TASHKIL ETISH

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Annotatsiya. Ushbu maqolada integratsiyalashgan ta'lim jarayonini tashkil etish, integrativ yondashuv bo‘yicha respublika va xorijiy olimlarning ilmiy-tadqiqot ishlari tahlili, integratsiyalashgan ta’lim tamoyillari, ta’limda integrativ yondashuv, integrativ bilimlarni shakllantirish jarayoni, integrativ yondashuv asosida darslarning bosqichlari va ularni tayyorlash hamda o‘tkazish usullari hususida ko‘rsatma va takliflar berilgan.
Kalit so‘zlar. Integrativ yondashuv, integratsiya, integratsion ta’lim, ta’limda integrativ yondashuv, ta’limda integratsion dars, integrativ bilimlar, didaktik prinsiplar, refleksiv, fanlararo.

Аннотация. В данной статье даны рекомендации и предложения по организации интегрированного образовательного процесса, анализу научно-исследовательских работ республиканских и зарубежных ученых по интегративному подходу, принципам интегрированного образования, интегративному подходу в образовании, процессу формирования интегративных знаний, этапам уроков на основе интегративного подхода и методам их подготовки и проведения.
Ключевые слова. Интегративный подход, интеграция, интегративное обучение, интегративный подход в образовании, интегративный урок в образовании, интегративное знание, дидактические принципы, рефлексивное, междисциплинарное.

Abstract. This article provides recommendations and suggestions on the organization of an integrated educational process, the analysis of research works by republican and foreign scientists on the integrative approach, the principles of integrated education, the integrative approach in education, the process of forming

integrative knowledge, the stages of lessons based on an integrative approach and methods of their preparation and conduct.

Key words. Integrative approach, integration, integrative learning, integrative approach in education, integrative lesson in education, integrative knowledge, didactic principles, reflective, interdisciplinary.

Kirish. Bugungi kunda ilm – fan sohasida olib borilayotgan ilmiy-tadqiqot ishlarida innovatsion, ijodiy va tizimli yondashuvlar bilan bir qatorda integrativ yondashuvdan ko‘proq foydalanilmoqda. Ayni paytda, ta’lim jarayonlarini integrativ tashkil etish, integratsion ta’lim texnologiyalarini takomillashtirish va modulli ta’lim talablari asosida o‘qitish mazmuni va metodikasini takomillashtirishni taqozo etadi. Bu yo‘nalishning istiqbolli tomoni shundaki, muayyan bir tizimni taraqqiyot g‘oyalari bilan integratsiyalashtiriladi. Aslida integratsiyali ta’limni ichki mantiqiy bog‘liqlik va chuqurroq metodologik aloqalarga asoslanib, amalga oshirish zarur. Hozirgi vaqtda ta’lim tizimida integratsiya muammosiga alohida e’tibor qaratilmoqda. Ta’lim tizimiga integratsiyani kiritish talabalarda tanqidiy fikrlash, axborotni mustaqil izlash va tahlil qilish ko‘nikmalarini shakllantirishga oid vazifalarni hal etishda asosiy vosita hisoblanadi.

Mavzuga oid adabiyotlarning tahlili. Mavzuga oid adabiyotlarning tahlili. Jaxonda ta’lim sifati va samaradorligini oshirishda integrativ yondashuvdan foydalanish, o‘qitish jarayonlarining integratsiyalashuviga kompleks yondashuvni tatbiq etishga doir qator ilmiy izlanishlar olib borilmoqda.

Bu borada Respublikamizda fanlararo aloqadorlik va integratsion o‘qitish jarayonlarini tashkil etish masalalari bo‘yicha R.Mavlonova, R.Safarova, E.Turdiqulov, M.Mirqosimova, A.Musurmonov, P.Musayev, A.Choriyev, X.A.Abduraxmonova, R.Burxonov, T.Nuriddinovkabi olimlar ilmiy-tadqiqot ishlarini amalga oshirgan. Mazkur tadqiqotlarda fanlararo aloqadorlikning turli yo‘nalishlari va tamoyillari, ularning o‘quv jarayonida muayyan fanlarni o‘zlashtirishda qo‘llanilishi, o‘quv fanlariaro aloqadorlik asosida ta’lim mazmuniga qo‘yiladigan talablar ilmiy-amaliy jihatdan o‘rganilgan.

Xorijiy olimlardan J.Gilbert, F.Cochran, J.W.Gray, M.Trott, R.J.Gaylordlarning ishlarida integrativ ta’lim texnologiyalarini qo‘llashning afzalliklari va imkoniyatlari yoritib berilgan. Mazkur ilmiy izlanishlarda yuqori malakali kadrlar tayyorlashning turli jihatlari, ya’ni innovatsion va pedagogik faoliyatga tayyorlash, ta’limda axborot-kommunikatsiya texnologiyalaridan foydalanish imkoniyatlari, integrativ muhitni tashkil etish masalalariga alohida e’tibor qaratilgan.

Tadqiqot metodologiyasi. Zamonaviy pedagogik amaliyotida fanlararo bog‘lanish asosida ta’limni integratsiyalash yo‘lidagi tadqiqotlar davom etmoqda. Bu vazifa g‘oyat murakkab va ayni paytda katta samara beradi.

Integrativ ta'lim g'oyasi zamonaviy ta’limning kontseptual g'oyalaridan biridir. Integrativ ta'limning maqsadi dunyoga yaxlit qarashni shakllantirishdir.

Integrativ (sintez qiluvchi, poliparadigmal) ta'lim o‘quv jarayonining organik yaxlitligini (mazmuni, tamoyillari, usullari, o‘qitish shakllari, yaxlit faoliyatning barcha tarkibiy qismlari: maqsadlarni belgilash, rejalashtirish, amaliy faoliyat, o‘zini

o‘zi boshqarish, tuzatish), turli xil tushunchalar elementlarini birlashtirishda izchillikni amalga oshiradi [1; 137 b.].

Integrativ ta'lim tizimni shakllantiruvchi ustuvor g'oyalari – bu ta'limning shaxsiy yo‘nalishi, umumlashtirilgan predmet tuzilmalari va faoliyat usullari, o‘qitishda ma'no hosil qiluvchi motivlar, o‘qitishda izchillik, o‘qitishda muammolar, dialogizm, faoliyatni aks ettirishdir [2; 122 b.].

Integratsiyaning bir nechta turlari mavjud:

1. Tabiiy fanlar va gumanitar madaniyatlarning integratsiyasi.

2. O‘qituvchilar tomonidan ta’lim jarayonida fanlararo xarakterdagi etakchi tushunchalarni shakllantirishning yagona dasturlarini ishlab chiqish asosida o‘rganilayotgan fanlarni birlashtirish.

3. O‘quv fanlari o‘rtasidagi munosabatlarning "gorizontal" tuzilmalarini amalga oshirish asosida nafaqat ma'lum bir mavzuning, balki fanlar tsiklining amaliy yo‘nalishini kuchaytirish orqali integratsiyalash.

4. Bilishning umumiy ilmiy usullaridan foydalanish, ushbu usullarni o‘rgatish.

Maqsadli ravishda amalga oshiriladigan fan aloqalari ta’lim jarayonini intensivlashtirishga, o‘rganish motivatsiyasini oshirishga, nutqni, kognitiv qiziqishni rivojlantirishga, talabalarning taqqoslash, umumlashtirish, xulosa chiqarish ko‘nikmalarini shakllantirishga yordam beradi.

Integratsiyalashgan darslarning maqsadi o‘rganilayotgan hodisa, jarayon haqida yaxlit tasavvurga ega bo‘lib, ular mavzuda, dastur bo‘limida aks etadi. Ularning mavzuning boshidagi o‘rni, kirish (umumiy) bo‘lim yoki mavzuni o‘rganish oxirida umumlashtirish sifatida keladi. Kirish va ko‘rib chiqish darsi o‘rganilayotgan narsaning yaxlit rasmini yaratadi. Keyingi darslarda o‘quv materiallari batafsil ko‘rib chiqiladi va tahlil qilinadi. Mavzu (bo‘lim) bo‘yicha yakuniy darsda umumlashtirish va xulosalar chiqariladi.

Integrativ yondashuv asosida ta'lim jarayonini tashkil etishda darslarning bosqichlarini va ularni tayyorlash va o‘tkazish usullarini ko‘rib chiqamiz (1-jadval).

Dars bosqichlari	**Har bir bosqichdagi faoliyat**
Ijodiy guruhni tashkil etish	Integratsiyalashgan darslarni o‘tkazish uchun o‘qituvchilar guruhni shakllantirish. Bunday jamoani shakllantirishda o‘zaro muvofiqlik va uyg'unlik, xayrixohlik va sheriklik omillarini hisobga olish kerak – bu muvaffaqiyat kalitidir.
Tahlil va rejalashtirish	Integratsiyani amalga oshirish zarur bo‘lgan ta’lim kurslari uchun dasturlar, darsliklar va qo‘llanmalarning qiyosiy tahlili. Faktlarni aniqlashtirish darajasini, ularni umumlashtirish chuqurligini, taxmin qilingan mahorat darajasini, shuningdek ushbu mavzuda qo‘llaniladigan bilish usulini aniqlash. Hamkor o‘qituvchilar bilan taqvim-tematik rejalashtirishni tuzish (individual o‘quv fanlarining yaqin mavzularini, birlashtirilgan darslarning soni va mavzusini aniqlash).
Dars mazmunini loyihalash	Darsning maqsadi, vazifalarini aniqlash. Tarkib

	ustida ishlash: har bir o‘qituvchi talabalarni jalb qilib, o‘z yo‘nalishi bo‘yicha material tanlaydi (qo‘shimcha adabiyotlar, qiziqarli faktlar, rasmlar, musiqiy asarlar, audio-video materiallar). Ijodiy guruh integratsiyalashgan qismlar o‘rtasida aniq chegaralarsiz darsning yaxlit to‘qimasini yaratish uchun hamma narsani ko‘rib chiqadi va faqat ma'lum vaqt oralig'ida dars uchun zarur bo‘lgan narsalarni tanlaydi.
Repetitsiyalar	Ushbu bosqichda stsenariy takomillashtiriladi: barcha sahnalarni ishlab chiqish, vaqtni saqlash amalga oshiriladi.
Ijro etuvchi	Integratsiyalashgan darsni o‘tkazish. Darsning boshlanishda talabalarga kuchli ta'sir ko‘rsatishi kerak. Ta'sir qilish usullari boshqacha bo‘lishi mumkin: muammo, qiziqarli voqea, musiqiy yoki video kirish. Asosiy qismida dars bosqichlari tuzilgan; o‘qitishning turli shakllaridan foydalaniladi (rol va biznes o‘yinlari, seminarlar, dialog darslari, sayohatlar, ekspeditsiyalar, loyihalarni himoya qilish, multimedia yordami bilan darslar; talabaning faoliyati o‘rganilayotgan hodisa, hodisa, jarayon haqida dars mavzusida aks ettirilgan yaxlit tasavvurga erishishga, bilimlarni tushunishga, ko‘nikma va malakalarni rivojlantirishga qaratilgan.
Refleksiv	Tizimli integral tahlil va darsni o‘z-o‘zini tahlil qilish.

1-jadval.

Tahlil va natijalar. Xulosa shuki, integratsiyalashgan texnologiyaning didaktik xususiyatlari (ta’lim oluvchi shaxsiga yo‘nalganlik, o‘quvbilish faoliyatining boshqarish, konsentrizm, hamkorlik, ijodkorlik) o‘quv fani mavzusi, tayanch tushuncha va bilimlar, ko‘nikma, malakaviy kompetensiyalarni ta’lim maqsadlari (ta’limiy, tarbiyaviy, rivojlantiruvchi) bilan ichki integratsiyasi dinamikligini ta’minlashga erishish orqali namoyon bo‘ladi. Shuningdek, Darsning tizimli va integral tahlili - Pedagogik faoliyat mezonlari, Integratsiya tarkibi va tarkibiy qismlari, Integratsiyalashgan obyektlarning yo‘nalishi va integratsiyalashgan ta’lim natijalariga erishishning mezonlari va parametrlarini takomillashtirish muhim ahamiyat kasb etadi.

Xulosa va takliflar. Demak, xulosa qilib aytish mumkinki, ta’lim jarayoniga integrativ yondashuvni qo‘llash natijasida ta’lim, fan va ishlab chiqarishning mustahkam integratsiyasi ta’minlanadi. Chunki ta’lim jarayonida qo‘llanilayotgan integrativ yondashuv texnologiyalarini pedagogik va axborot-kommunitatsiya texnologiyalarga ajratishni taqozo qiladi. Bu integratsiyalashgan texnologiyalarning yo‘nalishlari har xil bo‘lgani bilan, ularning tutashlikdagi umumiy tomonlari ham bor. Oliy ta’limda kompyuter grafikasi va web – dizayn fanini o‘rganish, integrativ

yondashuv asosida axborot-kommunikyatsiya texnologiyalarni qo‘llashning optimal(samarali) yo‘llarini belgilashda uzviylik printsiplarini tadqiq qilish hamda ularning aniq mezonlarini belgilash muhim vazifa sifatida sanaladi.

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MALAKALI PROFESSIONAL KADRLAR TAYYORLASHDA KASB STANDARTLARINING O'RNI

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Annotatsiya. Tizimdagi yangi strategi, kasb standartlari bu muayyan kasb yoki faoliyat turi bo‘yicha zarur bo‘lgan bilim, ko‘nikma va malakalarning tizimli tavsifi. Ular ish beruvchilar, ta’lim muassasalari va xodimlar uchun yo‘riqnoma sifatida xizmat qiladi. Kasb standartlari ta’lim va mehnat bozorini muvofiqlashtirish, kadrlarni tayyorlash va malakasini oshirishda muhim o‘rin tutadi.

Kalit so‘zlar. Kasbiy standarti, real ehtiyoj, kasbiy faoliyat, kompetensiya.

Annotation. The new strategy in the occupational standards system is a systematic description of the knowledge, skills and qualifications required for a particular occupation or activity. They provide guidance for employers, training institutions and employees. Occupational standards play an important role in coordinating education and the labor market, as well as in training and development.

Key words. The role of professional standards in the training of qualified professional staff, real need, professional activity, competence.

Kirish. Bugungi kunda O‘zbekiston Respublikasi inson huquqlari va erkinliklariga rioya etilishini, jamiyatning ma’naviy yangilanishini, ijtimoiy yo‘naltirilgan bozor iqtisodiyotini shakllantirishni, jahon hamjamiyatiga qo‘shilishni ta’minlaydigan demokratik huquqiy davlat va ochiq fuqarolik jamiyatni qurmoqda.

Inson, uning har tomonlama uyg‘un kamol topishi va farovonligi, shaxs manfaatlarini ro‘yobga chiqarishning sharoitlarini va ta’sirchan mexanizmlarini yaratish, eskirgan tafakkur va ijtimoiy xulq-atvorning andozalarini o‘zgartirish respublikada amalga oshirilayotgan islohotlarning asosiy maqsadi va

harakatlantiruvchi kuchidir. Xalqning boy intellektual merosi va umumbashariy qadriyatlar asosida, zamonaviy madaniyat, iqtisodiyot, fan, texnika va texnologiyalarning yutuqlari asosida kadrlar tayyorlashning mukammal tizimini shakllantirish O‘zbekiston taraqqiyotining muhim shartidir. Kasbiy standartlar mehnat bozorining joriy va kelajakdagi ehtiyojlarini hisobga olgan holda ishlab chiqiladi. Bu bizga ish beruvchilar tomonidan talab qilinadigan va professional muhitdagi o'zgarishlarga tezda moslasha oladigan mutaxassislarni tayyorlash imkonini beradi.

Professional standartlar xalqaro talablar va standartlarni hisobga olgan holda ishlab chiqiladi. Bu xalqaro mehnat bozorida mutaxassislarning raqobatbardoshligini oshirishga yordam beradi va mehnat migratsiyasi jarayonlarini osonlashtiradi.

Tadqiqot maqsadi. Malakali professional kadrlarni tayyorlashda kasb standartlarining o‘rni masalasining dolzarbligi bugungi kunda juda katta ahamiyatga ega. Bu bir qator omillar va tendentsiyalar bilan bog‘liq:

Texnologiyalar jadal rivojlanmoqda va yangi ish o‘rinlari yaratmoqda. Kasb standartlari bu texnologiyalarga moslashishni talab qiladi, ishchilarning zamonaviy bilim va ko‘nikmalarga ega bo‘lishi texnologik taraqqiyotga mos ravishda yangilanishni, bozor talablariga javob beradigan kadrlar xalqaro mehnat bozorida raqobatbardosh bo‘lishi kerak. Mehnat bozorida talab qilinadigan bilim va ko‘nikmalar o‘zgarib bormoqda, bu esa kasb standartlarining doimiy yangilanib borishini talab qiladi va kasb standartlari ta’lim muassasalarining o‘quv dasturlarini bozor ehtiyojlariga mos ravishda tayyorlashga imkon berichi kerak.

Tadqiqot natijalari va muhokamasi. O‘zbekiston Respublikasi Prezidentining “Professional ta’lim tizimini yanada takomillashtirishga doir qo‘shimcha chora-tadbirlar to‘g‘risida” 2019-yil 6-sentabrdagi PF-5812-son Farmoni ijrosini va O‘zbekiston Respublikasi kasbiy malakalar, bilim va ko‘nikmalarni rivojlantirish milliy tizimi faoliyatini tashkil etish maqsadida Vazirlar Mahkamasi qarori bilan «Kasbiy malakalar, bilim va ko‘nikmalarni rivojlantirish milliy tizimi to‘g‘risida» nizom ishlab shiqildi [1].

O‘zbekiston Respublikasi Prezidenti tomonidan 2019-yil 16-dekabr, O‘RQ-595-son «Maktabgacha ta’lim va tarbiya to‘g‘risida» qonuni qabil qilindi [2].

Meliyev X.Jamoldinova, O.Risqulova «Tarbiyachining kasbiy kompetenti va mahorati» o‘quv qo‘llanmasida Maktabgacha ta’lim muassasalari uchun tarbiyachi-pedagoglar kasb-hunar kollejlarida, oliy o‘quv yurtlarida tayyorlanadi. Maktabgacha ta’lim muassasalarida bolalarni har tomonlama tarbiyalash uchun malakali tarbiyachi-pedagoglar kerak. Afsuski, bugungi kunda maktabgacha ta’lim muassasalarida ishlayotgan tarbiyachi pedagoglarning katta qismi zamonaviy talablarga javob bermaydi. Ularning 79 foizini o‘rta maxsus ma’lumotli tarbiyachilar tashkil etadi [3; 107-118 bb.].

M.V.Vostretsova «Kasbiy standartlarning tizimdagi o'rni uchun kadrlar tayyorlash malakali kadrlar uchun sertifikatsiya tizimi» otli maqolasida Kasbiy standartlar xodimlarning mehnat majburiyatlarini aniqlash, ularning kasbiy o'sishini rejalashtirish, ish sifatiga qo'yiladigan talablarni ishlab chiqish, tanlash, kasbiy tayyorgarlik va malaka oshirishni tashkil etish.

Professional standartning vazifalari etip:

- bilim va malakalarga qo'yiladigan talablar tizimini yaratish va kasbiy faoliyat talablariga muvofiq vakolatlar;

- malaka darajasini va uning ish haqi darajasiga muvofiqligini aniqlash imkoniyatini ta'minlash;

- kadrlarning kasbiy ta’limini moliyaviy ta’minlashning me’yoriy-huquqiy bazasini yaratish;

- yo'naltirish va nazorat qilish imkoniyatini ta'minlash tashkilotning inson resurslarining rivojlanish darajasi;

- tarmoq ta’lim muassasalari bilan o‘zaro hamkorlikni ta’minlash mexanizmini yaratish;

- kasbiy kompetentsiyaga qo'yiladigan talablarni uyg'unlashtirish;

- korxonaning yagona axborot bazasini yaratish barcha ishtirokchilar uchun ish talablariga muvofiq mehnat faoliyati;

- professional standartlarning sifatga ta'siri kadrlar tayyorlash;

- kompaniyaning bitiruvchilarni olish imkoniyati eng yaxshi javob beradigan ta'lim muassasalari sanoatning o'ziga xos xususiyatlarini hisobga olgan holda ishlab chiqarish talablarin korsatip o'tkan [4].

Xo‘sh, standart o‘zi nima? Standart (inglizcha - me’yor, namuna) so‘zining keng ma’nosi - boshqa shunga o‘xshash ob’yektlarni ular bilan taqqoslash uchun boshlang‘ich sifatida olingan namuna, etalon, model.

Standart so‘zining boshqa ma’nolari ham mavjud: umumiy qabul qilingan, tarixan o‘rnatilgan qoidalar to‘plami (oltin standart, kodlarni rasmiylashtirish standarti, ochiq standart, televizion eshittirish standartlari); namuna sifatida xizmat qiladigan mahsulot; majoziy ma‘noda o‘ziga xos biron bir narsani o‘z ichiga olmaydigan shablon, namuna, malakali professional kadrlarni tayyorlashda kasb standartlarining o‘rni masalasining dolzarbligi mehnat bozorining samarali ishlashi, iqtisodiy o‘sish, raqobatbardoshlik va ta’lim tizimining rivojlanishi bilan bog‘liq. Bu jarayonlar davlat, ish beruvchilar va ta’lim muassasalarining o‘zaro hamkorligini talab qiladi.

Ikki bosqichli oliy ta'lim (bakalavr va magistratura), oliy ta’lim muassasalarining mustaqilligini kengaytirish, davlat boshqaruvini joriy etish, kadrlar tayyorlash, o‘z-o‘zini o‘qitishni individuallashtirish texnologiyalari va vositalarini, masofaviy ta’lim tizimini joriy etish, boy ma’naviyatga asoslangan ta’limning insonparvarlik va gumanitar yo‘nalishini ta’minlashni nazarda tutadi [5].

Kadrlar tayyorlash tizimida shaxsning o‘rni, huquq va majburiyatlari O‘zbekiston Respublikasining tegishli me’yoriy hujjatlarida konstitutsiyaviy tarzda mustahkamlab qo‘yilgan hamda qonun hujjatlari bilan ta’minlangan.

Milliy dasturda: “Ta’limni demokratlashtirish – ta’lim muassasalarining o‘qitish va ta’lim usullarini tanlashda mustaqilligini kengaytirish, ta’limni boshqarishning davlat tizimiga o‘tishdir”.

Xulosa. Shunday qilib, kasb standartlari malakali kadrlarni tayyorlashda mehnat bozoriga moslashuvchanligi muhim rol o‘ynaydi va ta'lim sifatini oshirish, mehnat bozoriga moslashish va iqtisodiy rivojlanishga hissa qo‘shishda muhim omil hisoblanadi. Kasb standartlari ta'lim dasturlarini ishlab chiqishda asos bo‘lib xizmat qiladi. Ular ta’lim sifatini oshirish, yagona baholash mezonlari, malaka oshirish

motivatsiyasi, xalqaro talablarga muvofiqligi va texnologik o‘zgarishlarni hisobga olgan holda o‘z hissasini qo‘shadi. Ta’lim muassasalari, kompaniyalar va davlat idoralarida professional standartlardan foydalanish tez o‘zgaruvchan dunyoda muvaffaqiyatli ishlashga qodir mutaxassislarni samarali tayyorlash va rivojlantirishga yordam beradi.

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QORAQALPOG‘ISTON RESPUBLIKADAGI DEMOGRAFIK VAZIYAT TAHLILI

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Annotatsiya. Ushbu maqolada Qoraqalpog‘iston Respublikasi hamda tumanlaridagi tug‘ilish darajasi, o‘lim darajasi, tabiiy o‘sishi ko‘rib chiqildi. Respublika statistika boshqarmasining 2011-2023 yillardagi statistik ma’lumotlar asosida tahlil qilingan.

Kalit so‘zlar. Demografiya, tug‘ilish darajasi, o‘lim darajasi, tabiiy o‘sish, promille, aholining tabiiy harakati.

Annotation. This article examines the indicators of fertility, mortality, and natural population growth in the Republic of Karakalpakstan and its districts. The analysis was carried out on the basis of statistical data of the Republican Department of Statistics for 2011-2023.

Key words. Demography, birth rate, mortality, natural growth, ppm, natural population movement.

Kirish. Demografik jarayonlarni tadqiq etish ma’lum bir mamlakat yoki mintaqaning ijtimoiy-iqtisodiy rivojlanishini rejalashtirishda muhim ahamiyatga ega.

Binobarin, aholisoni, tug‘ilish darajasi, o‘lim darajasi, yoshi, jinsi, aholining tabiiy harakati, iqtisodiy farqi hamda boshqada asosiy tavsiflar davlat darajasida zarur yechimlar qabul etish uchun asos bo‘lib xizmat etadi. Shuning uchun ham demografik jarayonlarga, masalan, tug‘ilish darajasiga, aholining tabiiy o‘sishiga, nojo‘ya tasir etadigan omillarni aniqlash, uning yechimlarini o‘rganish dolzarb vazifalar sirasiga kiradi.

Tadqiqot maqsadi. Tabiiy o‘sish asosiy demografik ko‘rsatkishlarning biri hisoblanadi, bu tug’ilish va o‘limchilik soni orasidagi farqdir. Qoraqalpog‘iston Respublikasida turli omillar tasiri ostida o‘rganilgan vaqt oralig‘ida sezilarli o‘zgarishlar bo‘ldi. 2011-2023 yillar oralig‘ida Qoraqalpog‘iston Respublikasi aholisining tabiiy usish dinimikasini tahlil qilish.

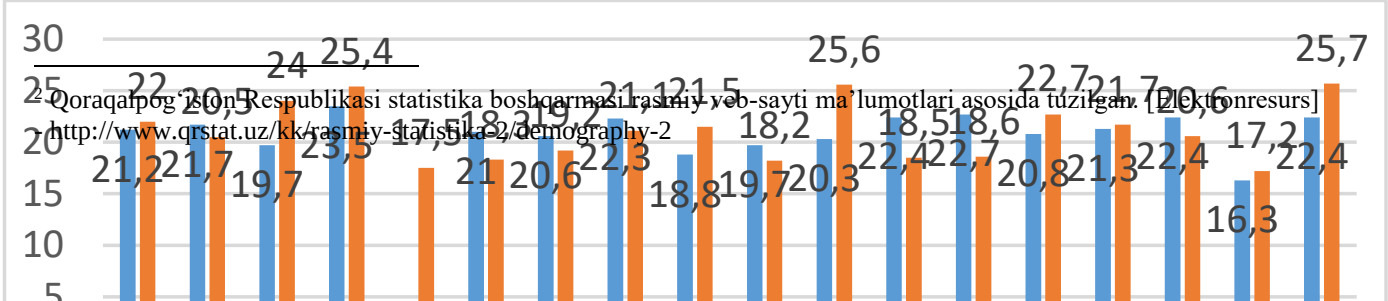
O’zbekiston Respublikasi Prezidenti huzuridagi Statistika agentligi ma’lumotlariga asoslanib tug’ilish va o’limning statistik ko’rsatkishlari baholandi.

Tadqiqot natijalari va muhokamasi. Statistika agentligi ma’lumotlariga ko’ra Qoraqalpog’iston Respublikasi eng ko’p tug’ilish 2023-yilga to’g’ri keladi (44 021 kishi). 2011-yilga kelib, tug’ilganlar soni 35 840 kishini tashkil etdi.

	Qoraqalpog’iston Respublikasi bo’yicha tug’ilganlar soni			
	Jami	Shu jumladan:		Har 1000 kishiga nisbatan promille
		Qiz bolalar	O`g`il bolalar	
2011	35 840	17 369	18 471	21, 2
2012	38 207	18 474	19 733	22, 3
2013	39 100	19 004	20 096	22, 5
2014	40 883	19 563	21 320	23, 2
2015	41 345	19 958	21 387	23, 1
2016	39 427	18 991	20 436	21, 7
2017	37 754	18 367	19 387	20, 5
2018	40 108	19 627	20 481	21, 5
2019	41 137	19 892	21 245	21, 7
2020	39 286	19 064	20 222	20, 4
2021	40 272	19 338	20 934	20, 7
2022	42 835	20 807	22 028	21, 7
2023	44 021	21 267	22 754	22

1-jadval. Qoraqalpog’iston Respublikasi bo’yicha tug’ilganlar soni 2011-2023 yillar[2].

Tug‘ilish darajasi. 2023-yilning yanvar-dekabr oylarida tug‘ilganlar soni 44 021 kishini tashkil qildi va 2011-yilning shu davriga (35840 kishi) nisbatan 8181 kishiga yoki 22,8 foizga ko‘paydi. Tug‘ilish koeffitsienti mos ravishda 22 promilleni tashkil qildi va 2011-yilning shu davriga (21,2 promille) nisbatan 0,8 promillega kopaydi.



Qoraqalpog‘iston Respublikasi statistika boshqarmasi rasmiy veb-sayti ma’lumotlari asosida tuzilgan. [Elektronresurs] http://www.qrstat.uz/kk/rasmiy-statistika-2/demography-2

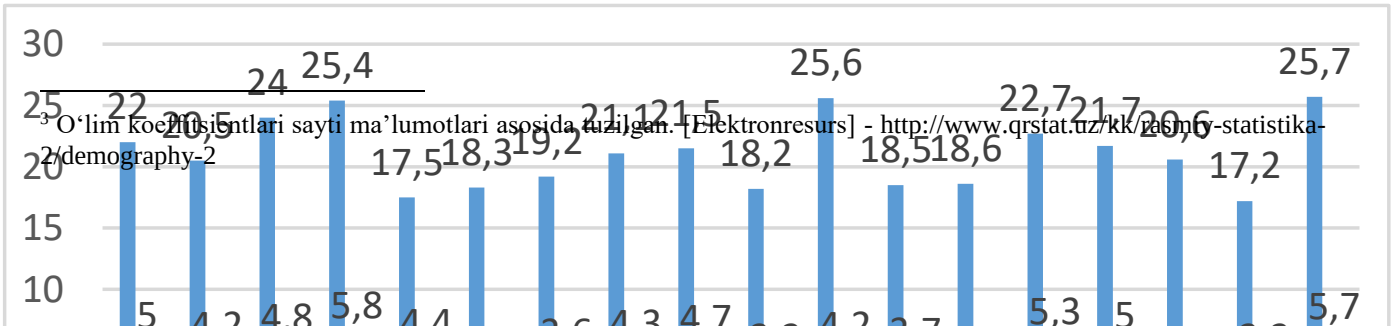
2-jadval. Aholining tabiiy harakati koeffitsientlari (2011-2023 yillarida) (1000 aholi soniga nisbatan promille).

Qoraqalpog‘iston Respublikasida 21,2 dan 22 promillega, Amudaryoda 19,7 dan 24 promillega, Beruniyda 23,5 dan 25,4 promillega, Qonliko’lda 18,8 dan 21,5 promillega, Nukus tumanida 20,3 dan 25,6 promillega, To’rtko’lda 20,8 dan 22,7 promillega, Xo’jaylida 21,3 dan 21,7 promillega, Shumonoyda 16,3 dan 17,2 promillega va Ellikqal’ada 22,4 dan 25,7 promillega ko‘payishi kuzatilgan.

O‘lim darajasi Respublikada 2023-yilning yanvar-dekabr oylarida o‘lganlar soni 10092 kishini tashkil qildi va 2011-yilning shu davriga (8184 kishi) nisbatan 1908 kishiga ko‘paydi. Mos ravishda o‘lim koeffitsienti 5 promilleni tashkil qildi (2011-yilning yanvar-dekabr oylarida 4,9 promille). Respublikada 1000 aholi soniga nisbatan o‘lim darajasining 0,1ga ortganini ko‘rsatadi.

	Kishi			**Har 1000 kishiga nisbatan promille**	
	2011-yil	2023-yil	O‘sish, kamayish	2011-yil	2023-yil
Tug‘ilganlar	35840	44 021	8181	21,2	22
O‘lganlar	8184	10092	1908	4,83	5
Tabiiy o‘sish	27656	33 929	6273	16,3	17

3-jadval. Yanvar-dekabr oylarida aholining tabiiy harakati[3].



[3] O‘lim koeffitsientlari sayti ma’lumotlari asosida tuzilgan. [Elektronresurs] - http://www.qrstat.uz/kk/rasmiy-statistika-2/demography-2

4-jadval. Qoraqalpog‘iston Respublikasi bo‘yicha tug‘ilish, o‘lim darajasi va aholining o‘sishi (2023-yil yanvar-dekabr oylarida 1000 aholi soniga nisbatan promille)[4].

O‘lim ko‘rsatkichlarining yuqori darajasi Beruniyda (4,8 dan 5,8 promillega), To‘rtko‘lda (4,5 dan 5,3 promillega) va Ellikkal'ada (3,9 dan 5,7 promillega) ko‘payishi kuzatilgan.

Xulosa. Qayd etish joizki, 2011-2023 yillarda Qoraqalpog‘istonda jami tabiiy o‘sish koeffitsienti 16,3 ‰ dan 17 ‰ gacha kopaydi. Bu ko‘rsatkich 2023-yilning yanvar-dekabr oylarida Qoraqalpog‘iston Respublikasi bo‘yicha 3-jadvalda tasvirlangan. Tabiiy o‘sishning eng yuqori ko‘rsatkichi Amudaryo (19,2), Ellikkal'a (20), Beruniy (19,6), Nukus tumani (21,4) larida qayd etilgan, past ko‘rsatkichlari Qorao‘zakda (17,8), Bo‘zatov (13,1) tumanlarida kuzatilmoqda.

Shunday qilib, hududlar va tarmoqlarni ijtimoiy-iqtisodiy rivojlantirishning barcha rejalari, dasturlari va ko‘rsatkichlari, shuningdek, ijtimoiy sohaga mablag‘lar ajratilishi demografik ko‘rsatkichlarga asoslanadi. Aholining o‘sish sur'atlari va ularning tarkibiy qismlari (tug‘ilish, o‘lim darajasi) hisobga olinadi. Kelajakdagi barcha tarmoq va hududiy dastur va strategiyalarham demografik ko‘rsatkichlar bilan chambarchas bog‘liq bo‘lishi kerak.

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BASLAWISH KLASS ANA TILI SABAQLARINDA MULTIMEDIALI MATERIALLARDAN NÁTIYJELI PAYDALANIW

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Annotaciya. Bul maqalamızda baslawish klass ana tili sabaqlarinda multimedia materiallarinan nátiyjeli paydalaniw haqqinda jazilǵan. Bul maqalamızda multimedia materiallarinin abzalliqlari keltirilip ótilgen. Multimediali materiallar járdeminde oqitiwshi qanday qilip sabaq otiwi hám duris paydalaniw qaǵiydalari haqqinda keń túsinik berilgen. Bul texnologiyalar járdeminde sabaq ótkende oqiwshi sanasinda qanshelli taza tema qaladi sol sorawlarǵa juwap berilgen. Prezentaciya, elektron doskalar oqiwshilardi ózine tarta aliwi, oqitiwshi waqittan únemli, duris paydalaniwi haqqinda kóp ǵana pikirler berilgen.

Tayanısh sózler. Axborot-kommunikaciya quralları, audio, video hám multimedialı texnologiyalar, oqıw dástúrleri, elektron sabaqlıq hám vizual materiallar.

Annotation. This article discusses the effective use of multimedia materials in first grade native language lessons. This article provides information about multimedia content. Detailed information on how to teach in a multimedia environment and rules for their use. When classes are conducted using these technologies, there will be as many questions as there are topics in the minds of students. Many opinions have been expressed about the submission, about how electronic whiteboards can attract students, saving academic time by using lessons.

Keywords. Multimedia, animation, innovation, communication, digital learning resource, audio, video, graphics, competence.

Аннотация. В данной статье рассматривается эффективное использование мультимедийных материалов на уроках родного языка в первом классе. В этой статье представлена информация о мультимедийном контенте. Подробная информация о том, как преподавать в среде мультимедийных материалов и правила их использования. Когда занятия проводятся с помощью этих технологий, вопросов будет столько же, сколько тем в сознании учеников. Высказано много мнений о подаче, о том, как электронные доски могут привлечь студентов, экономя учебное время, используя уроки.

Ключевые слова. Информационные и коммуникационные средства, аудио, видео и мультимедийные технологии, учебные программы, электронные книги и визуальные материалы.

Ózbekistan Respublikası Prezidentiniń «Kompyuterlestiriwdi ele de

rawajlandırıw hám informaciyalıq-kommunikaciyalıq texnologiyalardı engiziw haqqında»ǵı 2002-jıl 30-may PF-3080-sanlı Pármanı, 2002-jıl 6-iyun 200-sanlı qararı Ministrler Kabinetiniń «Kompyuterlestiriwdi ele de rawajlandırıw hám informaciyalıq-kommunikaciyalıq texnologiyalardı engiziw is-ilajları haqqında»ǵı qararı qabıl etildi. Bunda informaciyalıq-kommunikaciyalıq hám kompyuter texnologiyalarınıń keleshegi hám rawajlanıwı belgilep alındı. Bilimlendiriw sistemasına jańa informaciyalıq-kommunikaciyalıq texnologiyalarınıń kirip keliw bilimlendiriwde úlken burılıs boldı. Bilimlendiriw mákemelerinde pánlerdi oqıtıwda informaciyalıq-kommunikaciyalıq engiziwdiń máselelerine ayrıqsha dıqqat qaratıldı. Zamanagóy informaciyalıq-kommunikaciyalıq texnologiyalardan, oqıwshılardıń iskerligin jedellestiriwshi usıllardan sabaqlarda nátiyjeli paydalanıw wazıypaları belgilep berildi [1].

Multimedia atamasınıń mánisi (mult-mediur yamasa multi-media) eki sózdiń qosılıwınan jasalǵan bolıp, multi-kóp, media ortalıq mánisin ańlatadı. Atama ilimiy ádebiyatlarda “kóp úskeneli”, “multimedia ortalıǵı” sıyaqlı túsindirilip kelinbekte.

Multimedia - bul informatikanıń baǵdarlamalı hám texnikalıq qurallar tiykarında tiykarǵı xabardı dástúriy hám original túrleri tiykarında oqıw materialların oqıwshılarǵa jetkerip beriwdiń jıynalǵan túrdegi kórinisi. Multimedia bul arnawlı texnologiya bolıp, baǵdarlamalı texnikalıq támiyinleniwi tiykarında kompyuterde bir waqıttıń ózinde tekstli, súwretli informaciyanı sesli hám háreketli túrde ańlatıw bolıp esaplanadı [2].

Multimedia quralları arqalı tálim-tárbiya beriw házirgi kúnniń áhmiyetli máselelerinen biri bolıp esaplanadı. Multimedia-bul informatikanıń programmalı hám texnikalıq qurallar tiykarında audio, video, tekst, grafika hám animaciya effektleri tiykarında oqıw materialların mektepke shekemgi jastaǵı balalarǵa jetkerip beriwdiń qolaylı túrdegi kórinisi bolıp esaplanadı.

Oqıwshınıń sawatlılıq dárejesin asırıwda ana tili tálimi zárúrli faktorlardan bolıp tabıladı. Ana tilin oqıtıwda informaciya texnologiyalardan ónimli paydalanıw tálim natiyjeliligin júdá úlken asırıwǵa xızmet etedi. Sol sebepli de ulıwma orta bilim beriwdiń hár eki basqıshında ana tili tálimi natiyjeliligin asırıw ushın etiletuǵın háreketler búgingi kúnniń de talabı bolıp tabıladı desek aljaspaymız. Kompetensiyalıq jantasıw tiykarındaǵı mámleket tálim standartlarında oqıwshınıń sawatlılıǵin asırıw maqset etip belgilengen eken, buǵan baslawısh klasslar úlken itibar qaratıw kerek. Baslawısh klaslarda ana tili pánin oqıtıwda zamanagóy informaciya texnologiyalarınan paydalanıwdıń keń múmkinshilikler jaratılǵan jáne bulardiń qatarına oqıw ádebiyatlarınıń jańa áwladları elektron oqıw qollanbalar, elektron sabaqlıqlar, qısqa ınteraktiv oqıw programmaları, audio qollanbalar, multimedialı sabaqlardı kirgiziw múmkin. Baslawish klass oqıtıwshılarınıń ana tili sabaqlarında oqıwshılardıń sawatxanlıǵin asırıwında eń qolay hám zamanagóy usıllardan biri-sabaq processinde multimedia sabaqlarınan paydalanıw, oqıwshılarda unamlı oqıw motivlerın payda etiw aldına programmalastırılıp disklarǵa jazılǵan oqıw tapsırmaları járdeminde awızsha hám jazba tekstler jaratılıwına mólsherlengen kommunikativ moduller tiykarında islew bolıp tabıladı. Baslawısh klass ana tili sabaqlarında sóz, gáp dúziw hám tekst jaratılıwina arnalǵan kommunikativlik moduller oqıwshılardı anıq hám tez pikirlewge, aqırǵı maqset tárepke umtılıwǵa,

kerek bolsa óz pikirin qorǵaw hám tastıyıqlawǵa úyretedi, óz sóylew sheberligin ǵárezsiz rawajlandırıw ushın múmkinshilik jaratadı.

Ana tili tálimin audio, video hám multimedialı qurallar járdeminde ámelge asırıw oqıwshılardıń bilim, kónlikpe hám ilimiy tájriybelerin rawajlandırıw innovciyalıq xızmetlerden biri esaplanadı. Házirgi kúnde kóplegen rawajlanǵan mámleketlerde oqıtıw usılı bilimlendiriw tarawı baǵdarları boyınsha multimedia qurallarınnan paydalanıp atır. Ámeliyat sonı kórsetip atır, multimedia quralları tiykarında baslawısh klass oqıwshıların oqıtıw nátiyjesi dástúriy usılǵa qaraǵanda 2 ese ónimli hám waqıttan utıw múmkin eken. Multimedia quralları tiykarında bilim alıwda 30 payızga shekem waqtın tejew múmkin bolıp, alınǵan bilimler bolsa yadta uzaq múddet saqlanıp qaladı. Eger oqıwshılar berilip atırǵan materiallardı kóriw tiykarında qabıl qılsa, informaciyanı yadta saqlaw 25-30 payızǵa shekem asadı. Buǵan qosımsha retinde oqıw materialları audio,video hám grafika kórinisinde sáwlelengen halda berilse, materiallardı yadta saqlap qalıw 75 payızǵa artadı [3].

Juwmaqlap aytqanda, zamanagóy informaciya kommunikacion texnologiyalardan paydalanıw oqıwshılarda jedel pikirlew, zamanagóy texnika menen erkin dóretiwshilik baylanıs kónlikpelerin qáliplestiredi hám rawajlandıradı. Oqıwshıda tez bilip alıwǵa, ıqsham hám tez pikirlewge, óz bilimine isenim artadı. Qısqa etip aytqanda, kompyuter menen baylanıs oqıwshı óz-ózinen tálim processiniń subektine aylandiradı. Kompyuter programması onı aktiv islewge, tez pikirlewge, pikirdi anıq hám qısqa ańlatıwǵa úyretedi. Bunday nátiyje bolsa búgingi kúnde júdá zárúr bolıp tabıladı. Sonday eken, informaciya texnologiyaların tálim processine alıp kiriwdi dáwir talap qılıp atır. Bul talapqa juwap bere alıw ushın oqıtıwshı bunday texnologiyanı puqta biliwi, joqarı uqıp menen qollay alıwı, úyreniletuǵın materiallardıń qásiyetlerinen kelip shıqqan halda olardı tuwrı tańlay alıwı kerek. Bul baslawısh klaslarda júdá zárúrli bolıp esaplanadı. Usı orında Joqarı ta'lim, ilim hám innovaciyalar Ministrligine óz usınıslarımdı aytıp ótsem:

- birinshiden baslawısh klass ana tili sabaqlarında multimedialı materiallarınan ele de kóp paydalanıw sebebi baslawısh klass oqıwshıları bolǵannan soń hár túrli reńli nárselerge, multimedialıq materiallarǵa qızıǵadı bul oqıwshılarda sabaqqa degen qızıǵıwshılıǵın ele de arttıradı;
- baslawısh klasslarda elektron doskalar sanın kóbeytiw;
- baslawısh klass elektron variantlı kitaplar sanın arttırıw.

Bul usınıslarım álbette ámelge asıp keleshegimiz bolǵan jaslarımızdı ele de tereń bilim alıwına isenemen.

Paydalanilǵan ádebiyatlar

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ҲӘКИМ АТА БОЙЫНША АЛЫП БАРЫЛҒАН ИЗЕРТЛЕЎЛЕР

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Аннотация. Республикамизда жойлашган муқаддас қадамжолар қаторида Ҳаким ота зиёратгоҳи алоҳида аҳамиятга эга ҳисобланади. Ҳаким ота зиёратгоҳи бўйича ва шу билан бирга бобомиз умри, қилган хайрли ишлари бўйича ҳам фақат ватанимизда эмас, қўшни халқлар илмий тадқиқотларида ҳам бир қанча кенг кўламли тадқиқот ишлари олиб борилган бўлиб, улардан ҳам бебаҳо маълумотлар олишимиз мумкин.
Калит сўзлар. Ҳаким ота, илмий ишлари, келиб чиқиши, тассавуф илм, ҳаёти, ижоди.

Аннотация. Среди священных святынь, расположенных в республике, усыпальница Хаким ата имеет особое значение. Проведен ряд широкомасштабных исследований не нашей стране, но и в научных исследовниях соседних народов о святилище Хаким ата, а также о жизни и добрых делах нашего предка, от которых мы можно получить ценную информацию.
Ключевые слова. Хаким ата, научная деятельность, происхождение, суфизм, наука, жизнь, творчество.

Annotation. Among the sacred shrines located in the Republic, the shrine of Hakim ata is of special importance. A number of large-scale researches have been carried out not only in our country, but also in the scientific researches of neighboring nations on the shrine of Hakim ata, as well as on the life and good deeds of our ancestor, from which we can obtain valuable information.
Key words. Hakim ata, scientific work, origin, Sufism science, life, creativity.

Елимиз бойлап жайласқан муқаддес зыярат орынларын үйрениў ҳәм бул орынларда кең көлемли изертлеў жумысларын алып барыў ҳәзирги күнге келип кең көлемде әмелге асырылмақта. Бул орынлардың пайда болыў себеплери, қайсы дәўирде пайда болған, халық бул орынларға қашаннан баслап зыярат етип келмекте, бул орынларға қойылған атлар шахсларға ҳәм оьразларға

баланыслы қойылыў, болмаса қандайда бир жүз берген ҳәдийсе ақыбетинде атлары келип шығыў ҳәм оны үйрениў бирқанша изертлеўлерди талап етеди.

Усы тийкарда Ислам дүнясына белгили болған Сулайман Бақырғаный бабамыз бойыншада кең көлемли изертлеў жумыслары алып барылмақта. Оның өмир жолы, ислеген мийнетлери ҳәм өзи тәрепинен жазылған әдебиятларын үйрениў ең актуал мәселелерден бири болып саналады.

Тарийх ҳәм фольклор бир-бирин толықтырып, жетилистирип барады. Илимниң қайсы тараўлары болса да бир-бирине жүдә тығыз байланыслы болып келеди. Тарийх, этнография, фольклор, әдебият, тил билими – барлығы илимий изертлеўлерде зәрүр есапланады.

Халық батырлары, тарийхый тулғалар ҳаққындағы дереклер тарийхта да, фольклорда да кең орынды ийелейди. Түркий, мусылман халықлардың арасында Ҳәким Ата Сулайман Бақырғаный салмақлы орынға, атақ-абырайға ийе. Халқымыздың көпшилиги бул уламаны Ҳәким Ата деп таныйды. Ҳәким Атаның өмири ҳәм дөретиўшилиги бойынша шет елли ҳәм елимиздиң илимпазлары бир қатар жумыслар алып барған, дереклер келтирген. Көпшиликти қызықтыратугын мәселелер төмендегише:

Ҳәким Ата ким болған? Оның қәбири қайсы орында жайласқан?

Ҳәким Атаның қәбиристаны, жайласқан орны туўралы дәслепки мағлыўматлар В.Бартольдтиң мийнетлеринде сөз етилген [4; 251 б.].

Белгили қарақалпақ әдебиятшысы, фольклористи, шайыры Қ.Байниязов «Ҳәким Ата – Сулайман Бақырғаный бизиң уллы жерлесимиз» атлы китабында уллы тулғамыз ҳаққында баҳалы мағлыўматларды келтирген. Онда автор илимий изертлеў жумысларын алып барған илимпазлардың шығармаларынан, соның менен бирге халық аўызеки дөретпелеринен дереклер алып шебер пайдаланған. Ҳәким Атаның туўылыўы, камалға келиўи, билим алыўы, дөретиўшилик етиўи, қайсы мәканнан шыққанлығы, өлиминен соң жайласқан қәбири туўралы мағлыўматлар тарийхый ҳәм фольклорлық материаллар тийкарында сәўлеленген. Ҳәким Ата жайласқан қәбир туўралы да тартыслы пикирлер бар. Айырым әдебиятларда ертедеги Хорезм патшалығы орнында делинген болса, және бир дереклерде Хожанд аймағында деп келтирилген, базыбир әдебиятларда Арал теңизи бойларында уллы тулғаның қәбири жайласқан деп атап өтилген [14]. Соңғы дерек анағурлым ҳақыйқатлыққа туўры келеди.

Ҳәким Ата туўралы қызықлы мағлыўматлар бар. Әлийшер Наўайының «Насойим ул-муҳаббат» атлы шығармасын келтирген: «Хожа Ахмед Яссаўий аспазға аўқат писириўди өтиниш еткенде аспаз Яссаўийге отын жетпей атырғанын айтады. Адамлардың алып келген отынлары ызғар екен. Ҳәким Ата өзиниң жыйнаған отынын шапанына орап қурғақ етип алып келген екен. Яссаўий: «Ҳей, перзент, Ҳәкимге сай ис туттың» дейди. Усыннан баслап ол Ҳәким Ата деп атала баслаған [12]. Бул тулғаның суфизм тәлийматы бойынша да даңқы шыға баслаған.

Ҳәким Ата ҳаққында халық аўызеки дөретпелеринде де баҳалы дереклер бар. Ж.Таңирбергенов, Ж.Шамуратовлардың шығармасында уллы тулға туўралы мағлыўатлар сақланған. Ж.Таңирбергеновтың «Ҳәким Сулайман

ҳаққында әпсана» атлы дөретпесинде Ҳәким атаның «Султан Үбби» атлы шығармасы ҳаққында сөз етилген [5; 3, 12 бб.].

Педагог, жазыўшы Ж.Шамуратовтың бир қатар мақалаларында Ҳәким Ата туўралы баҳалы дереклер келтирилген. Атап айтқанда, Ҳәким Атаның ата-анасы, шаңарағы туўралы мағлыўматлар орын алған. Сүлайман Бақырғаныйға Ҳәким атамасының берилиўине байланыслы бир қатар аңыз-әпсаналар келтирилген. Киндик қаны тамған Ўатаны ҳәм туўылған елге және қалай қайтып келгенлиги атап өтилген. Ең баслысы, Хожа Ахмед Яссаўийдиң ең исенген шәкиртлериниң бири болғанлығы айтылған. Соның менен бирге, оның перзентлери ҳаққында баҳалы дереклер жазылған [9].

Бүгинги күнде Ҳәким Ата зыярат орны дүнья халықларын қызықтырып атыр. Әсиресе, шет елли илимпазлар, туристлер усы орынға барыўды үрдис еткен. Э.Қурбановаңың «Сулайман Бақырғаныйдың өмири ҳәм дөретиўшилигиниң Туркияда үйренилиўи» атлы мақаласында қызықлы дереклер орын алған. Илимпазлар Фуад Копрули, Камал Эрарслан, Наждат Тосун ҳәм Ҳаяти Бижа ҳәм басқалар Ҳәким Ата ҳаққында изертлеўлер алып барғанлығы сөз етилген. Мысалы, Фуад Копрули Сүлайман Бақырғаный Хожа Ахмед Яссаўийдиң үшинши халифаси болғанлығын атап өткен [6; 101-104 бб.].

Қазақстан илимпазлары да Ҳәким Ата туўралы изертлеўлер алып барған [10].

Бизге белгили, халқымыз әзел-әзелден ҳәр бир кәсип-кәрдиң, өнердиң, нәрселердиң пирлери болады деген исенимде болады. Мысалы, темир-терсектиң пири – Даўыт Ата, шарўаның пири – Шопан Ата, Сулайман Бақырғаный Ҳәким Ата болса Қоңырат қәўиминиң ҳәм суўдың пири есапланған. Ҳәким Атаның улларынан Асқар султан – жүўериниң пири, Махмуд султан - мәштиң пири, Үбби султан - илаҳиятлар пири, өмирлик зайыбы Әрўана (Әнўар ана) жаңа жумыс баслаўшыларға медет бериўши пир, ҳаял-қызлар, жасы үлкен ҳаялларды қоллап-қуўатлаўшы пир екен» [6; 52 б.].

Филология илимлериниң докторы, фольклортаныўшы Ж.Хошниязов Ҳәким Ата туўралы баҳалы мағлыўматларды келтирди. Әсиресе, халық аўызеки дөретпелеринде Ҳәким Ата ҳаққындағы дереклер оғада қунлы есапланады [7; 95-97 бб.]. Ҳәким Ата пүткил түркий халықлар арасында улама, белгили тулға ретинде қәдирленеди.

«Қарақалпақстанда Ислам тәлийматы ҳәм Қарақум ийшан әўладлары» атамасындағы китапта да уллы тулға туўралы илимий, әмелий мағлыўматлар бар [8; 34-38 бб.].

2002-жыл, 27-ноябрьде Қоңыратта Ҳәким Атаның 880 жыллығына арналған «Сүлайман Бақырғаный ҳәм оның дәўири» атамасында республикалық илимий-теориялық конференция болды ҳәм Ҳәким Атаға байланыслы мақалалар топламы баспадан шықты [3; 127 б.].

Ҳәким Ата зыярат орнында имарат қайта қурылған. Жаңа мешит, китапхана ҳәм тилеўхана салынған. Ески мешиттиң орны да сақланған, ески қудық орны да бар. Ал, ески мешит жанында еки әсирге тең ақ тал тереги бар. Ҳәким Ата зыярат орны ерте дәўирлерде пайда болған. Бул орында археологлар тәрепинен ески мешит орны табылған.

Ҳәким Ата туўралы мағлыўматлар, дереклер көп. Уллы тулғамыздың дөретиўшилигин, өмир баянын изертлеў бүгинги илим тараўларында үлкен әҳмийетке ийе.

Соның менен бир қатарда елимизде жасап тәлим, билимлендириў ҳәм ислам дининиң кең тарқалыўына үлесқосқан уламалар бойынша және де кең түрде изертлеў жумысларын алып барыў мақсетке муўапық болады. Олар бойынша көрсетиў, кинофильмлер ҳәм олар басларына екскурсиялар шөлкемлестириў халқымыз руўхый байыўына үлкен үлес қосқан болар еди.

Усыныс:

1. Улама ҳәм ислам дүньясына белгили әўлийе бабаларымыз бойынша және де кең көлемде изертлеў жумысларын алып барыў тийис;
2. Зыярат орынларына баратын жолларды қайта оңлаў, ол жерге барыўшылар ушын қолай имканияталар жаратыў керек;
3. Бундай ата-бабаларымыз бойынша көрсетиўлер ҳәм кинофильмлер таярлаў зәрүр.

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OLIY TA’LIM MUASSASALARIDA KASBGA YO‘NALTIRIB O‘QITISHDA XORIJIY TILLARNING AHAMIYATI

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Annotatsiya. Mazkur maqolada oliy ta’lim muassasalarida kasbga yo‘naltirilgan xorijiy tillarini o‘qitishning o‘ziga xos xusussiyatlari, kasbiy tamoyillari va vazifalari yoritilgan. Shuningdek, kasbga yo‘naltirib o‘qitishning asosiy tamoyili xorijiy tillarning mutaxassislik fanlari bilan fanlararo aloqadorlik asosida o‘qitishning dolzarb masalalari muhokama qilingan.

Kalit so‘zlar. Xalqaro aloqalar, mutaxassislar, globallashuv, oliy ta’limi bitiruvchilari, kasbiy qiziqish, kasbiy faoliyat, xorijiy tillar.

Annotation. This article describes the specific features, professional principles and tasks of foreign language teaching in higher educational institutions. Also, the main principle of career-oriented teaching and the topical issues of teaching foreign languages based on interdisciplinarity with specialized subjects were discussed.

Key words. International relations, specialists, globalization, graduates of higher education, professional interest, professional activity, foreign languages.

Insonning kasb-hunar bilan bog‘liq bolalikdagi his-tuyg‘ulari, orzu-hayollari yoshga xos psixologik xususiyat bilan bog‘liq. Bolalikdagi kasb-hunar yoki mutaxassislik uchun zarur bilim, shaxs sifatlari va boshqa talablar e’tiborga olinmaydi. O‘smirlik yoshida kasb tanlash yetakchi faoliyat sanaladi. Talabalar ertangi taqdiri haqida o‘ylashga majbur, chunki ular oldida jiddiy hayotiy masala – o‘z kasbining yetuk mutaxassisi bo‘lishi muammosi turadi. Ular kasb-hunar sohalarining ahamiyatli jihatlariga alohida e’tibor qarata boshlaydilar. Shu bois ham, ularning yoshlik davridagi o‘zgarishlar kasb tanlash va kasbning ahamiyatiga chuqur nazar solishga olib keladi. Maqolada shuningdek talabalarni xorijiy tillarni puxta o‘rganishi, ularni o‘z sohasida intelektual kadrlar bo‘lishi haqida aytib o‘tilgan.

Yosh avlodni hayotga, mehnatga tayyorlash – g‘oyat muhim vazifadir. “Kim bo‘lsam ekan” degan savol har bir yigit va qiz uchun eng asosiy muammolardan biridir. Odamning shundan keyingi butun hayoti ana shu muammoni hal qilishga bog‘liq. Kasbni to‘g‘ri tanlash mehnatda va ijtimoiy faoliyatda eng yuksak ko‘rsatkichlarga erishishga yordam beradi, mehnat jarayonida va uning natijalaridan qoniqish esa ijodkorlikni eng ko‘p namoyon etish, eng yaxshi hissiy kayfiyatda bo‘lish, tanho bir kishining ham, umuman jamiyatning ham barcha hayotiy rejalarini birmuncha to‘la amalga oshirish imkonini beradi. Jamiyat hamma zamonlarda yosh avlodga ijtimoiy va kasbiy tajribani berish to‘g‘risida g‘amxurlik qilib keldi. Ishlab chiqarishning rivojlanishi bilan odamga nisbatan qo‘yilgan talablar ham oshdi, bu esa turli kasblarda ishlash uchun xodimlarni tanlashning ilmiy asoslarini ishlab chiqish zarurligini taqozo etdi.

O‘zbekiston iqtisodiyotining o‘sishi va jahon hamjamiyati uchun xos bo‘lgan xalqaro aloqalarning kengayishi, iqtisodiyotining globallashuvi oliy ta’limi bitiruvchilaridan xorijiy til layoqatining mavjudligini talab qilmoqda. Ingliz tilidan xalqaro aloqalarni, xalqaro muloqotni muvaffaqiyatli amalga oshirish vositasi sifatida foydalana olish mehnat bozorida bizning mutaxassislarimizning raqobatdoshligini ta’minlaydi, hamda turizm sohasini yuksaltirib ularni yaxshi ishlarga joylashish imkoniyatlarini ochib beradi va boshqa professional hamda shaxsiy rivojlanish istiqbollarini kafolatlaydi.

Chet tillarni o‘qitishda ilg‘or pedagogik texnologiyalardan, shu bilan birga kompyuter texnologiyalaridan foydalanish, o‘qitish jarayonini jadallashtirish, video va audio resurslardan faol foydalanish yuqorida ta’kidlangan maqsadlarga erishishda yaxshi vosita bo‘la oladi.

Oliy ta’lim muassasalarida ta’lim olishni yanada kasbiy va ijtimoiy yo‘naltirilgan shaklda olib borish uchun, hamda mamlakatimiz oliy ta’lim maskani bitiruvchilari uchun mutaxassisligi bo‘yicha o‘zini imkoniyatlarini amalga oshirishda chet tillarni o‘qitishni bitiruvchilarning mutaxassislik bo‘yicha faoliyatining birinchi qadamlaridan olgan ko‘nikma, malaka va bilimlarini amalga tadbiq qilish uchun jamiyatda mavjud zamonaviy talablar va shartlar asosida tashkil qilish lozim. Yosh mutaxassis o‘z kasbiy faoliyatiga kirishida chet tilida muloqot qilish zarurati bilan yuzma-yuz keladi. Buni muvaffaqiyatli amalga oshirish ko‘p jihatdan ish joyi va mehnat faoliyatiga bog‘liq bo‘ladi. Bularning barchasi talabalarga xorijiy tilda ish yuritish hujjatlarini olib borishni, hamda kasbga yo‘naltirib o‘rgatishning dolzarbligini yana bir bor namoyon etadi.

Talabalarga xorijiy tilda xizmat yuzasidan yozma muloqotni olib borishni o‘rgatish maxsus tanlab olingan autentik va metodik jihatdan to‘g‘ri tashkillashtirilgan autentik matnlarni o‘qishga asoslangan, hamda mos mashqlarga tayangan holda olib borilsa, yanada samarali va ijtimoiy yo‘naltirilgan bo‘ladi.

Muloqotning har bir yo‘nalishi o‘ziga xos kommunikativ vaziyatalarga ega. Kasbiy muloqotning ikki vaziyatini farqlash mumkin: yozma nutq muloqot vaziyati va og‘zaki nutq muloqoti vaziyati. O‘zaro yozma nutq muloqoti vaziyatlariga hisobotlar yozish, xizmat yozishmalari, teleks va fakslar tuzish, yuridik hujjatlarni rasmiylashtirish, xalqaro shartnomalar tuzish kabilarni kiritish mumkin, reklamalar tuzish, yozishmalar olib borishni kiritish mumkin. Yuqorida nomlari keltirilgan vaziyatlar chegarasida mahsuli dialogik yoki monologik xarakterga ega yozma muloqot kommunikativ faoliyati amalga oshiriladi.

Yuqorida ta’kidlanganidek, bugungi kunda iqtisodiyot raqobatbardosh o‘z kasbiy mahoratlarini muntazam oshirib boruvchi, yuqori adaptiv va professional mobillikka ega mutaxassislarni talab qilmoqda. O‘zbekistonning jahon iqtisodiy aloqalaridagi faol ishtiroki, biznes sohasida xalqaro aloqalarni kengayishi, chet el korxonalari bilan hamkorlikda qo‘shma korxonalarni tashkil etilishi millatlararo aloqa vositasi sifatidagi xorijiy tillarni biluvchi mutaxassislarga ehtiyoj sezmoqda va bu ehtiyoj turizm sohasini yanada rivojlantirmoqda. Buning natijasi sifatida ta’lim muassasalarida ingliz tiliga fan sifatida yondashuvning shakl va mazmun jihatidan o‘zgarishiga olib keldi. Jamiyat taraqqiyotining hozirgi bosqichida, oliy ta’lim

muassasalarida “Chet tili” kursining asosiy maqsadi talabalarni xorijiy tilda xizmat yuzasidan muloqot qila olishga o‘rgatish hisoblanmoqda.

Ingliz tilini kasbiy yo‘naltirilgan holda o‘qitish ta’lim oluvchilarning ta’limiy ehtiyojlarga va jamiyatning ijtimoiy buyurtmasiga javob beruvchi ta’lim xizmatidir.

ESP (English for Special Purposes) qisqartmasi hozirda ingliz tilini kasbiy yo‘naltirilgan holda o‘qitish nazariyotchilari va amaliyotchilari ilmiy doirasiga kirgan atama hisoblanadi. Ingliz tilini “English for Special Purposes” sifatida o‘qitish nafaqat uning metodikasiga, balki chet tili mazmuniga ham yangicha yondashuv bilan qarashni talab qiladi.

Ingliz tilini kasbiy yo‘naltirilgan holda o‘qitish deyilganda, ingliz tilini o‘rganuvchilarga ularning ixtisosliklariga mos tarzda o‘qitishni nazarda tutmaydi. Chunki, talabalarning mutaxassislik leksikasini bilishi real shart-sharoitlarda ingliz tilida muloqot o‘rnata olishlarini kafolat qila olmaydi. Har qanday kasbiy yo‘naltirilgan kursning o‘ziga xos jihatlari bo‘lishiga qaramay, chet tilini o‘rganish jarayonlari umumta’lim kursidagidan farq qilmasligi kerak.

Talabalarni kasbga yo‘naltirib o‘qitishda quyidagilarni bajarish maqsadga muvofiq bo‘lar edi. Yo‘nalish fanlari haqida matnlarni o‘qish, ular bo‘yicha savol-javoblarda ishtirok etish. Tanlagan kasbi haqida hikoya qila olish, do‘stlari tanlagan kasblarga munosabat bildirish, rolli o‘yinda ishtirok eta olish. Kasbi haqida she’r yod olish va uni ifodali o‘qish. Quyidagi og‘zaki va yozma mavzularda o‘zaro suhbatlashish. Og‘zaki nutqda:

Hunar, hunardan unar.

O‘z ishimdan sevinaman.

Ilm - kamolot beshigi.

Yozma nutqda:

Hunar va ilmga oid hikmatlarni yozish.

Kasb-hunar tasviri asosida bayon yozish.

Mavzuga oid mashq va topshiriqlar ustida ishlash.

Shunday qilib, kasbni to‘g‘ri tanlashning mohiyati va istiqboli – kasb tanlashda shaxs, kasbiy qiziqish, moyillik va qobiliyatlarini e’tiborga olishda ko‘rinadi.

Mutaxassislarning bashorat qilishlariga qaraganda, har bir inson o‘z hayoti davomida besh-olti marta kasbiy bilim va malakalarni yangilashiga to‘g‘ri kelar ekan. Ayni mana shunda bilimlar tizimi har qanday kasbiy faoliyatning negizini tashkil etadi, umumiy qobiliyatlarni hamda kasbiy jihatdan muhim ahamiyatga ega bo‘lgan fazilatlarni rivojlantirishga yordam beradi, o‘nlab turli mashg‘ulotlarning tushunarli bo‘lishini, mahoratni tez sur’atlar bilan o‘stirishni ta’minlaydi, agar zarur bo‘lsa faoliyat sohasini o‘zgartirish imkonini beradi.

Yuqorida aytilganlaridan shunday xulosa kelib chiqadiki, odamning kasbga yaroqliligi o‘zgaruvchan xarakteristikadir. Kasbga yaroqlilikni shakllantirish bu faqat odamdagi muayyan fazilatlarni rivojlantirishdangina iborat bo‘lib qolmay, shu bilan birga mehnat sharoitini, ishlab chiqarish vositalarini o‘zgartirishni ham taqozo etadi.

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DIFFERENCES IN THE TEACHING OF PRIMARY EDUCATION IN URBAN AND RURAL SCHOOLS

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Annotation. Currently, the field of education is given a lot of attention in Jude. Good conditions have been created in Jude so that young people of our future can receive quality education and add a decent amount to the development of our country. Several different aspects of teaching primary education in urban and rural schools have been highlighted in this article.

Keywords. State educational standard, modern education, comfortable teaching rooms, efficient games, educational environment.

Introduction. Learning never chooses space and time, but sometimes the environment in which people live can affect their worldview in different ways. Neither the educated nor the educated are the same as not everything is the same in life.

Currently, the most important tasks in the field of education are abandoning outdated principles and teaching methods in one mold, requiring the search for new directions that meet the requirements of the time.

The most effective way to teach-the truth of students in training it is his desire for knowledge, thinking, free communication, cooperation. This spirit in the lessons without it, such training will be lifeless, boring and ineffective.

One of the important requirements for the organization of modern education is to achieve high results in a short time, without excessive mental and physical exertion. Between short periods of time, the delivery of certain theoretical knowledge to students, the formation of skills and competencies in them on a certain activity, the assessment of the level of knowledge, skills and qualifications acquired by them requires a high pedagogical skill from the teacher as well as a technological approach to the educational process.

In the course of education, when the teacher is unable to apply methods suitable for the personality of the student, when conditions are not created for changing the personality of the student, a retreat in his upbringing occurs.

The teacher is now faced with a responsible and painstaking task – to teach students to think freely and to form creative thinking.

The changes carried out in the educational process require the upbringing of the growing younger generation, the qualitative improvement of the educational process for them. In the current period, when scientific and technical progress is rapidly developing, it is important to cultivate the creative abilities of students for the training of competitive, independent-minded personnel in the labor market and has been proven in the experience of developed countries. In the full independence of Uzbekistan, the spiritual and mental independence of citizens is an important occupation. That is why training members of society, especially young people, to be able to think intangible, are an extremely urgent issue today. The educational system plays a special role in educating young people as initiators, getting them used to non-standard thinking. At the moment, the main focus of national pedagogy is on the maturation of the spirituality of the brought up person, the formation of him as an active person who thinks in his own way, can come to independent conclusions, is creative, enterprising, does not hesitate to take responsibility. As long as a person's world of feelings, the world of feelings, is not free, he can never say an independent opinion, exclaiming from the repression, violence of a teacher or other person. Able to think freely from a person whose feelings are not touched, to make his own opinion can justify, can protect it. The need to teach free thinking, in addition to the need to strengthen independence, it was necessary to end vices such as muteness, impotence embedded in the spirit of the people, as well as to remove from his mind such qualities as serandishness, blind obedience to adults, impatience. These issues are now taken into account by directly related institutions, individuals, who began to change the attitude towards the educator and realize that the ultimate goal of the educational process is free thinking and spirituality. Most importantly, an independent-minded student was interested in knowing everything, unlike a classmate who did not have such a quality, enjoyed the educational process. It should be noted that the student quickly perceives, thoroughly assimilates educational material when he acquires methods and ways of thinking freely and independently. He will not be satisfied with the lesson. He is offended by the indecent behavior of his classmate, which undermines his thinking.At the moment, a student who is not used to thinking, feels helplessness in front of a thinking classmate, suffers anguish, and from working in a group made up of students of different potential, the teacher is quickly exhausted. Such situations, on the other hand, entail grouping according to the level of training, ability of the students of the class. The main condition for the high efficiency of the work of students, the emergence of initiative and activity of them to create their activities is an assessment.

Sometimes teachers think that students are well versed in their ability, and therefore one can make an assessment of one, not checking whether they are able to perform personal knowledge and exercises, especially since the informant and the learner memorize the main task aspects.These tasks require the assessment of five to six children in the lesson in order to fulfill the stated requirements.

In addition, in each lesson, comes to you! "Raw is going well" you'll get used to it quickly! It is advisable to use the words that if you strengthen a little more, you

will be strong, light, and beautiful. Such words are necessary to throw a gaze, show a gesture, and throw a bite without using any rest.

Methodology. When comparing teaching elementary classes in the city and village, one can first talk about the material technical base. Until now, the appearance and equipment of schools in remote villages is the same as in The Times of the Russian regime. We also see students who have moved walls and are studying in old broken chairs through the mirror world. For this reason, young people also have a much lower interest in reading. What could be the interest of a student who did not see his future in the image of a teacher to gain knowledge?

In cities, spacious bright and cozy rooms, a variety of modern educational equipment, electronic whiteboards, etc. For them, studying in these buildings is a universal joy.

In addition, there is also a huge difference in the worldview and thinking of urban and rural residents.

In the elementary school, students are mainly interested in colorful rooms and classes taking place in modern devices. Especially in a time when the internet and technology are currently developing.

Conclusion. The environment being created in classrooms makes it even easier to acquire knowledge and arouses the interest of students. Villages are not the same in many places; even more excellent conditions have been created than in the city. Most of the very educated young people are also rural children. In all places, whether urban or rural, it is necessary for the teaching teachers to diligently carry out their work.

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ОПЫТ РАЗРАБОТКИ МОБИЛЬНОГО ПРИЛОЖЕНИЯ ДЛЯ ФОРМИРОВАНИЯ ПСИХОЛОГО-ПРАВОВОЙ КОМПЕТЕНТНОСТИ ПЕДАГОГА

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Аннотация. Работа посвящена опыту выполнения работ по проектированию, дизайну, экспресс-прототипированию мобильного приложения в рамках научно-инновационного проекта, ориентированного на коммерциализацию, по теме «Психолого-правовая компетентность педагога как средство самозащиты в профессионально нестандартных ситуациях затрудненного взаимодействия с обучающимися и их родителями». Автором проанализирован процесс создания уникальной концепции, нейминга и макетов интерфейса при подготовке прототипа приложения.

Ключевые слова. Научно-инновационный проект, мобильное приложение, образование, педагог.

Введение. На сегодняшний день все больше людей предпочитают мобильный и быстрый доступ к информации. С каждым годом процент пользователей мобильных приложений растет. Множество программных продуктов в эру цифровых технологий, разрабатывается для мобильных телефонов. Мобильное приложение — это программное обеспечение, специально разработанное под конкретную мобильную платформу. Предназначено для использования на смартфонах, фаблетах, планшетах, умных часах и других мобильных устройствах. Применение приложений экономит время и избавляет от ожидания загрузки элементов (графика, изображение и ряд других), так как программа уже находится на смартфоне.

В 2023-2024 гг. при поддержке Кубанского научного фонда в ФГБОУ ВО «Сочинский государственный университет» в Краснодарском крае Российской Федерации реализован проект по разработке мобильного приложения на основе результатов исследований по проблеме повышения уровня психологической и правовой компетентности педагогов школ.

Цель исследования. Наряду с подготовкой практических рекомендаций для педагогического сообщества было принято решение о необходимости будущего запуска мобильного приложения, в связи с тем, что определенный массив информации должен быть размещен на какой-либо платформе и адаптирован для просмотра на смартфонах. Онлайн-инструментарий позволит организовать в образовательной системе профилактическую работу по предотвращению и урегулированию коммуникативных затруднений во взаимодействии педагога с обучающимися и их родителями.

Рабочее название приложения — «Онлайн-помощник педагога». В соответствии с концепцией, приложение призвано стать навигатором педагога в проблемном поле затрудненного взаимодействия с контактными аудиториями в педагогической коммуникации. Данный медиаресурс будет агрегировать информационные материалы текстового, графического и аудиовизуального формата по психолого-правовым аспектам самозащиты педагога в образовательной среде для ознакомления педагогов с возможностями формирования их психолого-правовой компетентности.

Приложение должно обеспечивать следующие опции: возможность ознакомления с информацией по теме психолого-правовой компетентности педагога; возможность самодиагностики психолого-правовой компетентности педагога; возможность получения образовательного контента по теме психолого-правовой компетентности педагога; возможность получения информации о мероприятиях в рамках проекта.

Методы и организация исследования. В ходе разработки концепции проводился анализ целевой аудитории. Важно определиться, кто будет использовать приложение и какова итоговая цель разработки мобильного инструмента коммуникации с аудиторией.

Основные параметры аудитории обозначены ниже.

Профессия – учителя начальных классов, учителя-предметники, воспитатели, методисты, педагоги-психологи и другие специалисты, работающие в сфере образования. Уровень образования – высшее образование. Деятельность – педагоги школ, работающие с детьми разных возрастов (от младших классов до старших), педагоги дополнительного образования. Пол, возраст – не имеют значения, однако, по результатам исследований в рамках проекта, в большей степени испытывают потребность в развитии психолого-правовой компетентности именно молодые педагоги.

Целевую аудиторию можно разделить на несколько сегментов:

- Молодые педагоги,
- Опытные педагоги,
- Руководители образовательных организаций.

Результаты исследования и обсуждение. Для молодых педагогов важно сформировать психолого-правовую компетентность; опытных педагогов может заинтересовать повышение квалификации; руководителям организации может быть интересно применение мобильного приложения в своем коллективе.

Первоначальным этапом визуализации разработанной концепции является создание логотипа мобильного приложения. Для разработки логотипа требуется аналитический подход к дизайну, проведение маркетингового исследования рынка и изучение аналогичных продуктов в нише. Проводится знакомство с бизнес-логикой аналогов продукта для понимания возможных потребностей пользователя.

В результате мониторинга доступных цифровых магазинов мобильных приложений выяснено, что в большом количестве представлены приложения на тему «психологии», например: «Я могу», «Дневник эмоций», «Ментальное здоровье», «Терапия в кармане», «Анти-депрессия», «Психограм» и другие. Приложений, посвященных правовым аспектам, так же много: «КонсультантПлюс», «Гарант» и другие. В таких приложения, как правило, есть платный контент. Вместе с тем, не найдено приложений, которые объединяли бы и психологические, и правовые аспекты.

Также обратим внимание на то, что по итогам мониторинга платформ и изучения данных отраслевой аналитики, в русскоязычном сегменте по теме заявляемого проекта не представлено какое-либо специализированное программное обеспечение. В этой связи, предлагаемый проект характеризуется как уникальный для российского рынка.

При разработке фирменного знака в данном случае следует понимать, что логотип в будущем будет представлен не только в интерфейсе приложения, но и в качестве иконки в меню смартфона. Иконкой мобильного приложения называют изображение, которое демонстрируется пользователям на экране мобильного устройства. В связи с вышесказанным, рассмотрим особенности разработки логотипа в соответствии с описанной концепцией.

Логотип относят к фирменному стилю и символике проектов. Для логотипа необходимо утвердить нейминг, то есть название, соответствующее рынку и подходящее для продвижения на рынке. В процессе диалога с научным коллективом проекта было принято решение сделать попытку оформления

логотипа с более коротким неймингом, а словосочетание «Онлайн-помощник педагога» использовать в качестве дескриптора. Это краткое сообщение для аудитории, которое объясняет сферу деятельности компании. В отличие от слогана, который может быть абстрактным, дескриптор конкретный: не содержит метафор или запоминающейся рифмы.

Предложенный нейминг EduCare может быть объяснён с точки зрения его значения и ассоциаций, которые он вызывает у потенциальных пользователей. «Edu» — это сокращение от «education», что означает образование, обучение, просвещение. Это подчёркивает основную цель приложения. «Care» переводится как забота, внимание или уход. В контексте приложения это может означать, что оно обеспечивает поддержку и помощь педагогам в их работе. Можно заключить, что название EduCare объединяет две важные концепции: образование и заботу о педагогах. Оно подчёркивает, что приложение предназначено для поддержки и улучшения образовательного процесса, а также для облегчения работы педагогов.

Далее были предложены различные варианты логотипа, которые являются комбинированными, так как содержат и текстовую составляющую, и фирменное изображение. Один из вариантов показан на рис. 1. Также предложено на выбор несколько цветовых решений.

Рисунок 1. Оформление логотипа и иконки мобильного приложения.

Надежное, устойчивое восприятие Мобильного приложения «Онлайн-помощник педагога» (EduCare) обеспечивается разработкой дизайн-концепта посредством создания жесткой системы разделения интерфейса на категории, которые были указаны выше. Помимо этого, дизайн интерфейса должен быть интуитивно понятным, простым и лаконичным. В противном случае, приложение не будет выполнять свои функции для пользователя.

Стиль визуального оформления приложения для педагогов должен быть лаконичным, интуитивно понятным и функциональным. Цветовая гамма должна быть спокойной и не раздражающей. Шрифты должны быть читаемыми и легко воспринимаемыми. Иконки и символы должны быть понятными и узнаваемыми. В целом, визуальный стиль приложения должен способствовать концентрации внимания на содержании и функциях.

Выводы. Таким образом, были разработаны концепция, нейминг и логотип мобильного приложения, а также иконка для мобильной среды. По задумке авторов приложение позволит опубликовать на единой платформе обучающий контент для педагогов, проводить самодиагностику в режиме on-line, размещать видеолекции экспертов. Существующий на сегодняшний день макет позволяет продемонстрировать весь проект дизайна, который максимально приближен к реальности. На этом этапе контент статичен.

Окончательным этапом является этап, где добавляются анимации, логотипы, цвета, пользовательские шрифты. В результате получается кликабельный прототип. Это более детализированная форма финального проекта, который остается в разработке на 2024-2025 учебный год.

БОШЛАНҒИЧ СИНФ ЎҚИТУВЧИЛАРИ ИННОВАЦИОН ФАОЛИЯТИНИ ЛОЙИҲАЛАШ ИЖТИМОИЙ-ПЕДАГОГИК МУАММО СИФАТИДА

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Аннотация. Бошланғич синф ўқитувчиларини ўз инновацион фаолиятини лойиҳалаш, бошланғич синф ўқитувчиларини ўз инновацион фаолиятини лойиҳалаш, бошланғич синф ўқитувчиларини тайёрлаш, ўқитувчининг инновацион лойиҳаси лойиҳа концепцияси, халқ таълими тизими.

Калит сўзлар. Инсон фаолияти, таълим, ўқитувчи, методика, лойиҳалаш, тадқиқотчи, новатор, экспериментатор, инновацион фаолият

Жамиятдаги ахборотлашув жараёни инсон фаолиятининг барча соҳаларини қамраб олмоқда. Бунга айниқса таълим соҳаси, ундаги ўқитувчи фаолияти яққол мисол бўла олади. Таълим олдида турган муаммоларнинг аксарияти ўқитувчининг касбий тайёргарлигини таъминлаш орқали ўз ечимини топади. Шу муносабат билан бошланғич синф ўқитувчиларини ўз инновацион

фаолиятини лойиҳалашга тайёрлаш алоҳида долзарблик касб этмоқда. Бунинг учун ўқитувчининг фундаментал характердаги назарий билимларини бойитиш билан бир қаторда, унинг маданий даражасини ривожлантириш учун ҳам муҳим аҳамиятга эга.

Ўзбекистон Республикаси Халқ таълими тизимини 2030 узлуксиз таълим тизими мазмунини сифат жиҳатидан янгилаш, йилгача ривожлантириш концепциясида узлуксиз таълим тизими мазмунини сифат жиҳатидан янгилаш, шунингдек профессионал кадрларни тайёрлаш, қайта тайёрлаш ва малакасини ошириш, ўқитиш методикасини такомиллаштириш, таълим-тарбия жараёнига индивидуаллаштириш тамойилларини босқичма-босқич татбиқ этиш, ўқувчиларда таълим олишга кучли мотивацияни шакллантириш таълим тизимининг устивор йўналишлари сифатида белгилаб қўйилган.

Янги давр ўқитувчилари малакали тарзда муайян инновацияларни танлашлари, уни қўллашга оид ўз фаолиятларини лойиҳалаштира олишлари керак. Бошланғич синф ўқитувчиси томонидан танланган инновациялар бошланғич таълим мазмунига тўла мос келиши лозим. Бундай инновациялар ўқувчиларнинг ўзига хос хусусиятларини ҳисобга олган ҳолда уларни мужассам ривожлантиришга хизмат қилиши талаб этилади. Янги давр ўқитувчиси нафақат ўз фанидан ўқувчиларга чуқур билим бера олиши, балки янги инновацион усулларни эгаллаган бўлиши ҳам лозим. Ўқитувчи биринчи навбатда ўзи ўзлаштирган инновацион усулларни ўз фаолиятида муваффақиятли қўллаши алоҳида аҳамиятга эга.

Бундай шароитда нафақат бошланғич синф ўқитувчиларини тайёрлаш, балки тадқиқотчи, новатор, экспериментатор, янгича фаолият турини ташкил этувчи, ижодий изланиш лаёқатига эга бўлган, педагогик меросни танқидий баҳолай оладиган, бугунги жамият ҳаётига мослашган шахсни камол топтириш вазифаси ўз ечимини топиши керак. Ўқитувчини мактабдаги инновацион фаолиятга тайёрлаш ниҳоятда зарур бўлиб, у ахборот технологияларини қўллашга оид инновацион фаолиятни чуқур ўзлаштирган бўлиши лозим. Замонавий ўқитувчи ўқувчиларга бугунги кун талаблари асосида билим бериши, уларни маънавий-интеллектуал жиҳатдан ривожлантира олиши талаб этилади.

Инновация инглизча киритилган янгилик, ихтиро деган маъноларни англатади. Шунингдек, илмий-техника ютуқлари ва илғор тажрибаларга асосланган техника, технология, бошқариш ва меҳнатни ташкил этиш каби соҳалардаги янгиликлар, уларнинг турли соҳалар ва фаолият доираларида қўлланилиши кабиларни ҳам ифодалайди.

Лойиҳа – режа, мўлжал, ғоя. Инновацион фаолиятни лойиҳалаш эса, таълим соҳасига киритилган инновациялардан ўқитувчининг ўз фаолиятида фойдаланиш режаси, мўлжали, ғоясидир.

Демак, таълим соҳасига киритилган янгиликлар ўқитувчи фаолиятида алоҳида аҳамиятга эга. Шунинг учун ҳам уни лойиҳалаштириш эҳтиёжи мавжуд. Бу шубҳасиз, ўқитувчиларга қийинчиликлар туғдиради. Мазкур йўналишда муваффақиятга эришиш учун ўқитувчиларда янгиликларга қизиқиш ва эътиборни қарор топтириш зарур. Бунинг учун дастлаб лойиҳаларнинг

мазмунини ишлаб чиқиш, уларнинг алоқадорлик қонуниятларини аниқлаш, ўқувчи шахсини ривожлантириш имкониятларини белгилаш талаб этилади. Лойиҳаларни ишлаб чиқишда таълим жараёнининг узлуксизлиги ва изчиллигини эътиборга олиш мақсадга мувофиқдир.

Ҳар бир лойиҳа чуқур ўйланган ҳолда тузилиши лозим. Ўқитувчининг инновацион лойиҳаси лойиҳа концепцияси, тушунтириш хати, унинг мақсади, вазифалари, уни таълим жараёнига тадбиқ этишдаги қарама-қаршиликлар, муаммолар, фаразлар, ўқув вазиятининг таҳлили, ташқи ҳамда ички воситалари, инновацияларни қўллаш учун қандай имкониятлар мавжуд ва қайсиларини яратиш кераклиги, жамиятнинг таълим олдига қўйган ижтимоий буюртмаси, ўқитувчи фаолияти муваффақиятини таъминловчи мезонлар, инновацияларнинг мазмун-моҳиятини ифодаловчи қисмлар, жумладан, моддий-техникавий, илмий-методик, иқтисодий таъминот, педагог ходимлар фаолияти бошқаруви, педагогик ҳаракатлар ҳамда фаолият истиқболларини башорат қилиш кабиларни ўз ичига олиши лозим.

Мазкур лойиҳада ўқитувчи инновацион фаолиятининг мазмуни ва босқичлари акс этиши зарур. Педагогик лойиҳа режалаштирилган ва тадбиқ этиладиган ҳаракатлар тизимидир. Бу соҳада муайян мақсадга эришиш учун педагогик шарт-шароитлар ва воситалар зарурдир. Лойиҳанинг мақсадида ўқитувчи нимани қўллаши, яратиши, бунинг учун қандай педагогик шароитни вужудга келтириши ўз ифодасини топиши керак. Ўқитувчи инновацион фаолиятини лойиҳалаштириш шунинг учун ҳам зарурки, унинг инновацион фаолияти натижасида таълим жараёни онгли равишда ташкил этилади ва ўзгартирилади.

Ўзбекистон Республикаси Халқ таълими тизимини 2030 йилгача ривожлантириш концепциясида белгиланган ўқитиш методикасини такомиллаштириш, таълим-тарбия жараёнига индивидуаллаштириш тамойилларини босқичма-босқич татбиқ этиш йўналишларига мувофиқ тарзда метод бирлашмалар фаолияти янгича йўсинда ривожланади. Мавжуд методикаларга нисбатан чуқур ҳамда илмий ёндашув таъминланади. Ўқитувчи фаолиятининг мазмуни ва шакли қизиқарли, ўзига хос, бетакрор бўлади. Ўқув жараёни эса жозибали ва қизиқарли кечади. Ҳар бир ўқитувчи ўз инновацион фаолиятини лойиҳалаштиришда шахсан иштирок этар экан, янги тажрибалар, ёндашувлар ва ғояларни ўзлаштиради. Бу эса ўқитувчининг касбий тараққиётида муҳим ўрин эгаллайди. Улар янги фикрлар ва ғояларнинг ташаббускори сифатида намоён бўла бошлайдилар. Шу билан бир қаторда, турли ташаббускор гуруҳларни бошқаришга киришадилар. Инновацион фаолиятни лойиҳалаш натижасида ўқитувчи методик ишларининг мазмуни янгиланади. У педагогик–психологик билимларни ўзлаштиришга эҳтиёж сеза бошлайди.

Педагогик фаолиятнинг мазмуни янги инновацион ғоялар билан бойитилади. Ўқитувчи методист сифатида ҳам фаолият кўрсата бошлайди. Ўқитувчи инновацион фаолиятини лойиҳалаш натижасида инновацион-методик жараёнларни осон бошқариш имконияти туғилади. Метод

бирлашмалар фаолияти эса самарали ташкил этилади. Шундай йўл тутганда ижобий натижаларга эришилади. Шу билан бир қаторда:

- ўқитувчи инновацион фаолиятни лойиҳалаш тажрибасига эга бўлиши натижасида инновацион жараёнларни бошқариш воситаларини қўлга киритади. Мактабда методик ишларни ташкил этиш имконияти кенгаяди;

- ўқувчиларни ривожлантиришга йўналтирилган дастурнинг мақсади ва уни тадбиқ қилиш йўллари ойдинлашади;

- педагогик ижодкорликнинг асоси бўлган жараёнга тадқиқотчилик нуқтаи назаридан ёндашиш кўникмаси такомиллашади;

- ўқитувчининг ҳам педагог, ҳам методист сифатидаги маҳорати ортади;

- таълим бериш тажрибасининг мазмуни янгиланади;

- инновацион, методик ишлар тизими такомиллаштирилади, уларнинг самарадорлиги ортади.

Мавжуд адабиётларда ўқитувчининг инновацион фаолиятини лойиҳалашда унинг фаолияти педагогик жараённи бошқариш шакли сифатида яхлит тарзда қамраб олинади. Бунинг натижасида ўқув жараёни унга сарфланадиган вақт ва воситалар ижобий нуқтаи назардан ўзгаради. Инновацион фаолиятни лойиҳалаш мураккаб педагогик жараён бўлиб, у ўқитувчи фаолияти, ўқув вақти, имкониятлари ва воситалари орасидаги ўзаро алоқадорликни таъминлаш имконини беради.

Ўқитувчи инновацион фаолиятини самарали ташкил этиш учун қўйидагича **тавсиялар** этиш мумкин: 1) мавжуд инновациялар банкини вужудга келтириш; 2) инновациялар банкига кирган барча технологияларни назарий жиҳатдан таҳлил қилиш ва умумлаштириш; 3) ўқитувчиларни қайта тайёрлаш ва малакасини ошириш тизимида инновациялардан фойдаланиш бўйича илмий–методик тавсиялар ишлаб чиқиш; 4) ўқитувчилар фаолиятини ташхислаш орқали улар томонидан қўлланган инновацияларнинг маҳсулдорлик даражасини аниқлаш; 5) мактаб педагоглар кенгашлари ва методик бирлашмаларда ўқитувчиларнинг инновацион фаолиятлари ҳар томонлама таҳлил қилиниши ва уларни такомиллаштириш бўйича методик тавсиялар ишлаб чиқилиши керак.

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MAKTABGACHA TA'LIM TASHKILOTLARIDA BOLALAR OVQATINI TASHKIL ETISH MASALALARI

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Annotatsiya. Ushbu maqolada maktabgacha ta'lim tashkilotlarida bolalar ovqatini tashkil etish masalalari, maktabgacha ta'lim tashkilotlarida bolalar ovqatini tashkil etishning nazariy asoslari, pedagogik shart-sharoitlari, oziq-ovqat maxsulotlarini ratsionga to'g'ri kiritish, bolalarni maktabgacha ta'lim tashkiloti va oila sharoitida ovqatlantirish, maktabgacha ta'lim tashkilotlari xodimlari va ota-onalar vazifalari, normativ-huquqiy hujjatlar va undagi qo'yilgan vazifalar ochib berilgan.

Kalit so'zlar. Maktabgacha ta'lim, maktabgacha ta'lim tashkilotlari, ta'lim-tarbiyachi, bolalar.

Annotation. This article discusses the problems of establishing a school education system, the conceptual principles of establishing a school education system, the pedagogical principles, the rational introduction of nutritional content, the role of children in school education system and the role of families in school education system, the tasks of teachers and parents in school education system, the regulatory and legal tasks assigned to them.

Key words. Preschool, education, preschool organization, educator, children.

Аннотация. В данной статье рассматриваются вопросы создания детского питания в образовательных учреждениях, наглядные принципы создания детского питания в образовательных учреждениях, педагогические принципы, правильное введение в рациональную систему питания, воспитание детей в образовательных учреждениях и в семьях, задачи работников и родителей образовательных учреждений, задачи, предусмотренные нормативными актами и нормативными правовыми актами.

Ключевые слова. Школьный учитель, учредитель школьного образования, педагог, ребенок.

Kirish. O'zbekiston Respublikasi Prezidentining "Maktabgacha ta'lim tizimini tubdan takomillashtirish chora-tadbirlari to'g'risida" 2017-yil 9-sentabrdagi PQ-3261-son qarorining 3-bandiga muvofiq Toshkent shahrida joylashgan davlat maktabgacha ta'lim tashkilotlariga tadbirkorlik subyektlari tomonidan tayyor ovqatlarni yetkazib berish bo'yicha eksperiment o'tkazildi. Eksperiment jarayonida 60 nafar tadbirkor va 266 ta maktabgacha ta'lim tashkiloti ishtirok etib, jami 63760

nafar tarbiyalanuvchini autsorsing usulida (maktabgacha ta’lim tashkilotiga tayyor ovqat yetkazib berish yo‘li bilan) ovqatlantirish tashkil etildi. Eksperiment jarayonida tarbiyalanuvchilarning ishtirok etgan 3358 nafar ota-onasi o‘rtasida o‘tkazilgan so‘rovnomalar natijalariga ko‘ra, 2921 nafar (87%) ota-onalar autsorserlar tomonidan tayyorlagan taomlarga ijobiy baho berdi [1].

Quyidagilar maktabgacha ta’lim tashkilotlarida sog‘lom ovqatlantirishni tashkil etishning asosiy vazifalari hisoblanadi:

- tarbiyalanuvchilarning belgilangan sanitariya qoidalari, normalari va gigiyena normativlariga muvofiq holda ovqatlanishni tashkil etish;
- tarbiyalanuvchilarni sifatli oziq-ovqat mahsulotlari bilan ta’minlash;
- oziq-ovqat mahsulotlari hamda taomlarning xavfsizligi va sifatini kafolatlash;
- tarbiyalanuvchilarda ovqatlantirish bilan bog‘liq yuqumli kasalliklarning tarqalishiga yo‘l qo‘ymaslik;
- tarbiyalanuvchilar o‘rtasida sog‘lom ovqatlantirish ko‘nikmalarini shakllantirish;
- taomlarni tayyorlashda, oziq-ovqat mahsulotlarini qabul qilish hamda saqlashda sanitariya qoidalari, normalari va gigiyena normativlariga qat’iy rioya qilish [2].

Tadqiqot maqsadi. Maktabgacha ta’lim tashkilotlarida bolalar ovqatini tashkil etishning nazariy asoslari, pedagogik shart-sharoitlarini aniqlash.

Tadqiqotni tashkil qilish uslublari. Tadqiqot jarayonida tahlil, umumlashtirish usullaridan foydalanildi.

Tadqiqot natijalari va muhokamasi. Bolalar ovqatini tashkil etishda, eng avvalo, kunlik meyorlarda belgilangan oziq-ovqat maxsulotlarini ratsionga to’g’ri kiritishdir. Buning uchun birinchi o’rinda, bola organizmining fiziologik extiyojlarini qondiruvchi, oziq moddalarga boy, yuqori quvvatli bo’lgan asosiy oziq-ovqat maxsulotlarini kunlik ratsionga kiritish zarur. Bunday maxsulotlarga go’sht, go’sht maxsuloti (shu jumladan, parranda gushti), balik va tuxum (oksil, yog, A, V_{12}, darmondori, mineral modda, temir kabilar manbai), sut va sut maxsulotlari (oksil, kalsiy, A, V_2 darmondori manbai), sariyog’ va o’simlik moyi (yog’ kislotasi, A va E darmondori manbai), non va non maxsulotlari, yorma va makaron maxsulotlari (uglevod, V_1, V_2, RR darmondori, temir, magniy manbai, sabzavot va mevalar (S,R darmondori, beta-karotin, kaliy, va organik kislota manbai) hamda shakar va kandolat maxsulotlari kiradi. Gurux tarbiyalanuvchilarining jushqin va yaxshi kayfiyatli bo’lishlarida ovqatlantirish to’g’ri tashkil etilishining muhim ahamiyati bor. Bolalarni ovqatlantirishda idish-tovoqlar yetarli bo’lishi va stol atrofida utirishlari uchun qulay shart-sharoitlar yaratilgan bo’lishi, taomlarni tarqatishda esa did bilan chiroyli bezatib, juda issik yoki sovuq bo’lmagan holda berilishi kerak. Bolalarni stol atrofida tozalikka va saranjom-sarishtalikka e’tiborli bo’lishlarini uqtirmoq lozim. Shuningdek, bolalar ovqatlanish uchun stol atrofiga utirganlarda, taomlar quyilishi yoki bir taomni iste’mol qilib bo’lganlaridan keyin, ikkinchisi tortilishini kutib qolmasliklari kerak [3].

Bolalarni maktabgacha ta’lim tashkiloti va oila sharoitida ovqatlantirish bir-biriga mos ravishda amalga oshirilishi lozim. Buning uchun uyda bogchadagi ovkat ratsionini to’ldirishga intilmogimiz zarur. Tashkilotda xamshira tomonidan xaftalik

taomnoma (9-10.5 soatlik guruhlar faoliyat yuritadigan maktabgacha ta’lim tashkilotlarida) nonushta, tushlik, kechki tushlik uchun rejalashtiriladi.

Maktabgacha ta’lim tashkilotlarida autsorsing usulida sog‘lom ovqatlantirishning maqsadlari quyidagilardan iborat:

tarbiyalanuvchilarni to‘laqonli sog‘lom ovqatlantirish, sog‘lig‘ini mustahkamlash va ta’lim-tarbiya jarayonini samarali tashkil etishni ta’minlash;

sifatli taomlar tayyorlash orqali tarbiyalanuvchilarning sog‘lom va barkamol o‘sishini ta’minlash;

taomlarni iste’mol qilish uchun gigiyenik talablarga muvofiq sharoitlar yaratish;

tarbiyalanuvchilarni sanitariya qoidalari, normalari va gigiyena normativlari talablariga muvofiq sog‘lom ovqatlantirish [2].

Shu vaqtning o’zida xaftalik taomnomaga mos ravishda, kechki ovqat uchun tavsiya sifatida alohida xaftalik taomnoma tuzilib, ota-onalar burchagiga ilib qo’yilishi maqsadga muvofiqdir. Shuningdek, ota-onalar bog’chadagi kunlik taomnomaga kiritilgan taom va maxsulotlar bilan tanishib borishlari hamda shunga mos ravishda kechki ovqatni tashkil etishlari ham mumkin Bundan tashqari tarbiyachi va MTT xamshirasi tomonidan ota-onalarga kechki ovqatga (shuningdek, dam olish va bayram kunlariga ham) qanday taom berishlari bo’yicha taklif va tavsiyalar berib borish yo’li bilan ham amalga oshirsa bo’ladi.

Maktabgacha ta’lim tashkilotlarida ota-onalar bilan suhbat o’tkazib, bolani bog’chaga olib kelishlaridan oldin, ya’ni ertalab ovqatlantirmasdan olib kelishlarini ogohlantirib qo’yish lozim. Bola ertalab uyda ovqatlansa, avvalombor, ovqatlanish tartibi buziladi, qolaversa, bog’chaga kelganda, ishtaxasi susayib, yaxshi nonushta qilmaydi [3].

Bolani bog’chaga juda erta, ya’ni ertalabki nonushtadan 1-2 soat oldin olib kelishga to’g’ri kelsa, u xolda uyda yengil nonushta (choy, kakao, sharbat, meva yoki buterbrod) berish mumkin. Tashkilotda maxsulotlarni aloxida (go’sht, baliq, sut va xokazo) tartibda saqlanishi talab qilinadi. Shuningdek, go’sht va baliq yarim tayyor maxsulotlari (go’sht va baliq qiymalari)ni xattoki, muzlatgichda saklashga ruxsat etilmaydi. Go’sht va baliq maxsulotini faqat kulinariya ishlovini berishdan oldin qiyma xolatiga keltirish mumkin.

Turli xildagi oziq-ovqat maxsulotlariga issikliq ishlovi (qovurish shkafida) berishda, ularning pishirish uchun belgilangan xarorat va ishlov berish muddatlariga amal kilish lozim. Qovurish shkafidagi xarorat 220zS dan past bo’lmasligi kerak. Qaynatilgan go’shtdan ikkinchi taom tayyorlansa, albatta, ikkinchi issiklik ishlovi berilish talab etiladi.

Har kuni oshxonada ish tugatilgandan so’ng, xonalarni orasta qilib yigishtirib qo’yishlari lozim. Buning uchun yig’ishtirish vaqtida kiyishga mo’ljallangan maxsus kiyimlar (xalat, fartuk va bosh1.) bo’lishi kerak. Xar oyda bir marta asosiy yigishtirish-tozalash ishlarini utkazish va barcha xona, jixoz va anjomlar zararsizlantirilishi talab etiladi.

Xulosa. Ovqatlantirishni to’g’ri tashkil etishda, tashkilot xodimlarining eng asosiy vazifalardan biri oshxonaga hamda taomlarni tayyorlash va saqlashga qo’yilgan sanitariya-gigiyena talablariga rioya qilishlaridir. Bu talablarga rioya

qilinmasa, bolaning sog'ligiga jiddiy ta'sir ko'rsatishi, jumladan, ovqatdan zaxarlanish, turli kasalliklarga chalinish xolatlari sodir etilishi mumkin.

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OQIW MAQSETLERIN ÁMELGE ASIRIWDA KOMPYUTERDEN PAYDALANIW ABZALLIQLARI

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Annotatsiya. Bul maqalada joqarı tálim sistemasında oqıw maqsetlerin ámelge asırıwda kompyuterdiń múmkinshilikleri, usınıń menen birge tálim alıwshılardıń, informacion-kommunikacion texnologiyalar tiykarında ámelge asırıw zárúrligi, oqıtıwdı individuallastırıw, tálim alıwshılar qábileti, múmkinshilikleri hám qızıǵıwshılıqına maslastırıw, olardıń ǵárezsizligi hám dóretiwshiligin rawajlandırıw haqqında pikirler júrgizilgen.

Tayanısh sózler. Kóp maǵlıwmatlar menen tanıstırıw, zamanagóy tálim, tálim-tárbiya processlerin aktivlestiriw, ǵárezsiz tálim, informaciyalıq texnologiyalar, unamlı nátiyje.

Annotatsiya. Ushbu maqolada oliy ta'lim tizimida o'quv maqsadlarini ro'yobga chiqarish uchun kompyuter imkoniyatlari, shu bilan birga ta'lim oluvchilarning axborot-kommunikatsiya texnologiyalarini qo'llashlari, ta'limni individuallashtirish, ta'lim oluvchilarning qobiliyatlari, imkoniyatlari va qiziqishlarini rivojlantirish, ularning g'arazsizligini ta'minlash zarurligi haqida fikr yuritildi.

Kalit so'zlari. Ko'p ma'lumotlarga ega bo'lish, zamonaviy ta'lim, ta'lim-tarbiya jarayonlarini faollashtirish, beparvo ta'lim, axborot texnologiyalari, yaxshi muhit.

Аннотация. В этой статье обсуждалась необходимость использования компьютерных возможностей для реализации целей обучения в системе высшего образования, а также применения обучающимися информационно-коммуникационных технологий, индивидуализации образования, развития способностей, возможностей и интересов обучающихся, обеспечения их бескорыстия.
Ключевые слова. Современное образование, активизация образовательно-воспитательного процесса, неравнодушное образование, информационные технологии, хорошая среда.

Annotation. This article discussed the need to use computer capabilities to implement the goals of learning in the higher education system, as well as the use of information and communication technologies by learners, individualization of education, and development of students' abilities, opportunities and interests, ensuring their selflessness.
Key words. A large amount of knowledge, modern education, activation of the educational process, unlimited education, information technology, positive education.

Kirisiw. Búgingi kúnde tálim alıwshılardıń ǵárezsiz bilim alıwı hám ámeliy iskerlik kónlikpelerin qáliplestiriwi tiykarǵı wazıypalardan biri esaplanadı. Oqıw procesiniń tiykarǵı maqseti tek ǵana bilimlerdi ózlestiriw, bálkim studentlerdiń biliw qábiletlerin rawajlandırıw hám dóretiwshilik potencialın arttırıwdan ibarat. Bul bolsa, informacion-kommunikacion texnologiyalar tiykarında ámelge asırıw zárúr ekenligin, áyne oqıtıwdı individuallastırıw, tálim alıwshılar qábileti, múmkinshilikleri hám qızıǵıwshılıqına maslastırıw, olardıń ǵárezsizligi hám dóretiwshiligin rawajlandırıw, oqıw informaciyalarınıń jańa dereklerine erisiw, process hám obektlerdi kompyuter jardeminde modellestiriwden paydalanıw hám t.b. lardı támiyinleydi.

Izertlew maqseti. Óz tarawı boyınsha jetik kadrlardı jetkiziw, búgingi kúnde oqıtıwshılar aldına bir qatar wazıypa hám talaplardı qoyıp atır. Sebebi zamanagóy tálimdi informaciyalıq texnologiyalar menen toltırıw, tálim procesiniń natiyjeliligin asırıwdıń zárúrli faktorı bolıp tabıladı.

Izertlewdi shólkemlestiriw usılları. Usınıń menen birge búgingi kún oqıtıwshısı informaciyalıq-kommunikaciyalardan paydalanıw boyınsha tómendegi bilimlerdi iyelewi zárúr:

- kompyuter qurılmalarınan tuwrı paydalanıw;
- tekst redaktorlawda isley alıw;
- grafik programmaları menen islew;
- internetten maǵlıwmatlardı alıw;
- Power Point programması járdeminde prezentaciyalar tayarlaw;
- interaktiv qosımshalardan paydalanıp biliwi hám jarata alıwı;
- slaydlar tayarlaw hám t.b.

Búgingi kúnde zamanagóy tálim sisteması informaciyalıq-texnologiyalar hám kompyuter telekommunikaciyalarınan aktiv paydalanılmaqta. Ásirese tálim mekemeleriniń kompyuter úskeneleri hám Internet tarmaqları menen támiyinleniwine múmkinshilik jaratadı. Bul bolsa barlıq oqıw processleriniń natiyjeliligin asırıwǵa

járdem beredi. Mısalı, túrli dereklerdegi maǵlıwmat hám tájiriybelerge tayanǵan halda sonı aytıw múmkin, tálim processin xabarlandırıw, yaǵnıy oqıw processlerinde informaciyalıq-kommunikaciyalardan paydalanıw tómendegi zárúrli unamlı nátiyjelerge alıp keledi:

- tálim-tárbiya processlerin aktivlestiriw hám studentlerdiń dıqqatın tartıw;
- informaciyanıń túrli sırtqı kórinislerde (tekst, video, grafika, dawıs, animaciya járdeminde) beriliwi, temanıń uzaq waqıt yadta saqlanıwı;
- qısqa waqıt ishinde kóp maǵlıwmatlar menen tanıstırıw;
- studentti shınıǵıw processiniń passiv tıńlawshısınan aktiv qatnasıwǵa aylandırıw;
- ǵárezsiz tálim alıw mádeniyatın qáliplestiriw;
- kompyuter sawathanlıǵın asırıw;
- ótilgen temalardı tákirarlaw hám kóz aldına keltiriw;
- studentlerdiń ózlestiriw dárejesin bahalaw hám nátiyjelerdi sol zamatı monitringda kóriw;
- jiberilgen qátelerdi túsindiriw, dıqqat -itibarın jıynaw;
- studentlerdiń bilim hám kónlikpelerin arttırıw.

Kórinip turıptı, olda, oqıw processlerinde temalardıń didaktikalıq maqsetin ámelge asırıwda kompyuterdiń múmkinshilikleri júdá úlken bolıp tabıladı.

Interaktiv qosımshalardı jaratıw - reaktiv hám bayqaǵısh paydalanıwshı interfeyslerin jaratıw quralları hám usılların usınıs etedi. Ol paydalanıw múmkin bolǵan interfeyslerdi jaratıw ushın túrli dizayn evristikasın óz ishine aladı. Sonıń menen birge, ol paydalanıwshı interfeyslerin keń kólemde ámelge asırıw ushın programmalıq támiynattı proektlestiriw naǵısların uyretedi.

Ínteraktiv qosımsha termini programmalıq qosımshalardıń keń kóleminde salıstırmalı qollanılıwı múmkin. Ápiwayı etip aytqanda, bul paydalanıwshılarǵa oyınlastırıw, vizualizaciya hám hátte VR/AR arqalı audiovizual maǵlıwmatlar menen óz-ara baylanıs qılıw imkaniyatın beretuǵın programma bolıp tabıladı. Tiykarlanıp, hár bir qosımsha qanday da ınteraktivlikke iye.

Ínteraktiv qosımshalar tómendegilerden ibarat:

- interaktiv programma
- interaktiv baylanıs
- interaktiv quram
- interaktiv qurılma
- interaktiv element
- interaktiv tájiriybe
- interaktiv tálim
- interaktiv karta
- interaktiv muzey
- interaktiv ekran
- interaktiv xızmetler
- interaktiv shou
- interaktiv teatr
- interaktiv qural
- interaktiv seminar

Jumaqlaw. Tájiriybelerdi úyrenip, tómendegishe juwmaqqa keliw múmkin: oqıtıwshı informaciya uzatıwshı emes, bálkim máslahátshi, geyde úyreniwshiniń kásiplesi de bolıwı kerek, usınıń menen birge oqıw processlerine informaciya texnologiyaların qollasa student-jaslardı ǵárezsiz pikirlewge, jańa bilimlerdi iyelewge, dúnyaǵa kóz qarası hám oylawın rawajlandırıwǵa, házirgi zaman talaplarına juwap beretuǵın joqarı maman qániyge bolıp jetiwine járdem beredi.

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ZAMONAVIY JURNALISTIKA TA’LIMINING BA’ZI PEDAGOGIK MUAMMOLARI

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Annotatsiya: Mazkur maqolada bo‘lajak jurnalistlarda kasbiy bilim, malaka va kompetensiyalarni rivojlantirishning asosiy jihatlari tahlil etilgan hamda jurnalist kadrlar tayyorlashning innovatsion modeli mazmuni ochi berilgan.

Kalit so‘zlar: jurnalistika, malaka, kompetensiya, tadqiqotchilik, kollegial muloqot, amaliy trening, mahorat darslari, pedagogik modellashtirish.

Bugungi zamonaviy sharoitda bo‘lajak jurnalistlarda kasbiy bilim, malaka va kompetensiyalarni rivojlantirishning asosiy jihatlarini aniqlashtirish muayyan ahamiyat kasb etadi. Bu borada:

talabalar jurnalistika sohasida sifatli fan va ta’lim olish imkoniyatiga ega bo‘lishi kerak. Oliy ta’lim muassasalarida talabalarga zarur ko‘nikma va bilimlarni rivojlantirishga yordam beradigan maxsus fanlarni kiritish maqsadga muvofiq;

o‘qituvchilar tomonidan bo‘lajak jurnalistning malakasini oshirishga yordam beradigan muammoli izlanish, evristik ta’lim singari metodlardan foydalanishlari talabalarga mashq qilish va fikr-mulohazalarni rivojlantirish imkoniyatini beradi;

jurnalistning kasbiy kompetensiyasini rivojlantirishda soha bo‘yicha tadqiqotchilik ko‘nikmalari muhimligi kuzatuvlarimiz natijasida namoyon bo‘ldi. Tadqiqotchilik ko‘nikmalari hozirgi tendensiyalarni va jurnalistlar duch kelayotgan muammolarni tushunishga yordam beradi, shuningdek, tanqidiy fikrlash, ma’lumotlarni tahlil qilish va ongli qaror qabul qilish ko‘nikmalarini rivojlantiradi. Bu malakali jurnalist shaxsini shakllantirish uchun zarur

kompetensiyalarni rivojlantirish va zamonaviy yondashuvlarni ishlab chiqish imkonini beradi;

bo‘lajak jurnalistning kelajakdagi kasbiy faoliyatini tartibga soluvchi standartlar va axloqiy tamoyillar bilan tanish bo‘lishi – zarur omillardan biri. Bunga tahrir qilish, faktlarni tekshirish, anonim manbalarga ishlov berish, xolislik va adolat tamoyillariga rioya qilish qoidalari kiradi;

kollegial muloqot – jurnalistlarning kasbiy kompetentligini rivojlantirishning zarur mezonlaridan biridir. Jurnalistikaning turli sohalaridagi hamkasblar bilan o‘zaro hamkorlik tajriba va bilim almashishga, shuningdek, kasbiy mahoratini oshirishga yordam beradi. Forumlar va professional uyushmalar bunday muloqot uchun foydali platforma bo‘lishi mumkin.

Ushbu pedagogik asoslarning barchasi jurnalistning malakali va samarali faoliyat yuritishiga yordam beradi. Shuningdek, kasbiy kompetensiyani rivojlantirishda soha bo‘yicha ilmiy tadqiqotlar muhim rol bajaradi. Chunki, ular ma’lum bir soha bo‘yicha bilim va tushunchani shakllantiradi, shuningdek, tanqidiy fikrlash, ma’lumotlarni tahlil qilish va ongli qaror qabul qilish ko‘nikmalarini rivojlantiradi.

Hozirgi vaqtda bo‘lajak jurnalistning kasbiy faoliyatga oid bilim, ko‘nikma va malakasini rivojlantirishga yo‘naltirilgan quyidagi shakl, metod va vositalardan foydalanishga alohida ahamiyat qaratish lozim:

- amaliy treninglar bo‘lajak jurnalist uchun intervyu olish, yozish va tahrirlash kabi turli ko‘nikmalarni mashq qilishga qaratilgan mashg‘ulotlarni tashkil etishda muhim rol o‘ynaydi. Treninglar tajribali mutaxassislar rahbarligida o‘tkazilishi mumkin;

- mahorat darslari ilg‘or tajribalarni o‘rganish va tajribali mutaxassislardan maslahat olish, aloqalarni o‘rnatish imkonini beradi. Bunda o‘qitish, tajribalari bilan o‘rtoqlashish va talabalarning ijodiy mahoratini oshirish uchun taniqli jurnalist yoki ekspertlar taklif qilinadigan maxsus darslar tashkil etiladi va bu individual rivojlanishga yordam beradi;

- jurnalistika bo‘yicha chuqur o‘qitishni taklif qiluvchi onlayn kurslar va o‘quv dasturlari sohaning amaliy jihatlarini o‘rganishga muayyan darajada hissa qo‘shadi. Ushbu kurslar video darslar, topshiriqlar, fikr-mulohazalar va boshqa ishtirokchilar bilan muloqot qilish imkoniyatlarini o‘z ichiga olishi mumkin;

- faoliyatga oid professional adabiyotlarni o‘qish va o‘rganish, doimiy ravishda kasbga doir kitoblar, maqolalar va bloglarni mutolaa qilish bo‘lajak jurnalistning bilimini kengaytirish va malakasini oshirishda ahamiyati katta. Ular jurnalistikaning zamonaviy yo‘nalishlari bilan tanishish va ularni o‘z faoliyatida foydalanishda muhim o‘rin tutadi;

- jurnalistlar o‘zaro tajriba almashishlari, hamkasblar va ekspertlardan saboq olishlari, jurnalistika sohasidagi so‘nggi tendensiyalar bilan tanishishlari mumkin bo‘lgan professional tadbirlarda, konferensiya va seminarlarda ishtirok etish amaliy ahamiyatga ega.

Mazkur mulohazalardan kelib chiqib, jurnalistning kasbiy bilim, malaka va kompetensiyalarini rivojlantirishning ilmiy-uslubiy asoslariga alohida e’tibor qaratish maqsadga muvofiq:

talabalar jurnalistika asoslari to‘g‘risida tushunchaga, jurnalistika tamoyillari va usullari, jumladan, reportaj tayyorlash, intervyu olish, maqola yozish, tahrirlash va boshqa asoslari bo‘yicha fundamental bilimlarga ega bo‘lishi lozim. Bu ularga kasb asoslarini tushunish va umumiy jurnalistik mahoratini shakllantirish imkonini beradi;

talabalar jurnalistikaning axloqiy tamoyillari, jumladan, aniqlik, adolatlilik va mustaqillik kabi muhim tamoyillar bilan tanish bo‘lishi darkor. Shuningdek, shu tamoyillarga muvofiq ishlash uchun professional standartlar va amaliyotlardan xabardor bo‘lishlari kerak;

bo‘lajak jurnalist uchun tadqiqot ko‘nikmalari muhimdir, ya’ni talabalar ma’lumotni tadqiq qilish va tahlil qilish ko‘nikmalarini rivojlantirishlari kerak. Bunga faktlarni tekshirish, ishonchli manbalarni qidirish, ma’lumotlar va statistikani tahlil qilish, ishonchlilik uchun ma’lumot manbalarini baholash qobiliyati kiradi;

zamonaviy jurnalist turli media-texnologiyalar va vositalarni yaxshi bilishlari lozim. Bunga raqamli kameralar va jihozlardan foydalanish, video, audio va fotosuratlarni tahrirlash, ijtimoiy media va kontentni tarqatish platformalaridan foydalanish malakasi kiradi;

yosh jurnalistni kasbiy tayyorlashda yozma va og‘zaki shaklda muloqot qilish ko‘nikmalarini rivojlantirishlari kerak. Bu intervyu olish, dialoglar o‘tkazish, maqola va hisobotlar yozish hamda auditoriyaga ma’lumot taqdim etish qobiliyatini o‘z ichiga oladi;

talabalarni jurnalistikada ijodkorlik va innovatsiyalarni rivojlantirishga undash kerak. Bunga axborotni taqdim etishning yangi va original usullarini topish, yangi media formatlaridan foydalanish, turli janr va uslublar bilan tajriba o‘tkazish kiradi. Shuningdek, jurnalistning kasbiy bilim va kompetentligini rivojlantirish jurnalistika sohasidagi joriy tadqiqotlar va ilg‘or tajribalarga asoslanishi zarur.

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ПЕДАГОГИЧЕСКИЙ ФЕНОМЕН ПРЕЕМСТВЕННОСТИ УРОВНЕЙ ОБЩЕГО СРЕДНЕГО И ВЫСШЕГО ОБРАЗОВАНИЯ В РЕСПУБЛИКЕ БЕЛАРУСЬ В УСЛОВИЯХ ЦИФРОВИЗАЦИИ

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Аннотация. В статье рассмотрена проблематика обеспечения преемственности уровней общего среднего и высшего образования в контексте специфики процессов цифровизации образовательной сферы в Республике Беларусь с учетом осмысления феноменологической сущности изучаемого педагогического явления. На примере реализации механизмов обеспечения преемственности в рамках функционарования единой информационно-образовательной среды учреждений образования рассматриваются организационно-педагогические условия эффективного применения средового потенциала.

Ключевые слова. Преемственность уровней образования, механизмы преемственности, информационно-образовательная среда; цифровизация.

Keywords. Continuity of education levels, mechanisms of continuity, information and educational environment, digitalization.

Введение. Разработанность научных вопросов обеспечения преемственности (исследования Т.П.Афанасьевой, М.В.Бывшеевой, Г.П.Новиковой, Г.В.Пальчика, А.П.Сманцера, Ю.С.Тюнникова [1–4]) свидетельствует о стремлении авторов к расноаспектному рассмотрению заявляемой проблематики. Направленность научного поиска в исследовании феноменологической сущности преемственности в условиях цифровизации актуализируют положения Концепции развития системы образования Республики Беларусь до 2030 года и Концепции цифровой трансформации процессов в системе образования Республики Беларусь на 2019–2025 годы [5; 6]. Важным условием достижения качеств «непрерывного, гибкого, модульного, самостоятельного, опережающего, распределенного образования» [7; с. 48] является обеспечение преемственности на всех уровнях системы образования с учетом детерминирующих факторов цифровизации. Данный аспект чрезвычайно важен в расстановке акцентов, указывающих на актуальность, казалось бы, достаточно изученной проблемы преемственности в рамках развития классической педагогической теории. Анализ публикаций позволяет сделать вывод о том, что в современных условиях развертывания цифровой трансформации системы образования вне внимания исследователей

остаются вопросы выявления специфики процессов преемственности с опорой на диалектическое понимание ее феноменологических характеристик. Не решена проблема определения компонентного состава механизмов и инструментария обеспечения преемственности с учетом развития информационно-образовательных сред (ИОС) учреждений образования в Республике Беларусь. Современная педагогическая теория и практика нуждаются в системном и целостном осмыслении преемственности в многоаспектности ее феноменологического понимания при учете качественных средовых изменений образовательной сферы в нарождающемся обществе эпохи цифровизации.

Цель исследования. В качестве цели исследования нами определено выявление феноменологических характеристик и системообразующих признаков преемственности, реализуемых функционально в механизмах ее ресурсного обеспечения.

Методы и организация исследования. Методологическими основаниями исследования являются концептуальные положения разработанных в психолого-педагогической науке подходов (системно-средовой, процессный, деятельностный, компетентностный и личностно-ориентированный) к изучению процессов обеспечения преемственности в системе образования в Республике Беларусь в условиях цифровизации. Рассмотрение проблемных вопросов исследования опирается на применение методов сравнительного анализа и синтеза, а также научного обобщения. Источниковой базой в системном изучении заявленной проблематики являются документы государственных программ в сфере цифровизации образования в Республике Беларусь, а также научные публикации по теме исследования.

Результаты исследования и обсуждение. В рамках научной экспликации разработанных в педагогике теоретико-методологических подходов понятие «преемственность» в своем диалектическом представлении выступает как: а) открытая социокультурной среде иерархическая процессная система; б) методологическая закономерность развития в философской трактовке одной из основ организации системы непрерывного образования; в) системный механизм обеспечения взаимосвязи накопленного в различные периоды исторического развития педагогической науки и практики опыта, традиций; г) находящийся в системном взаимодействии с другими принцип обеспечения реализации целостного педагогического процесса; д) связь качественно различного между разными стадиями обучения в его системном построении; е) процесс обеспечения внутрипредметных и междисциплинарных связей в развитии образовательной системы при ее переходе в новое качественное состояние; ж) условие, определяющее динамику поступательного развития педагогического процесса во всех его составляющих и на всех этапах реализации субъект-субъектного взаимодействия участников; з) достигнутая характеристика качества обеспечения взаимосвязей различных уровней системы образования в целостной системе личностного развития обучаемых.

Важным объединяющим методологическим началом в научных подходах, определяющих феноменологическую сущность преемственности, является

выделение объективных характеристик – признаков, которые отображаются в тех или иных внутренних и внешних взаимосвязях рассматриваемого явления. К таким феноменологическим характеристикам, реализуемым функционально, нами относятся: 1) системность, проявляемая в многокомпонентном составе теоретико-методологического и практикоориентированного концепта с соответствующим научно-философским обоснованием онтологической, гносеологической и методологической функций, а также компонентных взаимосвязей; 2) детерминирующее влияние на систему образования и саму социальную организацию общества в качестве как стабилизатора, так и катализатора развития; 3) субъектоориентированность, проявляемая в процессуальной направленности на этапное развитие субъектов образовательной деятельности; 4) институциональная интегративность на всех ступенях и уровнях системы непрерывного образования; 5) эффективная процессуальная управляемость через осуществление преемственного управляющего воздействия на компоненты и межуровневые взаимосвязи; 6) проектируемость и прогнозируемость развития преемственности через определение достигаемых перспектив и выявление качественной направленности процесса; 7) поликомпонентность механизмов и инструментария реализации.

В контексте осуществляемого нами исследования под механизмом обеспечения преемственности нами понимается функциональный системно организуемый конструкт, объединяющий в себе нормативно-правовые, организационно-педагогические, учебно-методические и ресурсные средства, а также методы и формы применения, предназначенные в вариативности своей интеграции в образовательный процесс для достижения целей непрерывного образования. Определение структуры представляемого нами механизма-конструкта опирается на понимание обозначенной нами диалектической сущности феномена преемственности, а также ее характеристик, проявляемых функционально в эффективном обеспечении образовательной деятельности учащихся школ и студентов учреждений высшего образования (УВО).

Под ресурсами обеспечения функционирования механизмов преемственности нами понимается вся совокупность доступных к использованию источников, возможностей и инструментальных средств, обеспечивающих процесс преемственности. В рамках процессов цифровой трансформации образовательной сферы именно в эффективном применении всего комплекса ресурсов реализуется потенциал механизмов обеспечения преемственности. В таком контексте данный термин целесообразно определять, как совокупность возможностей предлагаемого к применению инструментария и средств конструкта по обеспечению преемственности для достижения актуальных целей образования в условиях процессов цифровой трансформации. В разнообразии таких инструментальных средств нами выделяются компоненты ИОС учреждений образования и образовательного сегмента РИОС – электронные образовательные ресурсы (ЭОР). С позиций оценивания возможности инструментального обеспечения преемственности целесообразно

рассматривать как технико-технологический, так дидактический потенциал информационно-образовательной среды [8].

Нами учтено, что поликомпонентность механизмов и инструментария обеспечения преемственности является одной из характеристик данного педагогического феномена с позиций понимания разнообразия применяемых средств, а также разновариантности тактик и стратегий управления процессом обеспечения на уровнях общего среднего и высшего образования. Это позволяет обобщенно рассматривать структуру и содержание конструкта механизмов обеспечения преемственности уровней общего среднего и высшего образования в условиях цифровизации в представляемых взаимосвязях и взаимообусловленностях их составляющих – сегментов.

Элементами нормативно-правового сегмента являются законодательные и иные нормативно-правовые акты, которые определяют специфику образовательного процесса и содержание образования, а также силой закона и нормативных требований обеспечивают функционирование всех составляющих механизмов преемственности (Конституция Республики Беларусь; Кодекс Республики Беларусь об образовании; образовательные стандарты и т. д.).

Учебно-методический сегмент в своем элементном содержании объединяет учебно-методические информационные ресурсы, дидактические средства (традиционные и высокотехнологичные), а также технологии, методы и приемы обучения, позволяющие эффективно осуществлять образовательную деятельность и решать ее актуальные задачи с учетом специфики того или иного учебного предмета. Объединенные в своем единстве элементы описываемого нами сегмента подчинены целям образования (в том числе и обеспечению преемственности в условиях развития системы непрерывного образования). Наполнение сегмента раскрывает требования к содержанию образования (например, через формулирование и технологическую реализацию дидактичесих принципов в осуществлении обучения учащихся и студентов), стимулирует развитие субъектов образовательной деятельности. Важной представляется знаниево-деятельностная составляющая сегмента в совокупном единстве содержательных линий и многокомпонентного состава учебного знания, способов деятельности и компетенций, предлагаемых для усвоения/освоения в тех или иных формах обучения. Данные положения важны для понимания функциональной роли инструментария сегментов в реализации механизмов обеспечения преемственности в условиях цифровизации при переходе субъектов образовательной деятельности на новый уровень или ступень образования. Так, чтобы преемственно овладевать компетенциями в области технологии дистанционного обучения, педагог или студент педагогических специальностей УВО, учащийся профильного педагогического класса должны обладать закрепленными в личном опыте и соответствующей социальной практике усвоенными знаниями и освоенными умениями в части работы с компьютерными средствами и информационными источниками (в том числе и определенными навыками безопасного информационного поведения в рамках формирования и развития информационной культуры каждого субъекта образовательной деятельности).

Инструментальный сегмент в структуре механизмов обеспечения преемственности объединяет в себе средства, с помощью которых субъекты образовательной деятельности ее осуществляют через поэтапное продвижение в избираемой траектории непрерывного образования (при условии необходимой активизации процессов саморазвития и самосовершенствования на основе прочной сформированности мотивации к продуктивной деятельности). Применение инструментальных средств осуществляется процессуально в рамках реализуемых методов и приемов. Как нами отмечалось выше, под таким инструментарием нами понимаются обеспечивающие компоненты ИОС учреждений образования и образовательного сегмента РИОС (в том числе и инструментарий мониторинга успешности процессов обеспечения преемственности).

Организационно-педагогический сегмент в структуре механизмов реализации преемственности выполняет объемный обеспечивающий функционал, отображающий упорядоченность и системную процессуальную организованность развития не только в обеспечении содержания образования, но и в самой организации образовательной деятельности ее субъектов (например, в условиях институционального эволюционного перехода современных университетов к моделям 3.0 и 4.0. с учетом тенденции кластеризации образования, при совершенствовании структуры и содержания ИОС учреждений образования, а также самого образовательного уровня школьников и студентов, профессионального развития педагогов). Измерение происходящих качественных изменений ИОС представляется важным с позиций теоретико-методологической и практической значимости разработки данной проблематики.

Заключение. Обобщая результаты исследования, отметим, что в условиях осуществляемого совершенствования информационно-коммуникационного пространства и развития цифровой трансформации образовательной сферы основными обеспечивающими императивами реализации преемственности на уровнях общего среднего и высшего образования являются: а) преодоление дискретности как качественного состояния образования личности в условиях автономности его уровней и непрочности проявляемых преемственных связей в образовательном пространстве, в том числе и через системную реализацию психолого-педагогического потенциала опережающего образования; б) гармонизация естественно-научной, технической и гуманитарной составляющих общего среднего и высшего образования; в) овладение учащимися учреждений общего среднего образования способами самообразования и самоконтроля, а также способами и методами учебной деятельности, применяемыми на первой ступени высшего образования с целью их максимальной адаптации требованиям институциональной организации (к требованиям университета 3.0 или 4.0); г) объективность оценивания результатов учебной деятельности учащихся на всех этапах осуществления педагогической диагностики и контроля в условиях разноуровневой системы оценивания учебных достижений; д) формирование и высокое уровневое развитие комплекса

компетенций (в том числе и информационных) субъектов целостного педагогического процесса.

Трактовка преемственности в качестве системного концепта отображает уровень осмысления и теоретико-методологической разработанности данного направления междисциплинарного научного поиска при четком понимании перспектив его развития в условиях совершенствования системы непрерывного образования в Республике Беларусь. Учет данного аспекта важен с позиций понимания синтеза социетарной, культуросообразной компетентностно-ориентированной парадигм образования в рамках реализации мероприятий государственных программ в области цифровизации. Рассмотренная нами проблематика актуализирует потребность в продолжении активного научного поиска в исследованиях и дискуссии с учетом разработки концепта обеспечения преемственности в условиях вызревания IT-общества и процессов цифровой трансформации сферы образования в Республике Беларусь.

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QORAQALPOG'ISTON RESPUBLIKASIDA TURIZM XIZMATLARINI RIVOJLANTIRISHDA MALAYZIYA TAJRIBASIDAN FOYDALANISH ZARURATI

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Annotatsiya. Ushbu maqolada turizm xizmatlarining mamlakat iqtisodiy rivojlanishidagi o'rni va iqtisodiy ahamiyati xususida yoritilgan. Xususan Qoraqalpog'iston Respublikasida turizm sohasini rivojlantirishda Malayziya tajribasidan foydalanish zarurati tadqiq qilingan.
Kalit so'zlar. Turizm, sohani rivojlantirish, turizm xizmatlari, YaIM, turizmdan olinadigan daromad.

Аннотация. В данной статье описывается роль и экономическое значение туристических услуг в экономическом развитии страны. В частности, изучена необходимость использования опыта Малайзии в развитии туризма в Республике Каракалпакстан.
Ключевые слова. Туризм, развитие промышленности, туристические услуги, ВВП, доходы от туризма.

Abstract. This article describes the role and economic importance of tourism services in the economic development of the country. In particular, the need to use the experience of Malaysia in the development of tourism in the Republic of Karakalpakstan was studied.
Key words. Tourism, industry development, tourism services, GDP, income from tourism.

Ma'lumki turizm - bu iqtisodiy, ijtimoiy, madaniy va ekologik jihatlarni o'zida mujassam etgan ko'p qirrali hodisa bo'lib, u doimiy taraqqiyot uchun salmoqli salohiyatga ega, iqtisodiyotning ko'plab tarmoqlari bilan chambarchas aloqada bo'lib, mamlakatlar va xalqlarning ijtimoiy-iqtisodiy hayotida uning yetakchi o'rnini oldindan belgilab beradi. Turizm sohasining jadal rivojlanishi iqtisodiyotning boshqa tarmoqlariga ham multiplikativ ta'sir ko'rsatadi, bunda investitsion faollik kuchaytiriladi va mablag'lar aylanmasi tezlashadi. Turizmni iqtisodiy rivojlanishning jozibador variantiga aylantiruvchi bir qancha xususiyatlar mavjud bo'lib, asosiysi

uning ish o‘rinlarini yaratish va qo‘llab-quvvatlash hamda bandlikni oshirish salohiyatidir.

Jahon tajribasi ishonchli tarzda shuni isbotlaydiki, ya’ni turizm industriyasining rivojlanishi, XX-asr o‘rtalaridan boshlab nisbatan qisqa tarixiy vaqt ichida muhim iqtisodiy va ijtimoiy muammolarni hal qilishda sezilarli ijobiy o‘zgarishlarga erishish imkonini berdi. Qolaversa, xorijiy sayyohlardan olinadigan daromadlar hisobiga turizm sohasining jadal yuksalishi madaniy-tarixiy qadriyatlarni asrab-avaylash, atrof-muhit va boshqa ijtimoiy qadriyatlarni muhofaza qilish va tiklashga xizmat qilmoqda. Bunday fikrlar bir qator davlatlar amaliyotida to‘liq tasdiqlanadi. Dunyoning turistik markazlari sifatida tasniflangan davlatlar, jumladan, Misr, Tunis, Malayziya, Tailand, iqtisodiy rivojlanishning nisbatan past darajasiga qaramay, turizm sohasini rivojlantirishda yuqori darajaga erishmoqda.

Bu, asosan, davlatning turizm industriyasini qo‘llab-quvvatlash, turizm xizmatlari ko‘rsatish bilan shug‘ullanuvchi yirik, kichik va o‘rta milliy biznesni rag‘batlantirishga qaratilgan maqsadli siyosati tufayli ro‘y bergan.

Xususan Malayziya iqtisodiyotini diversifikatsiya qilish va uning eksportga qaramligini kamaytirish maqsadida hukumat mamlakatda turizmni oshirishga harakat qildi. Bu turizm Malayziyaning ikkinchi yirik valyuta daromad manbaiga aylanishiga olib keldi. 2022 yilda turizm Malayziyaning umumiy yalpi ichki mahsulotiga 14 foiz hissa qo‘shgan. Lekin Malayziyada turizm industriyasi shakllanishining boshida turizmni rivojlantirish milliy strategiyasining amalga oshirilishi va amalga oshirilishini monitoring qilish funksiyasi Turizmni rivojlantirish Vazirlar Mahkamasi huzuridagi maxsus qo‘mita zimmasiga yuklatilgan edi, bunda mamlakat Bosh vaziri o‘zi raislik qilgan. Mazkur qo‘mitada har chorakda muntazam ravishda yig‘ilib, turizmga oid turli masalalar bo‘yicha qarorlar qabul qilingan. Keyinchalik 1989 yilda u Malayziya Turizm vazirligiga aylantirilgan [1].

Ta’kidlash joizki, bugungi kunda mamlakatda turizmni rivojlantirish va muvofiqlashtirishni boshqaradigan asosiy davlat organi Turizm va Madaniyat vazirligi hisoblanadi. Vazirlik vakili bo‘lgan hukumat Malayziyani Osiyoda jahon turizm markaziga aylantirish uchun bir qator muhim qadamlarni qo‘ydi.

Bularga quyidagilarni aytish mumkin:

- 120 dan ortiq davlat fuqarolariga Malayziyaga 2 haftadan 1 oygacha vizasiz borish imkonini beruvchi viza rejimini soddalashtirish, ayrim davlatlar uchun esa vizasiz qolish muddati 3 oy va undan ortiq muddatga uzaytirildi;

- yangi qurilgan mehmonxonalar faoliyatining dastlabki 5 yilida barcha turdagi soliqlardan ozod qilinadi;

- mehmondo‘stlikni yaxshilash, ya’ni, turizm sohasida ishlovchi xodimlar maxsus tayyorgarlikdan o‘tishi va mehmondo‘stlik ko‘nikmalariga ega bo‘lishi kerak, bu esa ularga Malayziyaga kelayotgan xorijiy sayyohlar bilan mehr-oqibatli muloqot qilish imkonini beradi.Ta’kidlash joizki, Malayziya Turizm va Madaniyat vazirligi turizmni rivojlantirish bo‘yicha davlat siyosatini ishlab chiqadi va qabul qiladi, huddi shu o‘rinda Malayziya Milliy turizm kompaniyasi esa mehmonxona sektorida, restoran biznesi va turistik xizmatlarning boshqa tarmoqlari, transport xizmatlari sohasida sifat nazorati bo‘yicha bosh inspektor rolini o‘ynaydi.

Malayziya bir paytlar sayyohlar kelishi bo‘yicha dunyoda 9-o‘rinni egallagan [2]. 2017 yilda Sayohat va turizm raqobatbardoshligi hisoboti Malayziyani Sayohat va Turizm raqobatbardoshlik indeksi (Travel & Tourism Competitiveness Index, TTCI) yordamida 141 mamlakat ichida 26-o‘ringa qo‘ydi.

Malayziyaning bunday tez sur’atlarda rivojlanishining sababi har hil sayyohlik kampaniyalarini olib borishidadir. 1990-yilda Malayziya “Maftunkor Malayziya: Festivallar yili” deb nomlangan sayyohlik kampaniyasini boshladi, bu muvaffaqiyatli deb topildi va 7,4 million sayyohni qabul qildi. Besh yil o‘tib, 1994-yilda Malayziya “Hayajonli Malayziya”. Tabiiyki, ko‘proq” deb nomlangan yana bir kampaniyani boshladi, u 10,22 million sayyohni qabul qildi. 2007 yilda Malayziya “Malayziya - Haqiqiy Osiyo” deb nomlangan eng mashhur sayyohlik kampaniyasini boshladi. Kampaniya Malayziya mustaqilligining 50 yilligiga bag‘ishlandi va keng targ‘ib qilindi. Bu kutilganidan oshib ketdi va 20,97 million sayyohni jalb etgan holda katta muvaffaqiyatga erishdi [3].

Xulosa o‘rnida ta’kidlash kerrakki, Qoraqalpog‘iston Respublikasida Malayziya davlati tajribasidan foydalangan holda mintaqada sayyohlik kampaniyalarini olib borishni faollashtirishning maqsadga muvofiqligi. Jumladan, Mo‘ynoqda har yili o‘tkazilib kelayotgan “Stixiya” festivali kabi boshqa muqobil tadbirlarni tashkil etish zarur.

Bizning fikrimizcha turizm oldida turgan muammolarni tadqiqotlar yo‘nalishidan kelib chiqib atroflicha har tomonlama ko‘rib chiqish kerak. Bunda barqaror turizmni rivojlantirish, turizm mahsulotlari tarkibini diversifikatsiya qilish va yangi texnologiyalarni qo‘llash ushbu muammolarni hal etishda yordam beradi va sohani rivojlantirish uchun qulay muhit yaratadi deb hisoblamiz. Oxir oqibatda, turizm mamlakat va mintaqalar barqaror iqtisodiy rivojlanishi, iqtisodiy o‘sishni rag‘batlantirish, madaniy merosni saqlash va tabiatni muhofaza qilish kabi vosita elementiga aylanishi zarur.

Demak yuqoridagi fikr mulohazalarimizni yakunlab aytganda, harqanday hududga sarmoya jalb etishning asosiy ko‘rsatkichi bo‘lib hududning iqtisodiy rivojlanish salohiyati hisoblanadi. O‘tgan 5 yillik tahliliga nazar tashlaydigan bo‘lsak, 2019-yil holatiga ko‘ra, Qoraqalpog‘iston Respublikasi iqtisodiyotining asosiy tarmoqlari quyidagilar bo‘lgan: sanoat (YaHM tarkibidagi ulushi – 32,7%), qishloq, o‘rmon va baliq xo‘jaligi (15,2%), qurilish (7,5 foiz), savdo, turar joy va oziq-ovqat xizmatlari (8 foiz), transport va saqlash, axborot va aloqa (7,6 foiz) va boshqa (shu jumladan turizm) xizmat ko‘rsatish sohalari (29 foiz) [4; 493-501 bb.]. Bu holat, bizningcha, respublikaning yirik sanoat tarmoqlari: savdo va umumiy ovqatlanish, transport va aloqa, kommunal, moliya va boshqalarning hissasi bilan bog‘liq bo‘lib, eng muhimi, avvallari asosan davlat tomonidan ko‘rsatilayotgan xizmatlar asta-sekin xususiy bozor xarakteriga ega bo‘ldi [5; 221-226 bb.]. Bu o‘z, navbatida hududda istiqbolda turizm sohasi barqarorlashishiga ijobiy ta’sir ko‘rsatadi.

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СОЗДАНИЕ ТЕХНОЛОГИЙ ПОЛУЧЕНИЯ ГЕТЕРОСТРУКТУР НА ОСНОВЕ КРЕМНИЯ ИЗ СЛОЕВ ОКСИДА ОЛОВА И ИЗУЧЕНИЯ ИХ ЭЛЕКТРОФИЗИЧЕСКИХ СВОЙСТВ

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Ключевые слова. Гетеро структуры на основе кремния, слои оксида олова, электрофизические свойства, методы синтеза, методы определения характеристик, электрические свойства, электронные устройства, характеристики устройств, оптимизация.

Введение. Гетеро структуры на основе кремния привлекли значительное внимание в области электронных устройств благодаря своим уникальным свойствам и возможностям применения. Чтобы изучить широкие возможности этих гетеро структур, исследователи сосредотачивают внимание на новых методах, использующих слои оксида олова в качестве прекурсоров. Целью данной статьи является всесторонний обзор прогресса, достигнутого в создании технологий получения гетеро структур на основе кремния из слоев оксида олова и последующего исследования их электрофизических свойств.

Методы синтеза. Синтез гетеро структур на основе кремния начинается с нанесения слоев оксида олова. Различные методы, такие как химическое осаждение, из паровой фазы (CVD), физическое осаждение из паровой фазы (PVD) и осаждение атомных слоев (ALD), были исследованы для нанесения высококачественных слоев оксида олова на кремниевые подложки. Выбор метода синтеза оказывает большое влияние на структурные и электрические свойства получаемых гетеро структур.

Техника характеристики. Характеристика структурных и композиционных свойств гетеро структур на основе кремния имеет решающее значение для понимания их поведения и характеристик. Сканирующая электронная микроскопия (SEM), просвечивающая электронная микроскопия (TEM), рентгеновская дифракция (XRD) и спектроскопические методы (например, романовская спектроскопия, рентгеновская фотоэлектронная

спектроскопия) используются для анализа морфологии и кристаллической структуры. Элементный состав и связующие свойства гетеро структур.

Оценка электрических свойств. Электрические свойства гетеро структур на основе кремния играют решающую роль в определении их пригодности для различных электронных приложений. Исследование электрических свойств включает измерение концентрации носителей, подвижности, удельного сопротивления и наличия каких-либо интерфейсных или объемных дефектов. Такие методы, как измерения эффекта Холла, измерения напряжения-емкости (CV) и измерения напряжения тока (IV), обычно используются для оценки электрического поведения гетеро структур.

Приложения в электронных устройствах. Гетеро структуры на основе кремния, полученные из слоев оксида олова, имеют большой потенциал для применения в электронных устройствах. Их уникальные свойства, такие как регулируемая запрещенная зона, высокая подвижность носителей заряда и отличные свойства переноса заряда, делают их пригодными для использования в тонкопленочных транзисторах, фотоэлектрических устройствах, датчиках и оптоэлектронных устройствах. Возможность оптимизировать характеристики этих гетеро структур посредством тщательного проектирования и проектирования открывает новые возможности для будущих электронных устройств.

Оптимизация производительности устройства. Стратегии оптимизации используются для гетеро структур на основе кремния для достижения высокой производительности устройства. Сюда входит изменение состава, толщины, качества интерфейса и профилей легирования гетеро структур. Передовые инструменты моделирования и методы моделирования помогают прогнозировать и оптимизировать производительность устройств, позволяя исследователям адаптировать свойства гетеро структур к конкретным требованиям приложения.

Краткое содержание. Исследование гетеро структур на основе кремния, полученных из слоев оксида олова, открывает большие возможности для разработки электронных устройств. Разработка инновационных методов синтеза, методов определения характеристик и оценки электрофизических свойств поможет понять и оптимизировать эти гетеро структуры. Постоянные исследования и технологические достижения открывают путь к внедрению.

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IQTISODIY TRANSFORMATSIYANING HUDUD IQTISODIYOTINI RIVOJLANTIRISHDAGI AHAMIYATI

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Annotatsiya. Ushbu maqolada iqtisodiy transformatsiyaning hudud iqtisodiyotini rivojlantirishdagi ahamiyati bugungi kundagi dolzarbligi, iqtisodiy tarmoqlarni raqamlashtirilishi yoritilgan va takliflar ko’rsatilgan.

Kalit so’zlar. Qoraqalpog’iston Respublikasi, transformatsiyalashuv davri, bozor iqtisodiyotini, iqtisodiy islohotlar, bozor munosabatlari raqamli transformatsiya, raqamli infratuzilma.

Abstract. In this article, the importance of economic transformation in the development of the region's economy, its relevance today, the digitization of economic sectors, and suggestions are indicated.

Key words. Republic of Karakalpakstan, period of transformation, market economy, economic reforms, digital transformation of market relations, digital infrastructure.

Аннотация. В данной статье указано значение экономической трансформации в развитии экономики региона, ее актуальность сегодня, цифровизация отраслей экономики, а также предложения.

Ключевые слова. Республика Каракалпакстан, период трансформации, рыночная экономика, экономические реформы, цифровая трансформация рыночных отношений, цифровая инфраструктура.

Kirish. Jahonda raqamli iqtisodiyotning o’sish sur’atlari deyarli 15,5 foizni tashkil etadi. Rivojlangan mamlakatlarda raqamli iqtisodiyotning YaIMdagi ulushi 7 foizga yetgan. Ular hozirning o’zida raqamli iqtisodiyotning joriy qilinishidan juda katta foyda ko’rmoqda. Jumladan, AQSh yiliga 400 milliard AQSh dollaridan ko’proq raqamli xizmatlarni eksport qilmoqda. 2025 yilgacha AQSh sanoat sohasini

raqamlashtirishdan qo’shimcha 20 trln. AQSh dollar daromad olishi kutilmoqda [3; 122-136 bb.].

O’zbekiston Respublikasi Prezidentining “Raqamli O’zbekiston – 2030” strategiyasini tasdiqlash va uni samarali amalga oshirish chora-tadbirlari to’g’risida”gi PF-6079-son Farmoni imzolandi. Farmonda iqtisodiyotning barcha tarmoqlari, shuningdek, ijtimoiy soha, davlat boshqaruvi, sog’liqni saqlash va qishloq xo’jaligiga zamonaviy axborot kommunikatsiya texnologiyalarni joriy etish belgilab qo’yilgan. Davlatlarning iinovatsion salohiyatini chuqur taxlillar asosida belgiaydigan “Global innovation index” 2020 yilda O’zbekistonni 132 davlat ichida 93 o’rinda ko’rsatgan bo’lsa, 2023 yildagi xisobotida esa 82 o’rinni qayd etdi. O’zbekiston Respublikasi Prezidentining 2023 yil 11 sentyabrdagi “O’zbekston – 2030” strategiyasi to’g’risidagi PF-158-son farmoniga [2] asosan mamlakatimizni “Global innovation index”da 2030 yilga borib Top-50 talikga kiritish belgilangan [4].

Yangi O’zbekistonda mintaqalarning ijtimoiy-iqtisodiy barqarorligi ta’minlanishi natijasida mamlakatimizda keyingi yillarda xalqimizning turmush sharoitini yanada yaxshilashga, tadbirkorlikni jadal rivojlanishi va iqtisodiyot tarmoqlarini transformatsiya qilish muhim yo’nalish sifatida belgilab olindi. Jumladan, «...mahallalarning “o’sish nuqtalari” va ularda yashovchi aholining tadbirkorlik faoliyatidagi ixtisoslashuvidan kelib chiqib, ularda istiqomat qilib, faoliyat yurituvchi aholini davlat tomonidan qo’llab-quvvatlash» [6] bo’yicha qator vazifalar belgilab olingan.

Transformatsiya so’zining lug’aviy ma’nosi, lotinchada Transformatio – o’zgartirish, qayta tashkil etish ma’nosini bildirib:

1. Tarkib, shakl va uslublarni qayta tashkil etish, faoliyatning maqsadli yo’nalishini o’zgartirish;

2. Almashtirish usullaridan biri, xalqaro huquq normalarini ichki davlat huquqi normalariga qayta tashkil qilish ma’nolarini anglatadi [6].

Tadqiqot maqsadi. Tadqiqotlarga ko’ra, jahon iqtisodchi olimlari bugungi raqamlashib borayotgan global olamda raqamli iqtisodiyotning qiymati va samaradorligini baholash bo’yicha yagona integral indikatorni yaratish bo’yicha muammolarga duch kelishmoqda [6]. Iqtisodiy adabiyotlarda “Transformatsiya” atamasi iqtisodiy tizimdagi tub o’zgarishlarning sifat xususiyatlarini baholash zarurati tufayli vujudga kelgan bo’lib, u qaytarib bo’lmaydigan va kelajak modelini shakllantirish yo’lida yangi sifat bosqichlariga o’tish holatini ifodalaydi .

Transformatsiya – bu iqtisodiy tizimning maьlum parametrlari, jumladan, o’zgarishlar jarayonining yo’nalishi, surьati, intensivligi, davomiyligi va boshqa xususiyatlarining qandaydir o’zgarishi bilan tavsiflangan harakatdir. Bu harakat shakli, tizimning ma’lum vaqtdagi va iqtisodiy makondagi harakatining maьlum bir sifat jihati hisoblanadi.

Tadqiqotni tashkil qilish uslublari. Qishloq xo’jaligi mahsulotlarini ishlab chiqarish (*Iich*), qayta ishlash (*Iqi*) va tovarlilik *(It*) darajasini “transformatsiyalashuv indeks”lari (*IT*) yordamida baholagan holda yakka tartibdagi tadbirkor (*ITYTT=0,65*), oilaviy tadbirkorlik (*ITOT=0,70*), oilaviy korxona (*ITOK=0,75*), dehqon (*ITDX=0,80*) va fermer (*ITFX=0,85*) xo’jaliklari ko’rinishidagi tashkiliy-huquqiy shakllarga o’tkazish bo’yicha ishlab chiqilgan. Mazkur takliflarni amaliyotga joriy

etish natijasida dehqon xo'jaliklarining qishloq xo'jaligi mahsulotlarini ishlab chiqarish, qayta ishlash va tovarlilik darajasidan kelib chiqqan holda turli ko'rinishidagi tashkiliy-huquqiy shakllarga transformatsiyalash jarayonlarini tartibga solish imkoni yaratilgan.

Shuningdek, tadqikotlar jarayonida Hududning iqtisodiy ko'rsatkichlari, xususan yalpi hududiy mahsulot (YaHM), Hududning iqtisodiy transformatsiya jarayonini boshqa o'xshash hududlar bilan solishtirish. Hududiy iqtisodiyot rivojlanishiga ta'sir ko'rsatuvchi omillar, muammolar va imkoniyatlar haqida ekspert fikrlari to'plandi.: Rivojlanish stsenariylari, transformatsiya natijalarini prognoz qilish va turli omillarning ta'sirini baholash uchun iqtisodiy modellar qo'llanildi.

Tadqiqot natijalari va muhokamasi. Raqamli transformatsiya (ing. digital transformation, DT yoki DX) keng ma'noda raqamli texnologiyalarni qabul qilish bilan ta'minlangan strategiya, modellar, operatsiyalar, mahsulotlar, marketing yondashuvi va maqsadlarni qayta ko'rib chiqish orqali boshqaruv tizimini o'zgartirishdir.

Shu bilan birga ayrim adabiyotlarda Transformatsiyalashuv davri - iqtisodiyotining tabiiy-evolyutsion turi – tashqaridan hech qanday aralashuv va tartibga solishlarsiz, o'z ichki rivojlanish qonuniyatlari asosida amal qiluvchi iqtisodiyot ekanligini ta'kidlab o'tgan [7].

Ijtimoiy-iqtisodiy rivojlanishning har qanday bosqichi yoki jamiyatdagi turli darajadagi ijtimoiy, iqtisodiy tuzilmalarning vujudga kelishi va rivoji, avvalambor, o'zidan avvalgi bosqichning muvaffaqiyatli kechishi va ma'lum bir darajaga yetishini taqozo etadi. Har qanday kichik yoki o'rta darajada birdaniga, yangi tashkil etilgan agrobiznes tuzilmalarining asoschilari, ularning asosini tashkil etuvchi inson omilining fizik, ma'naviy va kasbiy jihatdan shakllanishi, avvalambor, oilalarda sodir bo'ladi. Ular bevosita oila xo'jaliklari bazasida rivojlanib vujudga kelganda esa yanada mukammal bo'ladi [8].

Qoraqalpog'iston Respublikasida [10] va raqamli transformatsiya jarayonlarini yanada takomillashtirish uchun hozirgi vaqtda rivojlangan davlatlarda faol rivojlantirib borilayotgan -geoaxborot va navigatsiya texnologiyalari (fazoviy ma'lumotlar), foton texnologiyalari, bulut (Cloudcomputing), tuman (Fogcomputing), chekka (EdgeComputing), shudring (Dewcomputing) hisoblash texnologiyalari; kiberbiologik tizimlar (shuningdek, neyrotexnologiyalar), autentifikatsiya va identifikatsiya qilish texnologiyalari (shu jumladan biometrik texnologiyalar), superkompьyuterli va grid texnologiyalari kabi istiqbolli texnologik yo'nalishlarga jiddiy e'tibor qaratish zarur [7].

Orol bo'yi mintaqasida amalga oshirilayotgan iqtisodiy islohotlarning asosiy maqsadi, tadbirkorlik sub'ektlar tomonidan mahsulotlarni sifat jihatidan xalqaro standart talablariga javob bera oladigan darajada rivojlantirishga qaratilgan [11].

Masalan, korxonaning raqamli transformatsiyasi ishlab chiqarish, boshqaruv va yordamchi jarayonlarni qamrab oladi hamda unga bevosita ta'sir ko'rsatadi, iqtisodiyotda kontragentlar o'rtasidagi o'zaro munosabatlarning yangi usullarini ta'minlaydi, jamiyatdaga keng masalalar doirasini yechish uchun yangi kommunikatsiya shakllarini keltirib chiqaradi. Shu bilan birga bu guruhlarning ichida ham iqtisodiy tarmoqning o'ziga xos xususiyatlaridan kelib chiqqan holda talqin

qilinganda bir biridan keskin farq qiluvchi raqamli transformatsiya jarayonlari amalga oshirilishi mumkin.

Ayniqsa, O’zbekiston Respublikasi Prezidentining «Iqtisodiyotni rivojlantirish va kambag’allikni qisqartirishga oid davlat siyosatini tubdan yangilash chora-tadbirlari to’g’risida» [10] gi va boshqa qaror hamda farmonida belgilangan maqsad va vazifalar aholi bandlikni ta’minlash hamda kambag’allikni qisqartirishning eng muhim ob’ekti bo’lgan qishloq xo’jaligi mahsulotlari yetishtiruvchi oila, individual xo’jaliklarsiz tasavvur qilish mumkin emas. Umumiy ishlab chiqarish hajmidagi ulushning barqarorligi asosan ichki transaktsion xarajatlar nisbatan kamligi, mehnat motivatsiyasi va ish unumdorligining yuqoriligi sabablidir [11].

Xulosa. Hozirgi kunda O’zbekiston Respublkasida “Raqamli O’zbekiston – 2030” Strategiyasi doirasida iqtisodiyotning eng muhim tarmoqlari va ijtimoiy sohani raqamli o’zgartirishga qaratilgan davlat siyosati choratadbirlari belgilandi. Unda 2030 yilgacha bo’lgan davrda raqamli transformatsiyani amalga oshirish mamlakat iqtisodiyotini rivojlantirishning milliy maqsadlaridan biri sifatida belgilangan.

Qoraqalpog’iston Respublikasining demografik, geografik va ekologik o’ziga xos xususiyatlarini hisobga olgan holda raqamli iqtisodiyotni samarali tashkil etish quyidagi jihatlarga e’tibor berishni talab qiladi.

Demografik omillar: Qoraqalpog’istonda aholi siyrakligi va ko’pchilik oilalarda mehnatga yaroqli ishchi kuchining yetishmasligi iqtisodiy o’sishni cheklab turishi mumkin. Xususan, internetga ulanishni kengaytirish, axborot texnologiyalaridan foydalanishni oshirish va onlayn ish o’rinlarini yaratish orqali ishsizlik muammosini kamaytirish mumkin.

Geografik omillar: Aholi punktlarining tarqoq joylashganligi xizmatlar va tovarlardan samarali foydalanishni qiyinlashtiradi. Bu holatda raqamli platformalar orqali xizmatlarni taqdim etish va yetib borish osonroq bo’ladi.

Ekologik omillar: Qoraqalpog’istonning tuproq va suv sharoitiga bog’liq muammolari, xususan, suv resurslarining tanqisligi va yerlarning sho’rlanishi qishloq xo’jaligi faoliyatini cheklaydi. Raqamli iqtisodiyotni rivojlantirish orqali agrotexnik jarayonlarni avtomatlashtirish, sug’orish texnologiyalarini optimallashtirish va resurslardan samarali foydalanish imkonini beruvchi innovatsiyalarni tatbiq etish muhim.

Raqamli iqtisodiyotni samarali rivojlantirish mamlakat taraqqiyoti darajasidan kelib chiqqan holda raqamli iqtisodiyotni rivojlantirish shartsharoitlari turli darajalarga turkumlanib, har bir darajaga tegishli choratadbirlarni amalga oshirishning “quyidan-yuqoriga” yo’naltirilgan tizimli islohatlar orqali amalga oshirilishi ijobiy natija beradi.

Foydalanilgan adabiyotlar

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WEB-TEXNOLOGIYALAR ASOSIDA BO‘LAJAK O‘QITUVCHILARNING KASBIY TAYYORGARLIGINI RIVOJLANTIRISH MAZMUNI

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Annotasiya. Maqalada Web-texnologiyalar asosida bo‘lajak o‘qituvchilarning kasbiy tayyorgarligini rivojlantirish mazmuni, bu yo’nalishdagi ishlanishi zarur bo’lgan ishlar hamda mashg‘ulotlar óz aksini topgan.

Kalit so‘zlar. Web-texnologiyalar, kasbiy tayyorgarlik, ta’lim, bilim, ko’nikma, malaka, metodlar, videokonferentsiyalar va vebinar, interaktiv kontent, intensivlik, zamonaviy mustaqil ta’lim, kreativlilik, kognitiv kompetentlik, tálimni raqamlashtirish.

Key words. Web technologies, professional training, education, knowledge, skills, qualifications, methods, video conferences and webinars, interactive content,

intensity, modern self-directed learning, creativity, cognitive competence, digitalization of education.

Kirish. Davlatimiz tomonidan ta’lim jarayonini axborotlashtirish, uning texnikaviy bazasini rivojlantirish, o‘quv jarayonida zamonaviy axborot-kommunikatsion texnologiyalaridan foydalanish uchun kerakli dasturiy vositalarini ta’minlash yuzasidan tadbirlar amalga oshirilmoqda. 2017 yil 7 fevraldagi “O‘zbekiston Respublikasini yanada rivojlantirish bo‘yicha O‘zbekiston Respublikasi Prezidentining 2017 yil 14 sentyabrdagi «Muhammad al-Xorazmiy nomidagi axborot-kommunikatsiya texnologiyalari yo‘nalishiga oid fanlarni chuqurlashtirib o‘qitishga ixtisoslashtirilgan maktabni tashkil etish to‘g‘risida»gi PQ-3274-sonli Qarori buning yaqqol misolidir [1].

Demak, Web-texnologiyalar asosida bo‘lajak o‘qituvchilarning kasbiy tayyorgarligini rivojlantirish – bu internet orqali yangi ma’lumotlar, muhim xabarlar, ko‘rsatkichlar olib kirish va bu axborotlarni etkazuvchilar bilan yaqindan tanishish ko‘nikmasini hosil qilish. Shu o‘rinda e’tirof etish joizki XXI asr ilm, fan va texnika taraqqiyoti asri bo‘lib, bu asrda barcha sohalarni axborotlashtirish jarayonini o‘z ichiga oladi. Zero, har bir sohaning mazmunini anglatuvchi va uni rivojlantirishni ta’minlovchi bo‘ladi.

Tadqiqot maqsadi. Web-texnologiyalar asosida bo‘lajak o‘qituvchilarning kasbiy tayyorgarligini rivojlantirish mazmuni, ma’lumki, ta’lim, bilim, ko‘nikma va malakalardir.

Ta’lim - bu o‘qituvchi va bo‘lajak o‘qituvchining o‘zaro munosabatlarida avlodlar tajribasini to‘g‘ridan-to‘g‘ri uzatish va o‘zlashtirish jarayoni. O‘qituvchi va bo‘lajak o‘qituvchining faoliyati mustaqil ravishda ko‘rib chiqilishi mumkin: bo‘lajak o‘qituvchilar faoliyati bilim, ko‘nikma va malaka faoliyat tajribasi tizimini o‘tkazish; Web-texnologiyalar asosida bo‘lajak o‘qituvchining faoliyati o‘qitish, idrok etish, tushunish, o‘zgartirish orqali bilim, ko‘nikma va malakalarni o‘zlashtirish jarayonidan foydalanish [2; 181 b.].

Bilim-bu bo‘lajak o‘qituvchilar ongida ma’lum bir tizimda o‘rnatilgan obyektlar, hodisalar, tabiat va jamiyat qonunlarini bilish hisoblanadi. Bo‘lajak o‘qituvchilar qonun sifatida shakllangan va hodisalarning mohiyati va obyektiv aloqalarini qisqacha kategorik shaklda aks ettiruvchi bilimlarga ega bo‘ladilar. Bilimlarni amaliyotda qo‘llash malakalarning shakllanishiga olib keladi [3; 167-168 bb.].

Ko‘nikmalar - mavjud bilimlar asosida muayyan faoliyatni amalga oshirish qobiliyati, amalda maqsadga muvofiq harakatlarga tayyorgarlik. Agar ko‘nikma takroriy takrorlash yo‘li bilan avtomat darajasiga keltirilsa, uni malakaga aylangan deb hisoblash mumkin [4; 320 b.].

Malakalar - bu takrorlash tufayli hosil bo‘lib, ong tomondan ko‘rinadigan boshqaruvsiz bajariladigan harakatlar. Ko‘nikmalar xilma-xil: *o‘quv, mehnat, vosita, nutq va boshqalar* [5; 576 b.].

Pedagogika bilim, ko‘nikma va malakalarni birlik va o‘zaro aloqadorlikda ko‘rib chiqadi. Bilim, ko‘nikma va malakalar zanjirdagi bog‘lanishlar bo‘lib, ularda

ko‘nikmalar bilimlarni amaliyotda aks ettiradi va egallangan malakalarning asosi bo‘lib xizmat qiladi.

Tadqiqotni tashkil qilish uslublari. Ta’limda Web-texnologiyalarni qo‘llashning quyidagi uslublari ma’lum. Birinchisi, oliy ta’lim fanlarini o‘qitish sifatini oshirish va bo‘lajak o‘qituvchilarning axborot kompetentsiyalarini rivojlantirishni rag‘batlantirish maqsadida raqamli va innovatsion ta’lim texnologiyalarini an’anaviy o‘quv jarayonini o‘z ichiga olgan aralash ta’lim. Ikkinchi uslub-bu o‘qituvchining bevosita ishtirokisiz o‘quv jarayonini tashkil etish, bo‘lajak o‘qituvchilarning mustaqil bilim faolligini rag‘batlantirish, o‘zini o‘zi tashkil etish va o‘zini o‘zi tarbiyalash qobiliyatlarini rivojlantirishga imkon beradigan Web-texnologiyalarga asoslangan masofaviy o‘qitish. Uchinchi uslub yangi ta’lim tushunchalari rasmiy va norasmiy ta’lim shakllari hamda usullarini birlashtirgan individual o‘quv traektoriyasini yaratishga qaratilgan ochiq ta’lim resurslari, ommaviy ochiq onlayn kurslar tushunchasi bilan ifodalanadi.

Videokonferentsiyalar va vebinar: ushbu vositalar o‘qituvchi va bo‘lajak o‘qituvchilar o‘rtasida ikki tomonlama aloqani ta’minlaydi. Bunday holda, video, audio va grafik rasmlarni bir vaqtning o‘zida ikki tomonlama uzatishni amalga oshiradi. Auditoriyadagi guruh mashg‘ulotlari paytida kompyuter monitorining tasvirini SMART doskaga, videoproektor yoki boshqa proektsion moslama yordamida loyihalashimiz mumkin. Bitta ish joyining apparat va dasturiy ta’minotiga quyidagilar kiradi: kompyuter, monitor, printer, videoproektor, tegishli dasturiy ta’minot, klaviatura, sichqoncha, modem, Wi-Fi. Kutubxona xizmatlarining darajasi va istiqbollari ko‘p jihatdan kutubxonaning foydalanuvchilarga turli xil xizmatlarni ko‘rsatish imkoniyatlariga bog‘liq.

Tadqiqot natijalari va muhokamasi. Hozirgi kunda oliy ta’lim kutubxonalari ta’lim standartlariga to‘liq javob bermaydi. Shu munosabat bilan internet resurslaridan foydalanish muammosi ayniqsa keskinlashadi. Oliy ta’lim kutubxonalari kitobxonligining o‘ziga xosligi bo‘lajak o‘qituvchilarning ham, kutubxonachilarning ham internetga bo‘lgan munosabatlarini o‘rganishni taqozo etadi. Bo‘lajak o‘qituvchilarning kasbiy tayyorgarligini rivojlantirishda o‘quv va elektron kutubxona xizmatlari bozori shakllanishi amalga oshirilmoqda, shuning uchun oliy ta’lim muassasalari kutubxonalarining vazifalari kengayib mukammallashmoqda.

Ta’lim mazmunini modernizatsiya qilish sharoitida kutubxonaning vazifasi o‘zgarib bormoqda. Ta’lim muassasasining kutubxonasi ijtimoiy institut sifatida endi rivojlanishning bir necha evolyutsion bosqichlarida sakrashni amalga oshirishi kerak. Zamonaviy sharoitda ta’lim muassasalarining kutubxonalari yangi sifatda paydo bo‘ladi-ular media markazlarga aylantiriladi. An’anaviy kitoblar to‘plami bilan bir qatorda, bunday kutubxonada endi yangi ish joylari mavjud: video kutubxonalar, musiqa kutubxonalari va o‘yin kutubxonalari.

O‘quv jarayoni va Web-texnologiyalarni optimallashtirishning zamonaviy tamoyillarini to‘liq amalga oshirish imkonini beradi:

1. Individuallashtirish - bo‘lajak o‘qituvchilarning individual xususiyatlarini hisobga oladigan va har kimga mos ta’lim olish qobiliyatini maksimallashtirish imkoniyatini beruvchi tizimni yaratish bo‘lib hisoblanadi. Bu holda integratsiya

quyidagilarni o‘zgartirishga imkon beradi: ta’lim mazmuni o‘quv materialining hajmini solishtirish vaqti o‘quv va kognitiv faoliyatni faollashtirish o‘quv motivatsiyasi darajasini oshirish orqali erishiladi, bu esa o‘z navbatida o‘quv jarayonini tashkil etishning sur’ati, yo‘nalishi va boshqa jihatlarini bo‘lajak o‘qituvchilarning individual intilishlari va imkoniyatlariga maksimal darajada yaqinlashishi bilan kuzatiladi.

2. Moslashuvchanlik - o‘quv o‘zgaruvchanligining, o‘quv jarayonida, ta’limning sur’ati, chuqurligi, yo‘nalishi o‘zgarishi bilan tezkorlikning kombinatsiyasi.

3. Fakultativlik - o‘quv yo‘nalishlarini tanlashda mumkin bo‘lgan maksimal mustaqillikni ta’minlash-bo‘lajak o‘qituvchilarning individual moyilliklariga, kelajakdagi rejalashtirilgan kasbiy faoliyatining o‘ziga xos xususiyatlariga yoki shunchaki bilim qiziqishlariga javob beradigan fakultativ kurslar.

4. Kontekstli yondashuv - qo‘shimcha kurslar doirasida o‘quv materialini o‘rganish mazmuni va mantig‘ini tuzatish imkoniyati kelajakdagi kasbiy faoliyat manfaatlariga mos kelishini ta’minlash, natijada o‘rganish ongli, mazmunli, kontekstli xarakterga ega bo‘lib, kognitiv qiziqish va kognitiv faoliyatni mustahkamlashga yordam beradi.

5. Hamkorlikni rivojlantirish - hamkorlik pedagogikasi tamoyillarini amaliyotga tatbiq etish, bo‘lajak o‘qituvchilarga o‘quv faoliyatini tashkil etishda uning samaradorligiga bo‘lgan talablarni saqlash bilan birgalikda yordam berish.

Hozirgi kunda oliy ta’limda bo‘lajak o‘qituvchiga, ishonchni oshirish, unga mustaqillik, tashabbuskorlik va natija uchun individual javobgarlikni ko‘rsatish imkoniyatlarini berish bilan birgalikda, ko‘plab bo‘lajak o‘qituvchilar internet texnologiyalari sohasida bilimga ega. Ularning har biri yangi bilimlarni turli yo‘llar bilan o‘rganadi, shuning uchun har bir bo‘lajak o‘qituvchiga individual yondashuvni topishlari kerak edi. Endi ta’limda internet texnologiyalaridan foydalanilganda o‘qituvchilar iloji bo‘lsa bo‘lajak o‘qituvchilarning barcha individual so‘rovlarini qondiradigan tarzda yangi ma’lumotlarni berishlari mumkin.

Ta’limdagi Web-texnologiyalar o‘quv jarayonini yanada qiziqarli o‘tkazishga, kerakli vaqtda kerakli ma’lumotlarni taqdim etishga, ilmiy loyihalarda ishtirok etishga imkon beradi, shuningdek bo‘lajak o‘qituvchilarni bir-biri va o‘qituvchilar bilan bog‘lash uchun ishlatiladi.

Xulosa. Hozirgi vaqtda Web-texnologiyalarning bo‘lajak o‘qituvchilar hayotidagi roli sezilarli darajada oshdi. Zamonaviy jamiyat axborotlashtirish deb nomlangan umumiy tarixiy jarayonga qo‘shildi. Ushbu jarayon har qanday fuqaroning axborot manbalariga kirish imkoniyatini, axborot texnologiyalarining ilmiy, sanoat, jamoat sohalariga kirib borishini va yuqori darajadagi axborot xizmatini o‘z ichiga oladi.

Demak, o‘quv jarayoni va Web-texnologiyalarni optimallashtirishning zamonaviy muammolari jamiyatni axborotlashtirish bilan bog‘liq jarayonlar, ya’ni ilmiy-texnik taraqqiyotning tezlashishiga, bo‘lajak o‘qituvchining o‘quv bilish faoliyatining rivojlanishiga, ijodiy salohiyatini rivojlantirishni ta’minlaydi. Jamiyatning sifat jihatidan yangi axborot muhitini yaratishga, ya’ni, bo‘lajak o‘qituvchilarning kasbiy tayyorgarligini takomillashtirish ham yordam beradi.

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BOSHLANG‘ICH TA’LIMGA AKSIOLOGIK YONDASHUVNING O‘ZIGA XOS XUSUSIYATLARI

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Annotatsiya. Maqolada pedagogik oliy ta’lim tizimida bo‘lajak o‘qituvchilarni tayyorlashda aksiologik yondashuvning dolzarbligi asoslab berilgan. Ta’lim jarayoni sub’ektlari o‘rtasida qadriyatlarni shakllantirish ular o‘rtasidagi o‘z aro munosabatlarning rivojlanishi uchun asos bo‘lishi bilan birga, o‘quv jarayoniga aksiologik yondashuvni tadbiq etish yo‘llari va vositalari ko‘rsatilgan. Shuningdek, pedagogik oliy ta’lim tizimida aksiologik yondashuvga asoslangan qadriyatlarning akademik, shaxsiy va fuqarolik qadiriyat guruhlari aniqlashtirilgan.

Kalit so‘zlar. Aksiologik yondashuv, qadiriyat, akademik qadriyatlar, shaxsiy qadriyatlar, fuqorolik qadriyatlar, aksiologik salohiyat.

Аннотация. В статье обосновывается актуальность аксиологического подхода в подготовке будущих учителей педагогической системы высшего образования. Поскольку формирование ценностей у субъектов образовательного процесса является основой развития взаимоотношений между ними, показаны пути и средства применения аксиологического подхода к образовательному процессу. Также в системе педагогического высшего образования на основе аксиологического подхода определены академические, личностные и гражданские группы ценностей.

Ключевые слова. Аксиологический подход, способности, академические ценности, личностные ценности, гражданские ценности, ценностный потенциал.

Abstract. The article substantiates the relevance of the axiological approach in the training of future teachers of the pedagogical system of higher education. Since the formation of values in the subjects of the educational process is the basis for the development of relationships between them, the ways and means of applying the axiological approach to the educational process are shown. Also, in the system of pedagogical higher education, based on the axiological approach, academic, personal and civic groups of values are defined.

Key words. Axiological approach, ability, academic values, personal values, civic values, axiological potential.

Kirish. Jadallik bilan rivojlanayotgan texnologiya asrida dunyo ta’lim sohasida katta o‘zgarishlar ro‘y bermoqda. Jahon taraqqiyotining ana shunday zamonaviy tendentsiyalari ta’lim maqsadlari, mazmuni va texnologiyalarini tubdan o‘zgartirishni, mehnat bozoriga raqobotbardosh kadrlarni yetishtirish, ularning kasbiy malakalarini oshirish va qayta tayyorlashni taqozo etmoqda. Bu borada yurtimida oliy ta’limni tizimli isloh qilishning ustuvor yo‘nalishlarini belgilash, zamonaviy bilim va yuksak ma’naviy-axloqiy fazilatlarga ega, mustaqil fikrlaydigan yuqori malakali kadrlar tayyorlash jarayonini sifat jihatidan yangi bosqichga ko‘tarish, oliy ta’limda ma’naviy-axloqiy mazmunni kuchaytirish, yoshlarni milliy qadriyatlarga hurmat, insonparvarlik va yuksak ma’naviy g‘oyalar asosida vatanparvarlik ruhida tarbiyalashga katta e’tibor qaratilmoqda [1].

Tadqiqot maqsadi. Zamonaviy oliy ta’lim muassasalarining asosiy vazifasi esa XXI asr talablariga javob beradigan mutaxassislarni tayyorlashdan iborat bo‘lib, bu jarayon nafaqat tayyor bilimlarni berishni, balki yangi bilimlarni yaratishni ham o‘z ichiga oladi. Bugungi kunda pedagogik oliy ta’lim tizimida bo‘lajak o‘qituvchilarni tayyorlashda asosiy e’tibor tashqi ta’lim sharoitlariga va o‘quv faoliyatining yuqori samaradorligini turli yondashuvlar asosida oshirishga qaratilgan. Ammo, talabalarning shaxsiy sifatlarini rivojlantirishga aksiologik yondashish yetarlicha e’tiborga olinmagan.

Tadqiqotni tashkil qilish uslublari. Aksiologik yondashuv pedagog va talaba o‘rtasidagi o‘z aro munosabatlarni tashkil etishda o‘qituvchining yangi rollari va funktsiyalarini belgilab beradi. Aksiologik yondashuvning asosiy xususiyatlari shundan iboratki, o‘quvchi va o‘qituvchining ta’lim jarayonida muvaffaqiyatlarga erishish maqsadlari, intilishlari, qadriyatlari, motivlari, ehtiyojlari va sub’ektiv pozitsiyalari individual ta’lim traektoriyasini qurish, o‘zini o‘zi rivojlantirish uchun yangilanadi.

Qadriyatlar oliy ta’lim tizimining har bir bosqichida axloqiy me’yorlar sifatida xizmat qiladi va ta’lim jarayoni sub’ektlari o‘rtasidagi o‘z aro munosabatlarning rivojlanishi uchun asos bo‘lib xizmat qiladi. Ilmiy izlanishlarimiz davomida pedagogik oliy ta’lim tizimida aksiologik yondashuvga asoslangan qadriyatlarning quyidagi guruhlari aniqlashtirildi:

- **akademik qadriyatlar:** institutsional mustaqillik, akademik erkinlik, innovatsiyalarning rivojlanishiga yordam berish, kasbiy kompetensiya, ta’lim-tarbiya berishning yangi paradigmalari, nazariy va amaliy bilimlarning birgalikda olib borilishi, ustoz-shogirt tizimining uzviyligi, tadqiqotning fanlararoligi, o‘qituvchilarning xalqaro hamkorligi;
- **shaxsiy qadriyatlar:** o‘z o‘zini anglash, individuallik, ta’limning uzviyligi, atrof-muhit va vaziyatga moslashuvchanlik, kasbiy harakatchanlik; salomatlik; motivatsiya, mehnat bozorida raqobatbardoshlik;
- **fuqarolik qadriyatlar:** erkinlik, demokratiya, ijtimoiy adolat, bag‘rikenglik, odob-axloq, madaniyat, ijtimoiy mas’uliyat.

Qadriyat – insonning butun hayotiy vaziyatlarini o‘z ichiga oluvchi va umrining barcha jarayoniga ta’sir qiluvchi shaxsiy, hayotiy, kasbiy ko‘rsatgichlarini belgilab beruvchi ongi hisoblanadi.

Bo‘lajak boshlang‘ich sinf o‘qituvchilarining aksiologik potentsialini rivojlantirish ta’lim faoliyatiga bo‘lgan qadriyat munosabatida sifat jihatidan o‘zgarishlarni nazarda tutadi, ya’ni:

- dunyoning yaxlit va qiymatga asoslangan qiyofasini shakllantirish;
- ichki “men”ni shakllantirish;
- kelajakdagi kasbiy faoliyatini loyihalash [2].

Ta’lim muassasasining o‘quv jarayoniga qadriyat mazmuni singdirilgan bo‘lsa, bo‘lajak o‘qituvchilarning aksiologik salohiyati quyidagicha rivojlanadi: o‘z qard-qimmatini belgilashi ta’minlanadi, moslashish, zamonaviy axborot texnologiyalarini va yangi bilimlarni o‘zlashtirish, intellectual, kommunikativ va ijodiy qobiliyatlarini rivojlantirish osonlashadi.

Oliy ta’lim jarayonida o‘qituvchilarning asosiy rolini hisobga olgan holda, nafaqat talabalarning aksiologik salohiyatini rivojlantirish, balki o‘qituvchining o‘zi ham aksiologik salohiyatga ega bo‘lishi, doimiy ravishda o‘z o‘zini takomillashtirishga intilishi ayniqsa dolzarb bo‘lib hisoblanadi. Aksiologik yondashuvni amalga oshirish aksiologik potentsialning rivojlanishida bir necha bosqichlarning mavjudligini nazarda tutadi, bular: individuallashtirish, moslashish va qiymatli o‘z-o‘zini belgilash.

Aksiologik yondashuv asosida tashkil qilingan ta’limda talabalarning o‘z taqdirini o‘zi belgilash muammosi alohida ahamiyatga ega. Qadriyatning o‘z o‘zini belgilashi – bu shaxsning ta‘lim makonida va vaqtida o‘z hayotining mazmuni, maqsadlari va resurslarini egallash jarayoni [3]. O‘z hayoti davomida shaxsning o‘zini o‘zi belgilashining asosi kelajakni nazarda tutadigan va maqsadlarni belgilash, shuningdek ularga erishish yo‘llari uchun zarur bo‘lgan qiymat yo‘nalishlari hisoblanadi.

Shaxsning o‘z o‘zini qadiriyatli belgilashi quyidagi ko‘rsatkichlarni o‘z ichiga oladi:

- kognitiv (hayotiy bilimlarga ega bo‘lish);
- hissiy-irodaviy (hayotiy faoliyatga nisbatan qadriyatli munosabatda bo‘lish);
- faoliyatli (maqsadlarni belgilash, rejalashtirish, loyihalash).

Tadqiqot natijalari va muhokamasi. Olib borilgan ilmiy izlanishlar davomida oliy ta’limda tahsil olayotgan talabalarning aksiologik salohiyatini rivojlantirishni ta’minlash quyidagilarga bog‘liq ekanligi aniqlandi:

– ta’limning qadriyat mazmunini yangi bosqichga ko‘tarish;

– oliy ta’lim muassasasining ta’lim muhitida bo‘lajak mutaxassisning o‘z qadr-qimmatini belgilashi uchun sharoit yaratish;

– mutaxassislik amaliyotining aksiologik komponentini joriy qilish;

– ta'lim jarayoniga moslashish va ta’limni individuallashtirish;

– fundamental bilimlar va zamonaviy axborot texnologiyalarini o‘zlashtirish talabaning intellektual, kommunikativ va ijodiy qobiliyatlarining integratsiyalashuviga asoslanishi.

Shuningdek, talabaning kasbiy faoliyatining sifati ko‘p jihatdan mutaxassisning aksiologik salohiyati qanchalik rivojlanganligiga bog‘liq. Har qanday talaba shaxsining aksiologik salohiyatini rivojlantirish o'quv faoliyatiga, o‘ziga va kelajakdagi kasbiy faoliyatiga bo‘lgan qadriyat munosabatlaridagi sifat o‘zgarishlarini o‘z ichiga oladi.

Oliy ta’lim sifatining navbatdagi aksiologik ko‘rsatkichi, faoliyat samaradorligida, o‘z-o‘zini tashkil etishida namoyon bo‘ladigan shaxsning yaxlit aksiologik xususiyati sifatida talabaning sub’ektivligi hisoblanadi. Talabaning sub’ektivligi uning salohiyati va ilmiy bilimlaridan ta’lim jarayonida va kelajakdagi kasbiy muammolarini hal qilishning uslubiy va texnologik vositasi sifatida foydalanish uchun asos bo‘ladi. Sub’ektivlikni shakllantirishning harakatlantiruvchi kuchi talabaning o‘z o‘quv faoliyatining mazmuni, maqsadlari va resurslarini egallash jarayoni sifatida o‘z taqdirini o‘zi belgilashdir.

Demak, bo‘lajak o‘qituvchilarning sub’ektivligini shakllantirish konsepsiyasining asosiy g‘oyasi shaxsning aksiologik komponentlarining shaxsiy va kasbiy rivojlanishining mexanizmi sifatida belgilanadi. Ushbu g‘oya talabalarning ta’lim mazmunining qadriyatlari va ma’nolarini tushunish zarurligiga asoslanadi. Talabaning shaxsiyati tushuniladigan ma’no uning ta’lim va kelajakdagi kasbiy faoliyati uchun ko‘rsatmalarni belgilaydi, uning shaxsiy va ijtimoiy ahamiyatga ega bo‘lgan konstruktiv qarorlar qabul qilishini ta’minlaydi [2].

Pedagogik jarayonda ma’lum bir ijtimoiy guruh madaniyati sifatida talabalarning submadaniyatining qadriyatlari va me’yorlarini hisobga olish muhimdir, chunki o‘qituvchilar va talabalar turli submadaniyatlarga mansub bo‘lganligi sababli, ularning hayot tarziga ta’sir qiladigan o‘z aro tushunish, o‘z aro qabul qilish va o‘z aro ta’sir mavjud. Talabalarning submadaniyatini shakllantirish jarayoni sezilarli darajada ta’lim sohasida sodir bo‘lganligi sababli, birinchi navbatda, yoshlar submadaniyatini shakllantirishga ta’lim makonining ta’sirini boshqarishni o‘zgartirish, ikkinchidan, yoshlar submadaniyatini shakllantirish kerak. Bu shunday jarayonki, u bir tomondan, yoshlar submadaniyatining ijobiy xususiyatlarini o‘zida mujassam etgan bo‘lsa, ikkinchi tomondan, o‘sib kelayotgan yosh avlodni boshqaradigan qadriyatlar, xulq-atvor va munosabatlar normalari, turmush tarzi, estetik imtiyozlar, ehtiyojlar va moyilliklarni shakllantiradi.

Xulosa. Maqolada muhokama qilingan aksiologik ko‘rsatkichlar zamonaviy dunyoda o‘zgaruvchan ta‘lim sifatini sezilarli darajada yaxshilaydi, ta’lim jarayoni

ishtirokchilarining maqsadlari, qadriyatlari, qadriyat yo‘nalishlarini qarama-qarshi va o‘zgaruvchan sharoitlarga, shaxsning o‘z hayotiga mos ravishda o‘zgartiradi. Dunyoga, o‘ziga va boshqalarga yaxlit nuqtai nazarni shakllantirish, o‘z-o‘zini belgilash uchun ta’lim traektoriyasini yaratish, kelajakdagi kasbiy faoliyatida muvaffaqiyatga erishish, madaniy qadriyatlarni ishlab chiqarish va mustahkamlashga zamin yaratadi. Bizning fikrimizcha, aksiologik salohiyat ta’limning sifat darajasini o‘zgartirish uchun resurslarni topishga imkon beradi va oliy ta’limning asosiy sub’ektlari – talaba va o‘qituvchi o‘rtasidagi munosabatlarda muvaffaqiyatga erishish uchun boshlang‘ich nuqtaga aylanadi.

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ҚАРАҚАЛПАҚ ТИЛИНДЕ СЫПАЙЫЛЫҚТЫҢ ЖАН АФФИКСОИДЫ АРҚАЛЫ БИЛДИРИЛИЎИ

Матжанова А.Ж.
Өзбекстан Республикасы Илимлер академиясы Қарақалпақстан бөлими
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Бул аффиксоид ҳаслында парсы тилинен жан (душа) сөзинен келип шыққан [2; 72 б.]. Ҳәзирги қарақалпақ тилинде жан сөзи төрт түрли мәниде қолланылады: 1. Бөлек сөз сыпатында контекстте адам, киси (шаңарағымызда жети жанбыз); жүрек, кеўил мәнисинде (жаннан сүйиў); қорқыў, ашыўланыў (жаны шығып кетти). 2. Сөз жасаўда (жана-жан). 3. Рәўиш сөз сыпатында (қасы, жаны). 4. Форма жасаўшы аффикс сыпатында. Бундай жағдайларда атлықларға, субстантивлескен ҳәм гейде субстантив емес келбетликлерге қосылып, атлықлардың киширейтиў-еркелетиў ҳәм ҳүрмет формаларын жасайды [1; 55-56 бб.]. Бул аффиксоид те *-й* қосымтасы сыяқлы адам мәнисиндеги атлықларға жалғаныў арқалы кишипейиллик, сыйласықлықты билдиреди [4; 36 б.]. Қарақалпақ тилинде бул аффиксоид көбинесе туўысқанлық атамаларына қосылып, соларға қарата мүрәжатте қолланылады. Ол сол адамларға болған сыпайы қатнасты, өзине жақын алыў мәнилерин билдиреди. Ш.Содиқова өзбек тилинде бул аффиксоид туўысқанлық атамаларын аңлатыўшы түрли атлықларға қосылып та ҳүрмет мәнисин аңлататуғынын айтқан еди [2; 73 б.]. Мысалы, Мейли, анажан, басқа илажым

қалмады (К.Мәмбетов, 16-б). Анамыздан айрылып қалдық, жоражан (К.Кәримов, 152-б). Саған буйырған екен, шешежан, жеп ала ғой пәкизе, бир қайнатып әкелдим (Ш.Сейтов, 212-б). Атажан, әжағамды бәддиўа етпең. Соранаман, ата! (Т.Қайыпбергенов, 144-б). Апа-қарындасым, жеңгежанларым .(И.Юсупов, 148-б). Ол дәртимниң несин айтасаң, кишежан! (Г.Есемуратова, 270-б). Ағажан, көмек бер, дәрегин билсең айт, мениң бар тапқаным сеники болсын, -деди жигит диз бүгип (К.Каримов, 301-б). Айта бериўге де қысынаман, айтпайын десем ишиме сыймайды-аў, апажан (Г.Есемуратова, 54-б).

Қарақалпақларда келин киси баласы, сонлықтан оның кеўлине тийип алмаў керек деген мақсетте шаңарақ ағзалары оған сыпайы қатнас жасаўға ҳәрекет қылған. Шаңарақта оның ҳүрметин жайына қойып ата-енеси атын айтпастан келин, балам деп мүрәжат етеди. Усы келин сөзине *-жан* аффиксоиды қосылыў аркалы келинге айрықша ҳүрмет, өзине жақын алыў сезиледи. Мысалы, - Келинжан, деди бир күни енеси (К.Султанов, 20-б). Мениң қайда бара жағымды не қыласаң, келинжан (Ш.Сейтов, 54-б).

Қарақалпақларда ерли-зайыплар арасында жасы кишилери шабазым, ағасы, папасы табу сөзлерин қолланса, жасы үлкенлери бир-бирине ғарры, кемпир деп қатнас жасайды. Ғарры, кемпир сөзлери де шаңарақта бир-бирине болған сыпайы қатнасты билдиреди. Бул сөзлерге *-жан* аффиксоиды қосылса еркелетиў, ҳүрмет күшейтиледи. Мысалы, Қәне, кемпиржан, отқа қуман қой, Яқыпжан сөйлеп отыр, -деди Маман (Т.Қайыпбергенов, 297-б). Сондай-ақ бул қосымта еркелетиў ҳәм ҳүрметлеў мәнисинде де жумсалады [4; 36 б.]. Бул пикир С.Усманов мийнетинде де айтылған [3; 125 б.]. «Адамды аңлатыўшы меншикли атлықларға қосылып, еркелетиў, сүйсиниў, ҳүрмет мәнилерин билдиреди» [1; 57 б.]. Мысалы, Болмас ислер болды, Қулшыжан, -деди той ийеси Ералы салмақ пенен (К.Кәримов, 71-б). – Айдосжан, ҳәм сүйинши сорап, ҳәм тойға мәсләҳәт қылыўға келдик, -деди күтә әлпайым (Т.Қайыпбергенов, 115-б). Айымгүлжан, жуўырып Нурлыбекти үйинен шақырып кел, шырағым (Т.Қайыпбергенов, 305-б).

Қарақалпақ тилинде *-жан* аффиксиодынан кейин I бет тартым жалғаўы қосылып келген сөзлерде мысалларда ушырасады. Бул жағдайда ҳүрмет, сыпайылықтың, ардақлаў, жақын көриў мәнилериниң әбден күшейтип бергенлигин көремиз. Мысалы, Мени бар қылған, бизлер деп өмирин өткерип отырған анажаным неге қартайып баратыр? (А.Турекеева, 7-б). Есикке келин түсип, Омаржанымның күйеден қутылғанын көрип кетсем, әрманым жок (Т.Қайыпбергенов, 77-б).

Сондай-ақ *-жан* аффиксоиды сөзлерге қосылып та, туўысқанлық қарым-қатнасларда бир-биреўге сыпайылық, ҳүрмет көрсетиў мақсетинде сол сөзлердиң алдында келип те өзине жақын көриў мәнилерин билдирип келеди. Мысалы, Жан ағам қайда барасаң (Қарақалпақ фольклоры, 206-б). Лашыным, суңқарым, ҳүрим жан балам (Қарақалпақ фольклоры, 207-б). Кешеги кеткен жан дайым. Келермекен жуўықта (Қарақалпақ фольклоры, 223-б).

Жыйналған мысаллар соны көрсетеди: және де бул аффиксоид бала сөзине қосылып ҳаял-қызлар арасында бир-бирине сыпайы қатнаста

қолланылады. – Усы күнлери дым сарғайып кеткенсең бе? – Еси бар адамның урыс күнлери сарғаймай жүргени бар ма? – А-а, айтарың бар ма? Сәлийма Жәмийланың еки көзине тигилип жақынырақ отырды-жоқ-аў. Мениң айтайын дегеним бар ғой, балажан, бүйтип сарғайып отырғанша деймен-аў, ояқ-буяққа қыдырып төркин журтыңа барып кеўлиңди көтерип қайтсаң-о дегеним ғой (К.Султанов, 71-б).

Жуўмақлап айтқанда, қарақалпақ тилинде сыпайылықты, ҳүрметлеўди, жақынлықты, сүйсиниўди билдириўши морфологиялық қураллар көп түрли ҳәм олардың ҳәр бири халық аўызеки дөретпелеринде, көркем әдебий шығармаларда, сөйлеў тилинде кең қолланылады.

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BOLAJAQ TÁRBIYASHÍ – PEDAGOGLARDA KÁSIPLIK MOTIVACIYANÍ QÁLIPLESTIRIWDIŃ DIDAKTIKALÍQ SISTEMASÍ

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Joqarı tálim sistemasında oqıw procesin shólkemlestiriwde talabalardıń jeke rawajlanıw sapaları hám qızıǵıwshılıqlarına itibar qaratıw zárúrli esaplanadı. Bolajaq tárbiyashı-pedagoglar kásiplik motivaciyasın qáliplestiriw arqalı pedagogikalıq processke tayarlaw olarda kásiplik kompetensiya, kásiplik kónlikpe, ilimiy tájriybelerdiń asıwına erisildi.

Bolajaq tárbiyashı-pedagoglar kásiplik motivaciyasın qáliplestiriwde tálim processinde hár qıylı óz-ara tásir kórsetiw usılları, Talabalardıń jeke beyimligi hám uqıbın asırıwda professor-oqıtıwshılardan pedagogikalıq uqıp hám principlerge ámel qılıw talap etiledi. Principlerdiń zárúrli tárepleri talaba shaxsınıń ishki múmkinshiliklerin kórsete alıw, aktivligin payda etiw, tálim processinde jeke dóretiwshilik qarasların bildiriw sıyaqlı payda boladı. Talabalarda usı kónlikpelerdiń qáliplesiwi kásiplik iskerlikke dóretiwshilik jantasıw, tálim ortalıǵına jańalıqlardı engiziw ilimiy tájriybeleriniń iyelewlerine kepillik beredi. Olarda pedagogikalıq iskerlikke dóretiwshilik jantasıw hám de tárbiylanıwshılar menen nátiyjeli baylanısta bolıw ilimiy tájriybesi, óz-ózin rawajlandırıw múmkinshilikleri jaratıladı.

Mashqala boyınsha ótkerilgen tájiriybe-sınaw jumıslarında talabalar menen “Balalardı saqnalastırıw hám dóretiwshilik iskerlikke úyretiw” oqıw modulın oqıtıwda tómendegi principler tiykarında oqıw -tárbiyalıq iskerlik dúzildi:

1. Ǵárezsizlik principi. Bunda talabalar ózin kórsetiwi hám de oqıw iskerligin ǵárezsiz shólkemlestiriwge sharayat jaratıladı. Oqıw iskerligin mazmunlı ámelge asırıw hám tapsırmalardı belgilewde Talabalardıń usınısları, ǵárezsiz pikirlewleri inabatqa alınadı. Sabaqta erisilgen nátiyje hám tabıslar oqıtıwshı hám de talabalar menen sheriklikte analiz etiledi.

2. Rawajlandırıwshı princip. Bunda oqıw procesin úzliksiz ózgertip turıw talap etiledi. Shınıǵıwdı kirisiw bóleginen baslap juwmaǵına shekem Talabalardıń qálew tilekleri qandırıladı. Talabalar temaǵa tiyisli mashqalalardı ǵárezsiz túrde sheshiwi hám processke óz múnásibetlerin bildiriwi ushın pedagogikalıq sharayat jaratıladı. Principtiń mánisi sonda, oqıw tapsırmaları bólimlerge bólinip, bárshege bólistiriledi, sherikliktegi iskerlikten, social háreket hám de ǵárezsiz túrde ishki háreketke ótiw ámelge asırıladı.

3. Sheriklik principi. Bunda pedagogikalıq proceste oqıtıwshı hám talabalarda baslamashılıq, dóretiwshilikti payda ettiriw názerde tutıladı. Sonıń menen birge, bilim, kónlikpe hám ilimiy tájriybe, kompetensiyaların jetilistiriw, óz-ara birgeliktegi bilimlendiriwge tiyisli háreketler ámelge asırıladı, sheriklik strategiyası rawajlandırıp barıladı.

4. Rol atqarıw principi. Bunda oqıtıwshı hám talabalar belgilengen tapsırma, wazıypalardı atqaradı. Tapsırmalar mámleket, jámiyet, tálimdi basqarıwshı shólkemlerdiń social talaplarına tiykarlanıp beriledi. Oqıtıwshı talabalar iskerliginiń shólkemlestiriwshisi hám baslıq rolin atqaradı. Talabalar, óz gezeginde, oqıtıwshı bergen tapsırmalardı dóretiwshilik tárepten de atqaradı.

5. Juwapkershilikti seziw principi. Bunda barlıq talabalardan oqıw processinde tek ǵana olarǵa qoyılǵan minnetleme, bálki óz minez-qulqları, iskerlik nátiyjeleri, berilgen tapsırmalardıń orınlanıwı boyınsha esabat talap etiledi. Talabalar kásiplik juwapkershilik sezimi hám de ózlestirgen bilim, kónlikpe hám ilimiy tájriybeleriniń qálipleskenligi haqqında maǵlıwmat beredi.

6. Jámáátlik principi. Bunda oqıtıwshı hám talabalar óz-ara birgelikte iskerlik alıp baradı. Barlıq qatnasıwshılar bir-birine járdem kórsetedi, júzege kelgen qıyınshılıqlardı birgelesip sheshedi. Talabalardan oqıw maqsetleriniń tabıslı keshiwinde bir-birin qollap-quwatlaw, qızıǵıwshılıqlardı payda etiwde jámáátlik háreket etiwi talap etiledi.

7. Psixologiyalıq qollap-quwatlaw principi. Bunda sabaq processinde saw psixologiyalıq ortalıqtı jaratıw arqalı oqıw iskerliginiń nátiyjeli bolıwına erisiw názerde tutıladı. Talabalar iskerligi psixologiyalıq qollap-quwatlanadı. Tómen ózlestiriwshi talabalar aktiv talabalar menen biriktirilip, olardıń aktivligin asırıwǵa itibar qaratıladı. Auditoriyada kóterińki ruwxta ornatılıladı.

Sanap ótilgen principler bolajaq tárbiyashı-pedagoglarda kásiplik motivaciyanıń qáliplesiwinde zárúrli áhmiyetke iye. Bolajaq tárbiyashı-pedagoglar kásiplik motivaciyasın qáliplestiriw mazmunı bir qansha quramalı strukturadan ibarat bolıp,1-kestede kórsetilgen.

Motivacion faktorlar	Kásiplik mútajlik, kásiplik aktiv bolıw, pedagogikalıq iskerlikke maslasıw; ózindegi barlıq tájiriybeni bilimler menen bayıtıw; sezimlik turaqlılıq.
Kásiplik baǵdarlanǵanlıq	(Sabrlılıq) Miynet intizamın biliw, jeke úlgi, miynetkeshlik, sheriklik múnásibetin ornatıw, shańaraq penen sheriklik, kásiplik minneti hám wazıypaları.
Kásiplik iskerlik mazmunınan xabarlılıq	Mektepke shekemgi bilimlendiriw tarawına tiyisli normativ hújjetler menen tanısıw; oqıw-metodikalıq ádebiyatlardı úyreniw; pedagogika hám balalar psixologiyasındaǵı sońǵı tabıslardan xabarlı bolıw; zamanagóy texnologiyalardı úyreniw.
Kásiplik qızıǵıwshılıqlar	Balalardı súyiw, olardıń kúshi hám múmkinshiligine iseniw; aldıńǵı jumıs tájiriybeni úyreniw; óz jetiskenliklerin kórsetiw.
Dóretiwshilik-refleksiv iskerlik	Dóretiwshilik iskerlikti shólkemlestiriw; oz-ózin bahalaw; kreativlik, ózgeler iskerligin baqlaw hám bahalaw.

1-keste. Bolajaq tárbiyashı-pedagoglar kásiplik motivaciyasın qáliplestiriw mazmunı quramalı strukturaları.

Tájiriybe-sınaw dáwirinde bolajaq tárbiyashı-pedagoglarda tómendegi kásiplik elementlerdi qáliplestiriwge itibar qaratıldı:

- ✓ oz bilimlerin ámeliyatqa engiziw, bilimlendiriwge tiyisli processlerdi innovciyalıq formada ámelge asırıw kónlikpe hám ilimiy tájriybelerin iyelew;
- ✓ nátiyjeli usıl hám de texnologiyalardan orınlı paydalanıw;
- ✓ oqıw-metodikalıq iskerlikti nátiyjeli ámelge asırıw tájiriybesin úyreniw hám bayıtıw;
- ✓ pedagogikalıq hám bilimlendiriwge tiyisli iskerlikti shólkemlestiriw, qadaǵalaw ilimiy tájriybelerin iyelew;
- ✓ tárbiyashı retinde tárbiylanıwshılar menen adamgershilik múnásibetin ornatıw;
- ✓ tárbiylanıwshılarda saxnalastırıw iskerligine tán bilimlerdi qáliplestiriw ilimiy tájriybesin iyelew.

Kásiplik tayarlıq tikkeley bolajaq tárbiyashılar iskerligin shólkemlestiriwdiń obyektiv hám subyektiv, dóretiwshilik-individual komponentleri menen xarakterlenedi. Bolajaq tárbiyashılardı kásiplik iskerlikke tayarlaw ushın joqarı tálim sistemasında tálimniń innovciyalıq texnologiyaların engiziw úyretiledi. Bolajaq tárbiyashı-pedagog retinde olarda jámiyettegi ózgerislerge tez maslasa alıw, kútilmegen jaǵdaylarǵa tayın turıw kónlikpeleri qáliplestiredi. Keleshekte kásiplesleri hám de ata-analar menen sheriklikte islew qábiletin rawajlandırıw maqsetke muwapıq bolıp tabıladı. Talabalarda usı kónlikpelerdiń qáliplesiwi kásiplik iskerlikke dóretiwshilik jantasıw, tálim ortalıǵına jańalıqlardı engiziw ilimiy tájriybelerin

ózlestiriwlerine kepillik beredi. Olarda pedagogikalıq iskerlikke dóretiwshilik jantasıw, insanlar menen nátiyjeli baylanısta bolıw ilimiy tájriybesi, hám de ózin rawajlandırıw múmkinshiliklerin jaratadı. Bolajaq pedagoglar mektepke shekemgi pedagogika, balalar psixologiyası hám jas fiziologiyası hám de balalar pánlerin tolıq hám anıq ózlestiriwi kerek. Sebebi mektepke shekemgi tálimge tiyisli bilimlerdi tolıq iyelewi tárbiylanıwshılardı mektep tálimine tayarlawdağı tiykarǵı faktorlardan biri bolıp tabıladı.

Bolajaq tárbiyashı-pedagoglar kásiplik iskerligi boyınsha jáhánda erisilgen eń aldıńǵı tájiriybelerdi ózlestiriwleri hám de bilimlerin keńeytirip barıwları kerek. Bolajaq tárbiyashılar tálim hám tárbiya metodikasın ózlestiriwi, tárbiylanıwshılardıń individual qásiyetleri haqqında maǵlıwmatqa iye bolıwı hám de balanıń ishki dúnyasın ańlawı, pedagogikalıq uqıptı ańlawı, bunda ǵárezsiz tálim alıwǵa umtılıwı zárúr. Sanap ótilgen talaplar motivaciyanıń tiykarǵı belgilerinen biri bolǵan oqıw iskerligin qanday shólkemlestiriwge baylanıslı. Oqıw iskerliginde talabalar ózin analiz qılıwda refleksiv qábiletke súyenedi. Sonıń menen birge, oqıw processinde talabalar túrli tartıslı jaǵdaylarda sheshim tabıw kónlikpesin iyeleydi, pikir hám qaraslardı bildire alıwı ushın sharayat jaratıw talap etiledi.

Motivaciya talabalarda kásiplik kónlikpe hám kompetensiyanı qáliplesiwinde tiykarǵı negiz bolıp xızmet etedi. Bolajaq tárbiyashı-pedagoglarda qáliplesken motivaciya mektepke shekemgi tálimniń nátiyjeli iskerligin kepilleydi. Olarda innovaciyalıq iskerlik hám de pedagogikalıq improvizaciyadan paydalanıw múmkinshiliklerin jaratadı.

Keltirilgen principler óz-ara baylanıslı bolıp, tálim procesin shólkemlestiriwde bir-birin toltıradı hám oqıw iskerliginiń social áhmiyeti zárúrligini tiykarlaydı. Nátiyjede, bolajaq tárbiyashı-pedagoglarda bilimlerdi ózlestiriwge háreket qılıw, jámiyet ushın paydalı xızmet etiw, oqıw hám bilim alıw zárúr ekenligin túsiniw hám de juwapkershilikti seziw túsinikleri qáliplesedi.

Bolajaq tárbiyashı-pedagoglarda kásiplik motivaciyanı qáliplestiriwde shet el ámeliyatı tiykarında tálim procesine ǵárezsiz pikirlew, sın kózqarastan hám logikalıq oylawdı rawajlandırıwǵa qaratılǵan sanlı hám informaciya kommunikacion

Bolajaq tárbiyashılar iskerligine qoyılatuǵın zamanagóy talaplar quramına koorporativ sheriklikte islew kompetensiyasın kirgiziw kerek.

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НУРЛАРНИ ОПТИК УСУЛДА БИОЛОГИК ВА ФИЗИК ЎРГАНИШ ОРҚАЛИ ЎТА СЕЗГИР ДАТЧИКЛАР ЯРАТИШ ТЕХНОЛОГИЯСИ

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Аннотация. Кўринадиган, яқин инфрақизил ва ультрабинафша нурларнинг муҳит ва метериаллар билан таъсирлашишидан олинган маълумотларни ўрганиб математик моделлаштириш усулида маълумотларни қайта ишлаш ва бугунги ҳаётимиздаги муаммоларни ҳал этишда қўллаш.

Калит сўзлар. Кўринадиган нур, инфрақизил нур, ультрабинафша нур, нурлар берган маълумотлар.

Кўринадиган ва яқин инфрақизил тўлқин узунликларида ёруғлик нурланишини ўрганиш физика, техника ва медицинада аҳамияти катта ҳисобланади. Ушбу тўлқин узунлиги диапазонидаги ёруғлик биологик тўқималарга яхши кириб боради ва тўқималарнинг турли структуравий ва динамик компонентлари билан ўзаро таъсир қилиб, турли касалликлар пайтида тўқималарда содир бўладиган структуравий ҳамда динамик ўзгаришлар ҳақида маълумот берса, техникада бу тўлқин узунликдаги нурлар, электр ишлаб чиқариш ва маълумотни бир нуқтадан иккинчи нуқтага етқазиб беришда фойдаланилади. Физикада эса, ютилиш, дифракция, интерференция, флоресанс, шунингдек еластиклик каби таниқли ҳодисалар, биологик муҳитда квазеластик ва молекуляр сочилиш кузатилади ҳамда патологик жараёнлар ҳақида маълумот манбалари ҳисобланади. Албатта, ҳамма нарса оддий емас, биологик тўқималар оптикада алоҳида муҳит сифатида қаралади. Спектрофотометр СФ-46 қурилмаси билан ўлчов жараёнида фотонларнинг мураккаб чигал траекторияларидан иборат бўлиши, тўқималарда ёруғликнинг биз билган физик хусусиятларининг ўзгаришини кўриш қийин эмас. Бу эса муҳитдан ўтаётган нурнинг маълумот ташишда таъсирини ўрганиш муҳим аҳамият касб этади.

Олиб борилаган тадқиқотларни ўргансак, касалликларни ташхислаш мақсадида биологик тўқималар ва ҳужайралар ҳолатини кузатиш учун ёруғликдан фойдаланиб келинган [1; 2 б.]. 1831 йилда биринчи марта манбадан тарқалаётган нур гидросефали билан оғриган беморнинг бошидан ўтиши ёки ўтмай қолиши касалликни бор-йўқлиги хақидаги маълумотни берди [1]. Кейинчалик, 1843 йилда, биологик тўқималарнинг трансиллуминацияси еҳтимоли Кӧрлинг томонидан қайд етилган ва 1929 йилда Катлер сут безларида патологик ўзгаришларни кузатиш учун трансиллуминациядан фойдаланган [2]. Милликан биринчи бўлиб ёруғлик тарқалишини ҳисобга олиш учун икки

тўлқин узунликдаги оптик спектроскопиядан фойдаланишни таклиф қилди ва у одамларда метаболик таҳлилларни муваффақиятли ўтказди. Бу эса ҳар хил муҳитлардан ўтувчи нурлар маълумотларига таяниб, инсон соғлигини ташхислайдиган замонавий қурилмаларни яратилишига сабаб бўлади. 1911 йилда Ҳасселбалч ультрабинафша нурланишни тери орқали ўтказиш бўйича тадқиқотлар олиб борди. Ультрабинафша нурларнинг [3; 4 б.] муҳитда тарқалиш хусусиятларини ўрганиш, физика-техника сохасида ҳам кенг қамровли ўрганиб келинмоқда. Бир вақтнинг ўзида биологик ва физик жихатдан олиб борилган тадқиқодлар, бугунги кунда самарали натижаларни бермоқда.

Ҳозирги кунда ультрабинафша нурларни ўрганилиб, олинган тахлил натижаларига кўра ўта сезувчи датчиклар яратиш учун материаллар танлаб олинмоқда. Бунинг натижасида иситиш тизимлари, электр станциялар, иссиқ хоналарда фойдаланилаётган ёнилғиларнинг турларидан қатъий назар, уларнинг тўлиқ ёниши ва атмосферага чала-тутаб ёниш орқали тарқаладиган газлар миқдорини назорат қилиш имконини беради.

1-расм. ХМПО усулида материал ўстириш қурилмаси.

Бундай тадқиқот ишлари Ўзбекистон миллий университет ҳузуридари Яримўтказгичлар физикаси ва микроэлектроника илмий тадқиқот институтининг Микроэлектроника ва электротехника материалшунослиги лабораториясида олиб борилмоқда. Ўта сезгир датчиклар учун материалларни ўстириш ишлари кимёвий молекуляр даста усулида бажарилмоқда. Бу қурилмада бир вақтнинг ўзида 4 хил моддадан структура ўстириш мумкин.

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AZIQ-AWQAT ATAMALARINIŃ LEKSIKA-SEMANTIKALIQ ÓZGESHELIKLERI

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Qaraqalpaq xalqı ázel-ázelden ózine tán milliy miyraslarǵa iye. Olar xalqımızdıń úrp-ádetlerinde, kúndelikli turmısında, kiyim-kensheklerinde, sonday-aq milliy taǵam atamalarında kózge taslanadı. Usı kózqarastan alıp qaraǵanda, xalıqtıń ózine tán milliy ózgesheliklerі erte dáwirden baslap óz ornına iye túrkiy xalıqlardıń biri bolıp jetilisiwi onıń dástúrlerinde, milliy azıq-awqat atamalarında jaqsı saqlanǵan. Bunday milliy ózgesheliklerdi tereń úyrenip, ótmishimizdi qayta tiklew búgingi kúnniń eń baslı wazıypalarınan biri esaplanadı. Sonlıqtan da “Ótmishin bilmegen xalıqtıń keleshegi de bolmaydı” degen danalıq gápti basshılıqqa alıp, xalıqtıń etnomádeniy ózgesheliklerin burınǵıdan da tereńirek ańlap, itibar berip izertlewdi talap etedi. “Álbette, hár qanday xalıqtıń yaki millettiń mánáwiyatın onıń tariyxı, úrp-ádetlerisiz kóz aldımızǵa keltirip bolmaydı. Usı orında tariyxıy miyras hám estelikler eń áhmiyetli baylıqlardan biri bolıp esaplanadı [1; 30 b.].

Biz azıq-awqat atamaların leksika-semantikalıq jaqtan izertley otırıp tómendegidey túrlerge bóldik.

Un yaki qamırdan tayarlanatuǵın azıq-awqat atamaları:

Gúrtik (júweri gúrtik, shaj gúrtik), bawırsaq (shiy bawırsaq, qudaǵay bawırsaq);

Bókpen - suwǵa un salıp qaynatılǵan, sút qosılǵan qoyıw bılamıq. Un bılamıqqa uqsaǵan qoyıw awqat;

Bórek - qamırdıń ishine máyek, gósh hám taǵı basqa nárseler salınıp suwǵa hám mayǵa pisiriletuǵın awqat, as, tamaq, taǵam;

Sozban - qamırdı nannan juqalaw etip jazyıp mayǵa pisirilgen túri, shelpek;

Shelpek - qamırdı juqa etip, domalaq formada jayıp mayda pisiriletuǵın awqat;

Gúlshe (koliycha “domalaq maylı nan”) – qazanǵa qatırılǵan, tandırǵa jabılǵan yamasa qozǵa kómilip pisirilgen kishkene shórek;

Zaǵara (jáǵare “tarıdan islengen nan”) – júweriniń, tarınıń, shiginniń unınan tandırǵa jabılıp pisken nannıń bir túri;

Nan (nan “nan, azıq-awqat”) – qamırdan tayarlanıp, tandırda, oshaqta, tabada hám t.b. pisiriletuǵın taǵam;

Pátir (fatiyrun “ashımaǵan” (nan), “shiyki,pispegen,taza”) – qamırdı ashıtpay juqa etip jayıp pisirilgen nan;

Shórek (shuraykun “shórek”) – tandırǵa pisirilgen dóńgelek nan;

Baton - forması súyir, jalpaqlawdan kelgen nan;

Vermishel - fabrikada qamırdam islenetuǵın jińishke keptirilgen kespe;

Makaron - (italyansha “maccheroni”) – qamır bólekleri jińishke uzın formada kesilip, keptirilip islengen azıqlıq ónim.

Dán ónimlerinen tayarlanatuǵın awqat atamaları:

Gója (qatıq gója, sút gója, nawrız gója);

Sút burısh - gúrishke sút quyıp islengen suyıq awqat, as;

Basalay - at. Tarını hám shigimdi keptirip, kepegin ayırmastan tartıp pisirilgen suyıq bılamıq, jarma. Bunnan nan da isleydi;

Boza - biyday, tarı, júweri, gúrishlerdi hám taǵı basqa usı sıyaqlılardı jarıp, maydalap, qaynatıp, ashıtılıp islengen awqat, ishimlik;

Bórtpe (maysók) - sókti mayǵa, sútke, qantlı suwǵa salıp jibitiwden islengen awqat, as-taǵam, tamaq;

Bılamıq - mayda etip dánnen jarılǵan jarmanıń untaǵınan, júweriniń unınnan suwǵa salıp qaynatılıp islengen awqat, tamaq;

Badıraq - mákke, júweri, arpa, biyday hám taǵı basqa sobıqlılardıń dánlerinen quwırılǵan jemis,awqat, taǵam.

Góshten tayarlanatuǵın azıq-awqat atamaları:

Shashlik - góshten, arnawlı sımǵa tartıp, shoqqa pisiriletuǵın taǵam túri;

Bawır quwırdaq - maldıń bawırın quwırıp islenetuǵın taǵam túri;

Kotlet - maldıń, tawıqtıń góshin maydalap ótkerip, domalaq formaǵa keltirip, mayda quwırıp islenetuǵın taǵam túri. Bawır kotlet, kartoshka kotlet túrleri de bar;

Gósh quwırdaq - góshti quwırıp isleneupın taǵam túri;

Kabab (bawır kabab, tandır kabab, qazan kabab).

Sút ónimleri hám olardan tayarlanatuǵın azıq-awqat atamaları:

Súzbe - suwı qurıtılıp súzilgen ayran, qatıq;

Sawmal - ashımaǵan qımız, ashımaǵan biyeniń súti;

Qaymaq - sútten ajıratıp alınǵan maylı, qoyıw azıqlıq ónim;

Qatıq - qaynatılǵan sútke qatıqtan uyıtqı salıp tayarlanatuǵın azıqlıq ónim;

Brinza - sútten isleytuǵın irimshik, súzbe.

Aralas ónimlerden tayarlanatuǵın azıq-awqat atamaları:

Bıj-shıj - may quyılıp islengen jeńil awqat, as, taǵam;

Sáhárlik (suxuwrun “suxur” (musılmanlardıń ramazan ayında, hár kúni tań atpastan jeytuǵın awqatı) – oraza tutqan musılmanlardıń tańnıń aldında jeytuǵın awqatı;

Borsh - tuwralǵan kapustaǵa hár túrli palız ónimleriniń qosındısınan islengen suyıq awqat;

Pyure - miywe yamasa oboshtan maydalap islengen taǵam, awqat;

Ragu - góshten, balıqtan h.m hár túrli miywe jemislerden maydalap tuwralıp parǵa pisirilgen awqattıń túri. Sóytip olar azanda oboshtan islengen ragu, túste quwırılǵan et jeydi.

Qaraqalpaq tilinde azıq-awqat atamaları – tilimizdiń leksikasınıń belgili bólegin quraydı. Adamzat jasap, tirishilik eter eken, onıń jasaw tárizinde awqatlıq zatlar, azıq-awqatlar eń áhmiyetli orındı iyeleydi. Demek, azıq-awqat atamalarınıń kelip shıǵıwı, qáliplesiwi, tillik qordan orın alıwı tábiyiy. Sebebi azıq-awqat atamalarında xalqımızdıń milliy turmısı, milliy sana sezimi de ózgeshelenip turadı.

Qaraqalpaq tilindegi azıq-awqat atamaları xalqımızdıń turmısınıń tariyxıy rawajlanıw ayrıqshalıqları, kún kórinisindegi jaǵdaylarǵa da baylanıslı. Tilimizdiń sózlik quramıw onıń terminologiyasında izertleniwi tiyis máseleler kóp. Sebebi qaraqalpaq tiliniń leksikasında jámiyetlik turmıstıń barlıq táreplerine baylanıslı leksikalıq birliklerdi óz ishine aladı. Bul tárepinen alıp qaraytuǵın bolsaq, búgingi kún til biliminde tilimizdiń sózlik quramınıń bayıwında, hár qıylı óndiris tarawlarınıń keńeyiwi, sol tarawda qollanılatuǵın termin sózlerdiń belgili bir sistemasın payda etedi. Sonlıqtan da qaraqalpaq tilinde azıq-awqat atamalarınıń terminlik tárepin lingvistikalıq analizlew, onı bir tártipke salıw qaraqalpaq til biliminiń ámeliy hám ilimiy máseleleriniń biri bolıp tabıladı.

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QARAQALPAQ TILINDEGI AZIQ-AWQAT ATAMALARINIŃ IZERTLENIWI

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Mámleketimiz gárezsizlikke eriskennen keyin til bilimine, onıń rawajlanıw, qáliplesiw basqıshlarına zamanagóy lingvistikalıq izertlewler arqalı úyreniw máselesine itibar qaratıla basladı. Bul óz náwbetinde, qaraqalpaq tilinde azıq-awqat atamalarınıń tilimizde saqlanıp qalıwına óz tásirin tiygizdi. Prezidentimiz Sh.Mirziyoyev: “Joqarı mánáwiyat jolında pidayılıq kórsetip jasaw, ózligimizdi ańlaw, maqtanısh hám mártebe. Milliy máplerimizdi qorǵaw ushın bel baylap maydanǵa shıǵıw - dóretiwshi jámáátke tán bolǵan iygilikli pazıylet ekenligin hámmemiz jaqsı bilemiz hám bunı joqarı dárejede qádirleymiz” [1], - dep atap ótkenindey, milliy ózlikti ańlawda babalarımızdan áwladlarǵa jetip kelgen til mádeniyatın analızlewde, pútkil dúnyalıq, ekonomikalıq, siyasiy, jámiyetlik, ilimiy tabıslarınan xabardar bolıwda milliy tilimiz biytákirar ilim ǵáziynesi wazıypasın atqarmaqta.

Qaraqalpaq xalqı ázel-ázelden ózine tán milliy miyraslarǵa iye. Olar xalqımızdıń úrp-ádetlerinde, kúndelikli turmısında, kiyim-kensheklerinde, sonday-aq milliy taǵam atamalarında kózge taslanadı. Usı kózqarastan alıp qaraǵanda, xalıqtıń ózine tán milliy ózgeshelikleri erte dáwirden baslap óz ornına iye túrkiy xalıqlardıń biri bolıp jetilisiwi onıń dástúrlerinde, milliy azıq-awqat atamalarında jaqsı saqlanǵan. Bunday milliy ózgesheliklerdi tereń úyrenip, ótmishimizdi qayta tiklew búgingi kúnniń eń baslı wazıypalarınan biri esaplanadı. Sonlıqtan da “Ótmishin

bilmegen xalıqtıń keleshegi de bolmaydı” degen danalıq gápti basshılıqqa alıp, xalıqtıń etnomádeniy ózgesheliklerin burıńǵıdan da tereńirek ańlap, itibar berip izertlewdi talap etedi. “Álbette, hár qanday xalıqtıń yaki millettiń mánáwiyatın onıń tariyxı, úrp-ádetlerisiz kóz aldımızǵa keltirip bolmaydı. Usı orında tariyxıy miyras hám estelikler eń áhmiyetli baylıqlardan biri bolıp esaplanadı.” [2; 30 b.]

Búgingi kún til biliminde, tilimizdiń sózlik quramınıń bayıwında, hár qıylı óndiris tarawlarınıń keńeyiwi, sol tarawda qollanılatuǵın termin sózlerdiń belgili bir sistemasın payda etedi. Sonlıqtan da qaraqalpaq tilinde azıq-awqat atamalarınıń terminlik tárepin lingvistikalıq analizlew, onı bir tártipte sistemaǵa salıw, leksikalıq jaqtan tematikalıq toparlarǵa ajıratıw qaraqalpaq til biliminiń aktual máselelerinen biri bolıp tabıladı.

Qaraqalpaqlardıń milliy taǵamlarınıń túrleri haqqında xalıq awızeki dóretpelerinde, shayırlar shıǵarmalarında az-kem derekler saqlanǵan. Máselen:

Úsh ay sawınım - aǵarǵannan islengen taǵamlar,

Úsh ay qawınım - palız ónimleri,

Úsh ay qabaǵım - diyxanshılıq ónimleri,

Úsh ay shabaǵım-balıq ónimlerinen islengen taǵamlardı bildirgen.

Taǵamlardıń túrleri jıldıń belgili bir máwsimlerinde kóbirek qollanılatuǵın jaǵdaylar bolǵan. Mısalı, jazda aǵarǵan, gúzde dıyqanshılıq, qısta balıqshılıq hám t.b.

Sonday-aq, xalqımızdıń milliy taǵamlardı tayarlaw usılları, qollanıw tártipleri hám házirgi turmısımızda paydalanıw biziń xalqımızdıń mádeniyatınıń belgisi retinde qaraladı.

Azıq-awqat atamaları túrkiy tillerinde az izertlengen máselelerdiń biri. Qazaq tilinde Jirenshin O., Musin J. “Qazaqtıń ulttıq taǵamdarı”, Sadıqov B.X., Sariev I.S., Otarbaev A.N. “Aq dastarxan”, Tilemisov X. “Qazaqtıń ulttıq taǵamdarı”, Kenjeaxmetulı S. “Qazaqtıń dástúrli taǵamdarı” , Похлевкин В.В. “Национальные кухни наших народов”, ózbek til biliminde Nazarova M. “Alisher Navoiy asarlari tilida oziq-ovqat nomlari”, Dóstjanov B. “Xorazm taomlari”, Ikramova N. “Uzbekskaya kulinarnaya leksika”, Mahmudov K. “Ózbek tansiq taomlari”, Qurbonova M. “Buxoro vahasi ózbek va tojiklarining ananaviy taomlari”, Xudayarova M. “Ózbek tilidagi taom nomlarining lingvistik tahlili” (Qoraqalpoǵiston materiallari asosida). Sonday-aq, H.Dadaboevtıń “Devonu luǵatit turkning til xususiyatlari” atlı monogfrafiyasında eski túrkiy tiliniń fonetikalıq, leksika-semantikalıq ózgeshelikleri analizlengen. Monofrafiyada “Devonu luǵatit turk” miynetiniń sózlik qorındaǵı azıq-awqat atamaları, ishimlik atamaların bildiriwshi leksemalarda analiz etilgen. Шаниязов К. “О традиционной пище узбеков. Этнографическое изучение быта и культуры узбеков” miynetinde awqat atamaların tariyxıy-etnografiyalıq tárepten úyrengen.

Qaraqalpaq til biliminde azıq-awqat atamaları boyınsha ele arnawlı túrde izertlew jumısları alıp barılmadı. Qaraqalpaq milliy taǵam atamaları boyınsha Begjanova G. “Qaraqalpaqlardıń milliy taǵamları haqqında”, Xojabaeva K. “Qaraqalpaq tilinde sútten tayarlanatuǵın taǵam atamaları” maqalaları járiyalanǵan.

Óz sózlik quramdaǵı azıq-awqat atamaları. Hár bir xalıqtıń ózine tán milliy úrp-ádetleri menen birge milliy taǵamları da xalıqtıń ózgesheligin, milliyligin kórsetip turıwshı simvol esaplanadı. Qaraqalpaq xalqınıń da ózine tán, milliyligin

kórsetiwshi taǵamları bar. Máselen: Gúrtik (júweri gúrtik, shaj gúrtik) qaraqalpaq xalqınıń milliy taǵamlarınıń biri esaplanadı. Ózbek xalqında *beshbarmoq*, qazaqlarda *beshbarmaq* dep qollanıladı. Bul atama *"besh barmaq"* sóz dizbeginiń bir sózge birigiwi menen payda bolǵan. Bul taǵamǵa atama onı jew usılı yaǵnıy tabaqtan bes barmaq penen alıp jew tiykarında berilgen [3].

Aqsawlaq, Qawın aqsawlaq - aqsawlaqqa qawındı qaynatıp, qatıq aralastırıp islenetuǵın taǵam.

Góje (qatıq góje, sút góje, nawrız góje).

Mısalı:

Gójesin quyıp gúzege,

Nanların qoyıp dizege (A.Dabilov "Udarnikler").

Basalay - at. Tarını hám shigimdi keptirip, kepegin ayırmastan tartıp pisirilgen suyıq bılamıq, jarma. Bunnan nan da isleydi.

Basalay iship ashıdı quwıq,

Jaman ashlıq boldı bıyıl (Berdaq).

Ishkeniń basalay bılamıq,

Bul isiń qalay shermende (Ótesh).

Bókpen - suwǵa un salıp qaynatılǵan, sút qosılǵan qoyıw bılamıq. Un bılamıqqa uqsaǵan qoyıw awqat. Bókpennen baslap bılamıqqa shekem awqat ishiwge úyretken (J.Aymurzaev).

Ákem bir bere almay sútli bókpennen,

Omırtqam, qabırtqam say-say arıqtaq (A.Dabılov).

Ózlesken sózlik quramdaǵı azıq-awqat atamaları. Hár bir tildiń sózlik quramı tariyxıy rawajlanıw barısında bayıp baradı. Sózlik quramnıń rawajlanıwına tildiń ishki hám sırtqı rawajlanıwı úlken tásir jasaydı. Tilimizde qollanılıp júrgen ayırım azıq-awqat atamalarıda tildiń sırtqı rawajlanıwı menen basqa tillerden ózlesip otıradı. Tilimizde shıǵısı arab hám parsı tillerden ózlesken azıq-awqat atamaları ushırasadı.

Qaraqalpaq tilindegi shıǵısı parsısha azıq-awqat atamaları:

Gósh (gusht "gósh, et") – maldıń, qustıń hám t.b jániwarlardıń eti;

Gúlshe (koliycha "domalaq maylı nan") – qazanǵa qatırılǵan, tandırǵa jabılǵan yamasa qozǵa kómilip pisirilgen kishkene shórek;

Zaǵara (jáǵare "tarıdan islengen nan") – júweriniń, tarınıń, shiginniń unınan tandırǵa jabılıp pisken nannıń bir túri. Mısalı: Hayal qaltanıń awzın sheship, ishinen túyeniń kózindey *tarınıń zaǵarasın* alıp, bir úzip awzına saldı da, shaynap-shaynap qundaqlawlı balanıń awzına jaqtı (N.Dawqaraev "Internatta" gúrrińinen);

Zuwala (zuvala "qamırdan islengen sharik") – qamırdıń belgili muǵdardaǵı bólegi;

Máshaba (mashaba "máshli suyıq awqat") – máshti suwǵa qaynatıp sút yamasa qatıq qatıp hám may shajlap pisiriletuǵın awqat, taǵam. Mısalı: Qoyıw sarı *máshaba* kishkene qırmalarǵa quyılǵan (T.Qayıpbergenov "Muǵallimge raxmet" povestinen);

Nan (nan "nan, azıq-awqat") – qamırdan tayarlanıp, tandırda, oshaqta, tabada hám t.b. pisiriletuǵın taǵam. Mısalı: Tóresh dárriw ornınan ushıp túrgelip, eki qolın jayıp, *nandı* áydarhaday awzına salıp, shaynaw menen boldı (N.Dawqaraev "Internatta" gúrrińinen). Anaw kúni bolsa, mollaǵa jibergen bir dasturxan *nanıńdı*

aldınan “haq, sup!” dep qolın jayıp shıqqan qálenderlerge berip jiberipti (K.Sultanov “Ájiniyaz” romanınan).

Juwmaqlap aytqanda, qaraqalpaq tilinde taǵam atamaları óziniń leksikalıq, tematikalıq toparlarına iye bolıp, olardı ele de tereńirek, atap aytqanda dialektlik ózgesheliklerin, mánileriniń keńeyiw yaki tarayıw processlerin, ózlestirmeler arqalı azıq-awqat atamaları toparın bayıtıwı, etimologiyalıq jaqtan kelip shıǵıw deregin, basqa túrkiy tillerden azıq-awqat atamaları menen salıstırmalı túrde, tilimizdegi leksikalıq, morfologiyalıq, fonetikalıq, sóz jasalıw hám basqa da kózqaraslarınan ele de hár tárepleme úyreniw kerek dep esaplaymız.

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USING THE POPULATION CENSUS IN TEACHING SOCIOLOGY

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Аннотация. Данные переписи населения, проводимой в стране, имеют большое значение в преподавании социологии. В нашей республике очень необходима научная информация для преподавания социологии и изучению состояния демографических процессов. В статье на примере национальной переписи населения, рассматриваются методы преподавания социологии в Новом Узбекистане, как важный источник фактов демографических роцессов. Традиционная цель исследования – выразить мнение об исторических и современных этапах официальной переписи населения с использованием новых научных методов по исторической демографии. Несомненно, участие народа республики в этом мероприятии, считается необходимым условием демократии. В конце статьи представлены рекомендации по проведению общенациональной переписи населения в Новом Узбекистане.

Ключевые слова. Перепись, данные программы, пять или десять лет, первая перепись, первоисточник, принцип, добровольный набор, снимок населения в конкретный момент времени, социология, методика обучения.

Abstract. Data from the country's population census are of great importance in teaching sociology. In our republic, scientific information is very necessary for teaching sociology and studying the state of demographic processes. Using the example of the national census, the article examines methods of teaching sociology in New Uzbekistan as an important source of facts about demographic processes. The

traditional purpose of the study is to express an opinion on the historical and modern stages of the official census using new scientific methods in historical demography. Undoubtedly, the participation of the people of the republic in this event is considered a necessary condition for democracy. At the end of the article, recommendations are presented for conducting a national census in New Uzbekistan.

Key words. Census, program data, five or ten years, first census, primary source, principle, voluntary recruitment, snapshot of the population at a specific point in time, sociology, teaching methods.

Annotasiya. Sotsiologiya fanini o‘qitishda mamlakatda o‘tkazilgan aholi ro‘yxati ma’lumotlari muhim ahamiyat kasb etadi. Respublikamizda sotsiologiya fanini o‘qitish va demografik jarayonlarning holatini o’rganishda ham ma’lumotlar juda zarur. Maqolada, Yangi O‘zbekistonda umummilliy aholini ro‘yxatga olish tadbiri, sotsiologiya fanini o‘qitishning muhim uslubi sifatida o‘rganiladi. An’anaga ko’ra, ko’zlangan maqsad tarixiy demografiyaning ilmiy usullaridan foydalanib, aholini rasmiy ro’yxatga olish ishlarining tarixiy va hozirgi zamon bosqichlari haqidagi fikr-mulohazalar bayon qilinadi. Bu tadbirda respublika aholisining ishtiroki demokratiyaning zarur sharti deb baholanadi. Yangi O‘zbekistonda umummilliy aholini ro‘yxatga olish tadbiri bo‘yicha tavsiyalar bayon qilinadi.

Kalit so‘zlar. Aholi ro‘yxati, aholi hisobi, dastur ma’lumotlari, besh yoki o‘n yil, birinchi aholi ro‘yxati, asosiy manba, tamoyil, qo‘ngilli yollanganlar, aholining muayyan vaqtdagi “fotosurati”, sotsiologiya, o‘qitish usullari.

Introduction. In our independent state, where citizens, especially the younger generation, have the opportunity to think freely and critically, it is imperative to teach contemporary methods of sociology that align with modern demands. This article has been created precisely to address this need. In Uzbekistan, the national census serves as a crucial source for teaching sociology.

A modern individual cannot navigate life without understanding the social conditions of their environment. Every citizen has the right to express his or her thoughts freely and to be a contributing member of society. Consequently, a sociologist must be well versed in all data from the national population census. The participation of the republic's populace in the census, alongside the sociologist's role in data collection, is essential for democracy. In contemporary Uzbekistan, the national census serves as an indispensable resource for understanding the social fabric and informing sociological research. Historically, sociology was marginalized under previous regimes, but post-independence, there has been resurgence in its application, particularly through demographic data analysis. This paper examines the role of the national census in shaping sociological inquiry and public policy, highlighting the pivotal contributions of scholars and legislative efforts aimed at modernizing census practices. The active involvement of sociologists in the preparation and execution of the population census is a significant scientific event, providing a foundation for studying historical and demographic processes. Therefore, the purpose of the first national population census is to comprehensively cover all

stages of the official census, employing scientific methods of sociology in Uzbekistan.

In numerous countries, legal frameworks have been strengthened to regulate the census. To enhance scientific research, including sociology, a nationwide census in Uzbekistan is planned for 2025-2026. The census regulations clarify which categories of citizens, households, enterprises, and institutions are subject to registration, who will collect the data, and the format of the questionnaires. Additionally, rules for recruiting census takers, their responsibilities, and census procedures are being developed.

Literature review. Based on the literature review it should be noted, that based on the study of scientific works, professors N.S.Alikorieva, R.T.Ubaidullaeva, M.Kh.Ganieva, A.Ya.Kholbekova, K.Kalonova, B.A.Farfieva [2], R.A.Ubaidullaeva, M.B.Bekmurodova, O.B.Ata-Mirzaeva [3], M.Kyrgyzboeva [4] obtained the necessary and significant data on the subject of sociology. They argue that under the previous regime, sociology was initially denied and later marginalized despite its global significance. For example, in the work of Anthony Giddens, one of the largest sociologists of the 20th century, who also analyzed these problems in his works and proved that, indeed, modern Sociology as a science is a mirror of society [5].

Under the totalitarian regime in Uzbekistan, no sociology textbooks or teaching aids were created, and highly qualified specialists were not trained. Only after gaining independence did it become possible to create such textbooks and teaching aids as the works of I.Negmatov [6], M.N.Normamatova [7], G.G.Tagieva [8], M.B.Sherov [9], D.Kh.Bakhrieva [10], M.U.Tangirova [11] and R.K.Yusupov [12] which emerge, enriching the scientific and educational literature with new materials. Thanks to the research conducted by the above authors, scientific and educational literature in Uzbek, Russian and Tajik languages on sociology has been replenished with new textbooks, teaching aids, brochures and scientific articles. In the new Uzbekistan, a great number of conferences were held on sociology and sociological research [13], however, during the years of independence, the population census as the most important primary source was still not carried out.

According to the adopted laws and regulations, the population census was to be carried out throughout the entire territory of Uzbekistan. Or a population census for individual regions had to be carried out every five or ten years. During the period of population censuses, where personal data is collected to determine the demographic and socio-economic characteristics of the population in the established procedure for their processing. The main goal of the census is to obtain reliable information about the state of the social structure of the population and the dynamics of population development in Uzbekistan, necessary for determining and implementing state policy priorities in the field of socio-economic and socio-political development [14].

Methods. This research utilizes a qualitative approach, reviewing literature from prominent Uzbek sociologists and analyzing legislative documents related to the national census. The study also incorporates historical census data to contextualize current demographic trends and socio-economic conditions. Methodological frameworks from international standards, such as those proposed by the United Nations, are applied to assess the robustness of the upcoming census.

Results. The analysis indicates that the absence of a comprehensive census since 1989 has posed significant challenges to demographic research in Uzbekistan. However, the planned national census for 2025-2026, supported by recent legislative measures, is poised to fill this gap. The regulations specify the categories of citizens to be included, the structure of data collection instruments, and the responsibilities of census personnel. This comprehensive framework is expected to yield reliable demographic data crucial for policy development.

Main part. In the context of independence, a population census was not conducted in Uzbekistan despite the fact that it is imperative to take into account the population of a country, region, city or district, it is necessary to know age, gender, national and religious composition, birth rates, mortality and natural increase, age at marriage, and divorce information collected during population censuses. In each country, the government, regional, city, district authorities and its local statistical bodies usually cope with the issues how many people are born and die per year, what is the population growth, how many people move and leave (migrate) annually. Population surveys are conducted through a comprehensive census or ongoing records, covering a range of demographic and social data. Current population records include records of births, deaths, arrivals and departures for each year.

The census, conducted on a large scale, collects detailed information on households, including year of birth, gender, social origin, nationality, native language, and more. Furthermore, the number of people living in the household, year of birth, gender, social origin, nationality, native language, social status, number of children, age and other data has to be thoroughly analyzed. Most countries conduct censuses every five or ten years. The census program covers age, nationality, language skills, education, living conditions, sources of income and other issues. The survey is conducted in the national language, and respondents who do not speak the state language can participate in the survey in their native language or another freely chosen language of communication. The final registration data will be open to legal entities and individuals, published in the media and posted on the official website of the State Statistics Committee of the Republic of Uzbekistan.

The research methodology was analyzed in the works of R.T.Ubaydullaeva [15] and P.L.Berger [16]. These works widely use the problems of demographic development of society, which had their reflections, current social processes in the public consciousness for scientific, educational and methodological purposes. Also the scientific article by M.Kh.Ganieva “Sociology in Uzbekistan: state and prospects” [17] was widely used methodologically. This article, opinions on the priority directions and prospects for the development of sociological science in Uzbekistan are of particular importance.

It is noteworthy that the last complete population census in Uzbekistan was conducted in 1989. The annual census and the current population count must be closely linked, as fertility, mortality, immigration and emigration rates have changed in recent years. This study also used an analysis of sources at the intersection of historical demography and methods of teaching sociology.

The United Nations has issued guidelines for global census preparation and implementation. An annual demographic summary and a report on the world

population census are published, highlighting the importance of these events in collecting and analyzing comprehensive demographic data, which are crucial for the socio-economic development of each country. A population census is an event carried out during a certain period of time, during which all information about the population is collected, the data is assessed, analyzed and the results are published. The census collects demographic, economic and social data by interviewing every person in the country. The purpose of the census is to collect data on population size, composition, location and social status. These data play an important role in the economic and social life of each country [8].

According to sources, by the 19th century the population census had expanded significantly. Statistical organizations were created in a number of European countries, and population censuses were carried out based on scientific programs. At the end of the 19th century, 21 percent of the world's population was registered in the census, and at the beginning of the 20th century, 54 percent of the total world population was covered by the census.

After World War II, the census system was improved. The modern stage of the population census began in the middle of the 20th century. Population censuses were conducted in a number of Asian and African countries. In the 1970s, populations were first recorded in countries such as Yemen, the UAE and Saudi Arabia. By the end of the 20th century, the population census covered almost all regions of the world. Currently, almost all countries in the world conduct a population census.

When studying demographic processes in our Republic of Uzbekistan, population census data is of great importance. The first population census on the territory of Uzbekistan was carried out in 1897, when some of the population of our country was part of the Turkestan General Government. These data helped to create an idea of the demographic processes of Uzbekistan at the end of the 19th century, such as the number of families, age and gender, ethnic composition, fertility and mortality of the population. Population censuses were conducted in Uzbekistan in 1926, 1939, 1959, 1970, 1979 and 1989. 35 years have passed since the last population census, which has created difficulties in studying the real lifestyle of the population and providing them with practical assistance.

In the modern era, on June 10, 2015, the UN adopted a resolution on “Principles and Recommendations for the Conduct of the 2020 Population and Housing Census.” According to it, UN member states were required to conduct a population and housing census at least once. In the CIS countries, including the new Uzbekistan, preparations for this process have begun.

According to this, the Presidential Decree of February 5, 2019 “On approval of the concept of conducting a population census in the Republic of Uzbekistan in 2022” [19] and the law “On the population census”, signed on March 16, 2019 [20], which began to serve legal basis in this regard. The law regulates relations in the field of population census on the territory of Uzbekistan, and it is aimed at obtaining the necessary official statistical information about the population. According to the law, the collection of personal data about the population, their processing, the formation of demographic, economic and social information, analysis, generalization and dissemination are carried out according to certain rules [20]. It is important to

emphasize that, according to the adopted and approved regulatory acts in Uzbekistan, participation of the population in the census is mandatory [19].

During the period of preparation and conduct for the population census in 2023, a resolution of the Cabinet of Ministers of the Republic of Uzbekistan “On measures for the preparation and conduct of the 2023 population census in the Republic of Uzbekistan” was adopted [21]. It states that one of the goals of the census is to compare population census data with the results of previous censuses, determine the dynamics of changes in population size and demographic characteristics, and create a database for comparative analysis.

Conclusion. In conclusion, organizing and conducting a population census requires substantial resources. As Uzbekistan prepares for the 2025 census, regulations, forms, and instructions have been developed, and census personnel are being trained. Public awareness campaigns emphasize the census's importance, with international cooperation providing valuable experience and methodological support.

The population census is crucial for socio-economic development, offering reliable data on population characteristics, which underpin effective decision-making and public policy in socio-economic and demographic spheres. The 2025 census in Uzbekistan represents a significant step toward enhancing governance and improving citizens' living conditions. Measures were taken to explain to the population the importance and necessity of participating in the census. In this regard, cooperation with international organizations such as the UN, the World Bank and the WTO (World Trade Organization) is of particular importance to use their experience and methodological assistance in conducting the population census.

The population census is of great importance for ensuring the socio-economic development of the country. The data collected during the census can be widely used and make it possible to obtain reliable information about the size, qualitative composition and characteristics of the population, which is the basis for making effective management decisions and implementing public policy in the field of socio-economic, demographic and socio-political development. Conducting a population census in Uzbekistan in 2025 will be an important step towards improving the quality of governance and improving the living conditions of the population.

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ПУТИ ПРОФЕССИОНАЛЬНОГО РАЗВИТИЯ И ПОВЫШЕНИЯ КВАЛИФИКАЦИИ СПЕЦИАЛИСТОВ ПО АНГЛИЙСКОМУ ЯЗЫКУ

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Аннотация. В данной работе рассматривается значимость профессионального развития преподавателей английского языка и его влияние на эффективность обучения. Подчеркивается необходимость применения современных учебных методик, таких как интерактивные технологии и проектное обучение, для повышения интереса и вовлеченности студентов. Также акцентируется внимание на важности обратной связи от учащихся, что позволяет адаптировать образовательные стратегии под их потребности. Работа анализирует существующие трудности, с которыми сталкиваются преподаватели в процессе профессионального роста, и предлагает пути их преодоления. Особое внимание уделяется влиянию новых технологий на процесс обучения и необходимость активного участия в профессиональных сообществах для обмена опытом и постоянного повышения квалификации. Итоговое утверждение подчеркивает, что непрерывное профессиональное развитие является ключом к успешному преподаванию английского языка и повышению качества образования в целом.

Ключевые слова. Профессиональное развитие, преподаватели английского языка, эффективность обучения, современные методики, интерактивные технологии, проектное обучение, обратная связь, образовательные стратегии.

Abstract. This study examines the significance of professional development for English language teachers and its impact on learning effectiveness. The need to use modern teaching methods such as interactive technologies and project-based learning to increase students' interest and engagement is emphasized. Attention is also drawn to the importance of feedback from students, which allows for the adaptation of educational strategies to their needs. The work analyzes the existing difficulties faced by teachers in the process of professional development and proposes ways to overcome them. Particular attention is paid to the impact of new technologies on the learning process and the need for active participation in professional communities for the exchange of experience and continuous professional development. The final statement emphasizes that continuous professional development is the key to successful English language teaching and overall improving the quality of education.

Keywords. Professional development, English language teachers, learning effectiveness, modern methods, interactive technologies, project learning, feedback, educational strategies.

Введение. В современном мире знание английского языка приобретает всё большее значение в различных сферах жизни [2; сс. 81-85]. Специалисты по английскому языку, включая преподавателей, переводчиков и консультантов, сталкиваются с необходимость постоянного профессионального развития и повышения квалификации [1; сс. 28-32]. Это обусловлено быстро меняющимися требованиями рынка труда, новыми методиками преподавания и технологическими инновациями [4; сс. 21-25].

Цель данной статьи – рассмотреть эффективные пути профессионального развития и возможности повышения квалификации для специалистов по английскому языку. В рамках исследования будут выделены актуальные программы и подходы, а также осмыслены их преимущества и недостатки. Краткий обзор существующих подходов к профессиональному развитию позволит понять, какие методы являются наиболее эффективными в текущих условиях, и какой вклад они вносят в общую профессиональную сферу специалистов по английскому языку.

Методы. Для написания статьи были проанализированы актуальные источники литературы, исследования в области лингвистики и методики преподавания, а также данные о курсах повышения квалификации и сертификациях. Использовались результаты опросов среди специалистов, работающих в данной области.

Результаты. Профессиональное развитие специалистов по английскому языку играет ключевую роль в повышении качества преподавания и формирования успешной образовательной среды для студентов [3; сс. 60-64]. Этот процесс приносит множество положительных результатов, как для самих преподавателей, так и для их учеников. Важность повышения квалификации трудно переоценить, так как оно способно трансформировать образовательный процесс и привести к значительным изменениям [6; сс. 188-196]. Одним из самых очевидных результатов профессионального развития является повышение уровня владения английским языком у преподавателей. Программы повышения квалификации часто могут способствовать освоению новых языковых навыков, что напрямую влияет на качество преподавания. Повышение уровня языка позволяет учителям более уверенно вести занятия и точно объяснять учебный материал, улучшая восприятие учащимися. Современное образование требует от преподавателей способности адаптироваться к разнообразным стилям обучения студентов. Освоение новых подходов и методик в ходе потока повышения квалификации способствует созданию более эффективных и увлекательных уроков. В результате, учащиеся становятся более вовлечёнными в учебный процесс, повышая свои академические результаты и мотивацию. С учетом быстрого развития технологий, знание и умение работать с современными учебными платформами и интерактивными средствами становится незаменимым. Преподаватели, обучившись интеграции технологий в процесс обучения, могут создавать более разнообразные и интересные занятия, что, в свою очередь, делает обучение более привлекательным для студентов [5; сс. 46-50]. Часто участие в обучающих программах и семинарах порождает в преподавателях новый энтузиазм и вдохновение. Они становятся более активными в поиске новых знаний и методов работы, что положительно сказывается на их профессиональном росте. Мотивация, полученная через обучение, становится важным двигателем для дальнейшего совершенствования навыков и методик преподавания. Участие в конференциях и курсах дает возможность преподавателям наладить контакты с коллегами и экспертами в области. Эти профессиональные связи могут стать основой для будущих коллабораций и

обмена опытом, что обогащает как личный, так и профессиональный опыт. Одной из значимых побочных выгод от применения новых методов является получение положительной обратной связи от студентов. Они могут заметить улучшения в подаче материала и интерес к обучению, что подтверждает эффективность занятий и укрепляет доверие учеников к преподавателю. Это доверие создает более открытое и продуктивное учебное пространство. Регулярное повышение квалификации дополнительно способствует развитию статуса и признания среди коллег и студентов. Преподаватели, которые активно участвуют в профессиональных сообществах и обучении, становятся более уважаемыми в своем окружении, что может привести к новым карьерным возможностям и лидерским позициям. Не стоит забывать, что процесс обучения и профессионального роста способствует не только улучшению профессиональных навыков, но и личностному развитию. Преподаватели развивают критическое мышление, креативность и уверенность в себе, что позволяет им не только становиться более эффективными в своей профессии, но и вносить положительный вклад в жизнь студентов. Все перечисленные результаты подчеркивают важность постоянного профессионального развития для повышения качества образования и создания успешной образовательной среды. В условиях современных вызовов и изменений в образовательном процессе, специалисты по английскому языку должны воспринимать профессиональное развитие как обязательный элемент своей карьеры, что в конечном итоге приносит пользу всем участникам образовательного процесса.

Обсуждение. Профессиональное развитие преподавателей английского языка является актуальной темой, особенно в контексте постоянных изменений в образовательных подходах и технологиях. Возникает ряд важных вопросов о том, как эти изменения влияют на результаты обучения. В этом эссе мы рассмотрим несколько ключевых аспектов, касающихся профессионального развития и его воздействия на преподавание английского языка. Методы обучения играют решающую роль в успеваемости студентов. Использование интерактивных технологий, таких как онлайн платформы, видео уроки и игры, создаёт более активную и увлекательную атмосферу. Например, проектное обучение, где студенты работают в группах над реальными задачами, часто повышает их уровень заинтересованности и вовлеченности. Исследования показывают, что такие подходы способны улучшить понимание материала и, как следствие, повысить академические успехи. Рассмотрение конкретных кейс-стадий может помочь в глубоком понимании различных методик обучения. Например, в одном из языковых центров внедрение смешанного обучения — сочетания традиционного и онлайн-образования — привело к увеличению успеваемости студентов на 20%. Эти примеры показывают, что инновационные подходы могут приносить значительные результаты, однако важно также учитывать возможные недостатки, такие как необходимость в обучении преподавателей для работы с новыми технологиями. Обратная связь от студентов — это ценный инструмент для преподавателей. Она позволяет адаптировать методы и подходы, учитывая мнения и предпочтения учащихся. Регулярные опросы и обсуждения с классом позволяют понять, что работает, а

что нет, и внести необходимые изменения. Таким образом, учитывание мнения студентов не только способствует улучшению образовательного процесса, но и формирует более доверительные отношения между учителем и классом. На пути профессионального развития преподаватели сталкиваются с различными трудностями. Одним из основных вызовов является необходимость балансировать между инновациями и традиционными методами, что может создавать стресс, как для преподавателей, так и для студентов. К тому же не все методы подходят каждому ученику, что требует от преподавателя способности адаптироваться к индивидуальным потребностям класса. С переходом в digital-эру подходы к обучению также претерпевают изменения. Новые технологии, такие как виртуальная и дополненная реальность, открывают новые горизонты для преподавания английского языка, позволяя создавать иммерсионные языковые среды. Будущее профессионального образования будет иметь акцент на гибкости и адаптивности, что позволит учителям быстрее интегрировать новшества в свою практику. Профессиональные сообщества играют важную роль в поддержке непрерывного обучения и обмена опытом между преподавателями. Участие в таких сообществах даёт возможность получать доступ к ресурсам, делиться практическим опытом и находить поддержку от коллег. Эти сети взаимопомощи могут облегчить процесс профессионального развития и сделать его более эффективным. Обсуждение влияния профессионального развития на преподавание английского языка подчеркивает важность применения новых подходов и технологий. Кроме того, учет мнения студентов, работа в сообществах и преодоление трудностей становятся ключевыми факторами для повышения качества образования. В конечном итоге, цель профессионального развития — это создание лучших условий для учебы, что приносит пользу, как преподавателям, так и студентам.

Заключение. В ходе исследования были рассмотрены ключевые аспекты профессионального развития преподавателей английского языка и их значительное влияние на качество образовательного процесса. Итогом анализа является понимание того, что современные методы, технологии и подходы не только повышают заинтересованность студентов, но и способствуют улучшению их успеваемости. Проведенное исследование подтвердило, что разнообразие методов обучения, включая интерактивные технологии и проектные подходы, играет важную роль в повышении образовательных результатов. Кейс-стадии продемонстрировали конкретные примеры успешной интеграции новых методик, что служит стимулом для их более широкого применения. Обратная связь от студентов оказалась неотъемлемой частью процесса, позволяющей преподавателям корректировать свои подходы и обеспечивать более высокое качество обучения. Профессиональное развитие становится мощным инструментом в руках преподавателей для достижения высоких образовательных результатов. Обучение новым методам, активное участие в профессиональных сообществах и готовность к изменениям — всё это способствует созданию более эффективной и адаптивной образовательной среды. Как показало исследование, улучшение навыков преподавателей непосредственно связано с ростом успеваемости их студентов, что, в свою

очередь, повышает уровень общего качества обучения. Будущие исследования в области профессионального развития преподавателей английского языка должны сосредоточиться на дальнейшей интеграции технологий в учебный процесс, а также на изучении влияния новых подходов на различные категории студентов. Особое внимание стоит уделить адаптации методов для студентов с особыми образовательными потребностями. Исследования также могут охватывать влияние дистанционного обучения и гибридных моделей на качество преподавания и усвоения языка. В конечном итоге, развитие данной области науки будет способствовать созданию более инклюзивной и эффективной образовательной среды, где каждая из сторон — преподаватели и студенты — сможет реализовать свой потенциал на максимум.

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CURRENT CHALLENGES IN TRAINING ENGLISH LANGUAGE SPECIALISTS WITH HIGHER EDUCATION

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Abstract. This study investigates the challenges in training English language specialists in higher education. With the increasing demand for proficient English speakers globally, it is imperative to assess the effectiveness of current educational programs. Through a combination of qualitative interviews and quantitative surveys

conducted with students and educators, three primary challenges were identified: curriculum relevance, practical training opportunities, and professional development support. Results indicate that many programs fail to adapt their curricula to meet modern pedagogical needs, leaving graduates inadequately prepared for real-world teaching environments. Additionally, a significant gap in practical training experiences was noted, which hinders the application of theoretical knowledge in classroom settings. Finally, the lack of ongoing professional development for both faculty and students was found to limit the ability to implement innovative teaching strategies. The findings suggest urgent reforms in curriculum design, enhanced practical training components, and a commitment to professional growth within academic institutions.

Keywords. English language education, higher education, curriculum development, teacher training, professional development, pedagogical challenges, education reform, language specialists.

Аннотация. В данном исследовании исследуются проблемы подготовки специалистов по английскому языку в высших учебных заведениях. В связи с растущей во всем мире потребностью в квалифицированных носителях английского языка необходимо оценивать эффективность текущих образовательных программ. Путём сочетания качественных интервью и количественных опросов, проведенных со студентами и преподавателями, были выявлены три основные проблемы: актуальность учебного плана, возможности практического обучения и поддержка повышения квалификации. Результаты показывают, что многие программы не адаптируют свои учебные планы к современным педагогическим потребностям, оставляя выпускников неадекватно подготовленными к реальным условиям обучения. Кроме того, отмечается значительный пробел в практическом опыте обучения, что затрудняет применение теоретических знаний в аудиторных условиях. Наконец, было обнаружено, что отсутствие непрерывного повышения квалификации, как преподавателей, так и студентов ограничивает возможности реализации инновационных стратегий обучения. Полученные результаты свидетельствуют о неотложных реформах в области разработки учебных программ, совершенствовании компонентов практического обучения и приверженности профессиональному росту в академических учреждениях.

Ключевые слова. Обучение английскому языку, высшее образование, разработка учебного плана, подготовка учителей, повышение квалификации, педагогические вызовы, реформа образования, языковые специалисты.

Introduction. In today's increasingly interconnected world, the demand for proficient English language specialists has never been greater [2; pp. 36-38]. With English serving as a global lingua franca, professionals who can effectively teach and communicate in English are essential across various fields, including education, business, healthcare, and diplomacy [5; pp. 527-539]. As a result, the role of higher education institutions has become crucial in preparing these specialists to meet the diverse linguistic and cultural needs of society. However, the training of English

language specialists is currently fraught with challenges. Despite advancements in educational methodologies and technologies, many programs face significant obstacles that hinder the effective development of future educators [4; pp. 17-18]. These challenges can range from outdated curricula and insufficient practical training to a lack of resources and support for continuous professional development. Furthermore, the rapid evolution of language use in global contexts demands that educational institutions adapt quickly, yet many are struggling to keep pace [1; pp. 447-459].

The aim of the study. This article aims to investigate the current challenges faced in the training of English language specialists within higher education. By critically analyzing these issues, the study seeks to highlight the gaps and barriers that exist in the educational system and their impact on future educators' preparedness. Understanding these challenges is vital for stakeholders in the education sector, as addressing them can lead to more effective training programs and ultimately enhance the quality of English language education. Through this exploration, we aim to provide insights and recommendations for improving the training of English language specialists, ensuring they are well-equipped to thrive in a dynamic and diverse linguistic landscape.

Methods. To comprehensively analyze the current challenges in training English language specialists within higher education, this study employed a mixed-methods approach. This approach combined quantitative data collection through surveys and qualitative insights through interviews and focus groups, allowing for a holistic understanding of the issues at hand [3; pp. 29-31].

Survey Design and Implementation: A structured survey was developed targeting faculty members, administrators, and current students in English language training programs across various universities. The survey consisted of both closed and open-ended questions, structured to gather quantitative data on:

- Perceptions of curriculum relevance and effectiveness.
- Availability and quality of resources.
- Opportunities for practical teaching experiences.
- Support for professional development initiatives.

The survey was distributed electronically to a diverse range of institutions, ensuring representation from large and small, urban and rural universities. A total of 300 responses were collected, yielding a response rate of approximately 45%. The data from the surveys were analyzed using descriptive statistics, providing insights into common trends and challenges identified by the participants.

Qualitative Interviews and Focus Groups: To complement the quantitative data, semi-structured interviews and focus groups were conducted with a subset of survey participants. These included:

- 10 faculty members with extensive experience in English language education.
- 15 current students enrolled in various English language programs.
- 5 education administrators responsible for curriculum development. The interviews and focus groups were designed to explore participants’ personal experiences, challenges, and perceptions in greater depth. Sessions were recorded,

transcribed, and analyzed thematically, allowing for the identification of key issues, recurring themes, and nuanced insights that may not have emerged from the survey alone.

Data Triangulation: The combination of quantitative and qualitative data served to triangulate findings, enhancing the validity of the study. By comparing responses from the surveys with insights gained from interviews, a richer and more comprehensive understanding of the challenges faced in higher education training programs for English language specialists was achieved.

Ethical Considerations: Participation in the study was voluntary, and informed consent was obtained from all participants. To ensure anonymity and confidentiality, personal identifiers were removed from the data collection process, and all responses were aggregated for analysis. Through this mixed-methods approach, the study aims to provide a well-rounded perspective on the current challenges in training English language specialists, highlighting areas for improvement and potential pathways for future development.

Results. The analysis of the data obtained from the mixed-methods study revealed several salient findings regarding the challenges faced in training English language specialists in higher education. The results are categorized into three main themes based on the participants' feedback: curriculum relevance, practical training opportunities, and professional development support.

Curriculum Relevance:

- Survey Findings: Approximately 62% of the faculty respondents indicated that they believe the current curriculum does not adequately reflect the evolving needs of English language learners in diverse educational contexts. Common concerns mentioned included the lack of integration of technology and current pedagogical approaches.

- Qualitative Insights: Faculty interviews highlighted a perceived disconnect between theoretical training and real-world application. Participants noted that while the foundational linguistic theory is essential, there is a pressing need for courses that address contemporary issues such as globalization, multiculturalism, and the integration of digital tools in language teaching. Students echoed these sentiments, expressing frustration over the theoretical focus and a desire for more applied learning experiences.

Practical Training Opportunities:

- Survey Findings: Less than 40% of student respondents reported having sufficient opportunities for practical teaching experience during their training programs. Many indicated that internships or practicum placements were either limited or non-existent.

- Qualitative Insights: Focus group discussions revealed that many students felt inadequately prepared for classroom environments due to a lack of hands-on training. Participants described their training experiences as overly theoretical, with limited real-world teaching scenarios included in the curriculum. Faculty members acknowledged this gap, noting that the scarcity of partnerships with local schools and language centers further hindered students' access to practical training.

Professional Development Support:

- Survey Findings: A significant 70% of respondents identified insufficient support for ongoing professional development as a challenge. Many faculty members expressed the need for institutional backing to attend workshops, conferences, and training sessions that could enhance their teaching methodologies and professional growth.

- Qualitative Insights: Interviews revealed that faculty often feels overwhelmed by administrative responsibilities, which leaves little time for their own professional development. This results in a stagnation of teaching practices, as faculty members find it challenging to keep up with innovative teaching strategies and emerging trends in language education. Students too noted a lack of mentorship opportunities from experienced educators, which could facilitate their growth as future professionals.

Summary of Key Findings: Overall, the results underscore a pressing need for reform in the training of English language specialists within higher education. The identified challenges of curriculum relevance, inadequate practical training opportunities, and insufficient professional development support present significant barriers to the effective preparation of future educators. The insights gathered will serve as a foundation for proposing targeted strategies aimed at enhancing the quality and effectiveness of English language training programs.

Discussion. The findings of this study highlight critical insights into the challenges currently faced in the training of English language specialists within higher education. The overarching themes—curriculum relevance, practical training opportunities, and professional development support—reflect diverse yet interconnected areas requiring urgent attention and reform. This discussion aims to interpret these results in light of existing literature, provide implications for policy and practice, and suggest avenues for future research.

Curriculum Relevance: The majority of participants in this study expressed concerns about the inadequacies of the current curriculum in addressing the complex, evolving landscape of English language education. This aligns with findings from previous research, which advocate for curricula that are responsive to the needs of diverse learners. As globalization continues to shape the sociolinguistic environment, it is essential that training programs incorporate innovative approaches that address not only linguistic skills but also cultural competencies and digital literacy. The lack of curriculum alignment with practical needs may hinder graduates' ability to effectively engage with the communities they serve, thus perpetuating a cycle of disconnect between education and practice.

Practical Training Opportunities: The study's findings indicate a significant gap in the practical training that students receive. This deficiency echoes concerns raised by other scholars, suggesting that theoretical knowledge without practical application can leave students unprepared for the realities of the classroom. Effective teacher training must bridge the divide between theory and practice by providing robust, supervised teaching experiences, such as internships or practicums. Universities might consider establishing partnerships with local schools or language centers to enhance these experiential learning opportunities. Furthermore, expanding

simulation-based training could give future English language specialists the confidence and skills needed to navigate real-world classrooms effectively.

Professional Development Support: The lack of ongoing professional development for both faculty and students poses a substantial barrier to effective teaching practices. Faculty members in this study expressed a deep need for institutional support in pursuing continued education and training. This correlates with findings from other studies that emphasize the importance of professional development in fostering innovative teaching. Institutions of higher education must prioritize the establishment of sustainable development programs that not only enhance faculty expertise but also create mentorship opportunities for students. This investment in continuous learning can lead to improved educational outcomes and foster a culture of growth within the institution.

Implications for Policy and Practice: The findings from this study suggest several key implications for policy stakeholders in higher education:

Curricula should be regularly reviewed and updated to reflect contemporary practices, technologies, and learner needs. There should be an established framework for creating partnerships with schools and community organizations to facilitate practical training for students. Institutions should allocate resources for professional development initiatives that cater to both faculty and students, thereby enhancing the overall quality of English language instruction.

Future Research Directions: Further research is needed to explore the effectiveness of curriculum reforms in meeting the diverse needs of English language specialists. Longitudinal studies could provide valuable insights into the outcomes of graduates in the field, shedding light on the relationship between training quality and teacher efficacy in classroom settings. Additionally, explorations into innovative teaching practices and how they are embraced by institutions could further inform best practices in English language education. In conclusion, the challenges identified in this study—a lack of curriculum relevance, insufficient practical training opportunities, and inadequate professional development support—point to a pressing need for systemic reform in the training of English language specialists. By addressing these challenges through collaborative efforts among educators, institutions, and policymakers, the field can better prepare future language teachers for the complexities of today's globalized educational landscape.

Conclusion. This study has illuminated several critical challenges faced in the training of English language specialists within higher education institutions. Through the comprehensive analysis of participant responses, we identified three key areas requiring immediate attention: the relevance of the curriculum, the availability of practical training opportunities, and the level of professional development support provided to both faculty and students. The relevance of the curriculum emerged as a significant concern, underscoring the need for academic programs to evolve in tandem with the dynamic demands of English language teaching. In conjunction with this, the significant gap in practical training experiences indicates that many graduates may enter the workforce without the necessary skills to face the realities of modern classrooms. Furthermore, the findings highlighted a lack of sustained professional development, which is essential for both faculty and students to stay

abreast of best practices and innovations in teaching. Addressing these challenges is not only crucial for improving the quality of English language instruction but also for ensuring that graduates are well-equipped to meet the diverse needs of their learners. It is imperative for higher education institutions to engage in a reflective and collaborative redesign of their training programs. This can be achieved through continuous curriculum updates, investment in experiential learning opportunities, and robust professional development initiatives.

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GAPLARNI SO‘Z TURKUMLARI BO‘YICHA TAHLIL QILISH KO‘NIKMASINI MUSTAHKAMLASH USULLARI

Nomozov Abdumurod
Nukus innovatsion instituti dotsenti

Annotatsiya. Tilshunoslikdagi tahlil namunalaridan biri gaplarni so‘z turkumlari bo‘yicha tahlil qilish bo‘lib, maqolada bu turdagi tahlilning o‘ziga xos xususiyatlari ochib berilgan. Taqdim etilgan misollarga tayanilib, asosli ilmiy xulosalar chiqarilgan.

Kalit so‘zlar. Tahlil, lingvistik tahlil, morfologik tahlil, mustaqil so‘z turkumlari, morfologik birlik, ot so‘z turkumining morfologik tahlili.

Аннотация. Одним из примеров анализа в лингвистике является анализ предложений по частям речи, и в статье раскрываются особенности этого вида анализа. На основе представленных примеров были сделаны обоснованные научные выводы.

Ключевые слова. Анализ, лингвистический анализ, морфологический анализ, самостоятельные части речи, морфологическая единица, морфологический анализ имени существительного.

Annotation. One example of analysis in linguistics is the analysis of sentences by parts of speech, and the article reveals the features of this type of analysis. Based on the examples presented, substantiated scientific conclusions were made.

Key words. Analysis, linguistic analysis, morphological analysis, independent parts of speech, morphological unit, morphological analysis of a noun.

Boshlang‘ich ta’lim yo‘nalishida tahsil olayotgan talabalarga so‘z turkumlari va ularni tahlil qilish tartibi haqida nazariy va amaliy mashg‘ulotlarda ma’lumot va bilimlar berilsa-da, tan olish kerak, talabalarda hali ham tahlilni yaxshi o‘zlashtirmaganlik, jarayonda nuqsonlarga yo‘l qo‘yish hollari, xususan, so‘z turkumlari bilan gap bo‘laklarini bir-biridan farqlamaslik, so‘z turkumi nomi so‘ralganda gap bo‘laklari nomini aytish, yoki aksincha, holatlar kuzatilmoqda. Bu singari xatoliklarning tahlil jarayonida mavjudligi, ularni yo‘qotishga bo‘lgan intilishlarimizning o‘zi ham mavzuni mustaqil izlanishlarda yanada chuqurroq o‘rganish, to‘ldirish, mustahkamlash zarurligini taqozo qiladi. Avvalo, **tahlil** nima, bu atama qanday izohlanadi? “**Tahlil biror narsaning tarkibini belgilash va uning mohiyatini tadqiq etish”** deb tushuntirilgan “O‘zbek tilining izohli lug‘ati”da [1]. Demak, mustaqil ishning bu shaklida o‘quv mashg‘ulotlarida aytilgan nazariy ma’lumotlarning talabalar tomonidan idrok etilishi, tadqiq qilinishi, takrorlanishi asosida bilimlarni mustahkamlash, to‘ldirish maqsad qilib qo‘yiladi. So‘z turkumlaridan ayrimlarining boshlang‘ich ta’lim yo‘nalishi 2-bosqichida o‘rganilishini hisobga olsak, ayni shu bosqichda bunday tahlilning talabalar tomonidan mustaqil ish sifatida bajarilishi har jihatdan o‘rinlidir. Bunda o‘qituvchi har bir so‘z turkumiga doir so‘zlar nisbatan ko‘p qo‘llangan matnlarni tanlaydi. Morfologik tahlil qilish uchun matnlar talabalarga bo‘lib beriladi. Matndagi har bir jumla so‘z turkumlari ishtiroki bo‘yicha, ya’ni morfologik tahlil qilinadi. Bunday tahlilning to‘liq bajarilishi uchun nazariy va amaliy mashg‘ulotlarda o‘zlashtirilgan ma’lumotlar esga olinadi, so‘zlarni turkumlarga ajratish, har bir turkumning faqat o‘ziga xos bo‘lgan morfologik belgilari, kategoriyalari, so‘z shakllarini aniqlash nazarda tutiladi. Namuna sifatida biror so‘z turkumining, masalan, **Ot** turkumiga tegishli so‘zlarning morfologik tahlili jarayonida e’tiborda bo‘lishi zarur bo‘lgan xususiyatlar sanaladi:

- qaysi so‘roqlarga javob bo‘ladi?
- bosh shakli?
- ma’nosiga ko‘ra turlari (atoqli, turdosh, aniq, mavhum, yakka, jamlovchi)
- grammatik son (birlik va ko‘plik). Ko‘plik ma’nosi qaysi usul bilan hosil qilingan?
- qaysi shaxsga qarashli (egalik qo‘shimchasini olgan bo‘lsa)?
- qaysi kelishikda?
- gapdagi qaysi so‘z bilan bog‘langan?

Talaba morfologik tahlil jarayonida zarur bo‘ladigan nazariy ma’lumotlarni o‘zlashtirgach, yuqorida havola qilingan bandlardan xabardor bo‘lgandan so‘ng, fikrlarini amaliy jihatdan asoslash maqsadida o‘qituvchi tomonidan tavsiya qilingan matnni tahlil qilishga kirishadi. Talabaga havola qilingan matn 10-15 jumladan iborat bo‘lishi maqsadga muvofiq. Matnning ixcham shaklda bo‘lishi, jumlalarning

qo‘shma gaplardan iborat bo‘lmasligi talabaning mustaqil ishini, tahlil jarayonini yengillashtiradi. Yuqorida **Ot** so‘z turkumining morfologik tahliliga oid nazariy ma’lumotlar keltirilgani uchun quyidagi matnda asosiy e’tiborni shu turkumga tegishli so‘zlarga qaratsak.

Bolalar! Ota-onani hurmat qilish, ular oldida adab bilan turib, xizmatlarini bajarish hammamizning vazifamizdir. Ota-onalarimizni ranjitadigan so‘zlarni aytishdan, ko‘ngillarini qoldiradigan ishlardan doimo saqlaning. Aqlli bolalar ota-onalarini hurmat qilib, kuchlari yetgancha ularning xizmatida bo‘ladilar. Yomon so‘z aytishdan, achchiqlanib qarashdan o‘zlarini saqlaydilar. Ota-onaga qanday xizmat qilish haqida sizlarga bir kichik misol keltiramiz:

Bir kishi kechasi uyg‘onib, o‘g‘lidan “suv ber!” deb so‘radi. O‘g‘li suv olib kelguncha, otasi yana uxlab qolgan edi. O‘g‘li: “Otam balki yana uyg‘onib suv so‘rar”,- deb uxlamasdan otasining uyg‘onishini kutib, tong otguncha o‘tirdi. Mana, bolalar, adabli,tarbiyali bola shunday bo‘ladi. Ota-onalaringizni izzat-hurmat qilishga, ularning olqishlarini olishga harakat qiling. Har bir bola ota-onasi qilgan nasihatlarini jon qulog‘i bilan eshitib, nasihatlariga har vaqt amal qilishi kerak. Ota-onasiga ozor berib, ularning dillarini og‘ritadigan bola baxtli bo‘lmaydi.

Istasangki, yetmasin senga balo,
Ota-onangga sira qilma jafo.

Keltirilgan ushbu matnda ot turkumiga tegishli anchagina so‘zlar mavjud. Yuqorida havola qilingan **Ot** turkumining morfologik tahlili talablariga ko‘ra matndagi har bir so‘z to‘liq tahlil qilinishi kerak. Shu gaplardan birining morfologik tahlilini havola qilishni ma’qul ko‘rdik:

Bolalar! Ota-onani hurmat qilish, ular oldida adab bilan turib, xizmatlarini bajarish hammamizning vazifamizdir. Ushbu jumlada **Ot** turkumiga doir 5 ta so‘z bor: bolalar, ota-onani, adab, xizmatlarini, vazifamizdir.

- **bolalar -** ot, kimlar? so‘rog‘iga javob bo‘ladi, bosh shakli **bola,** ma’nosiga ko‘ra turdosh ot, aniq ot, shaxs oti, ko‘plik sonda, ko‘plik ma’nosi morfologik usulda hosil qilingan (**-lar** qo‘shimchasi orqali), egalik qo‘shimchasi qo‘shilmagan, bosh kelishikda, gapda biror so‘z bilan grammatik jihatdan bog‘lanmagan.

- **ota-onani** - ot, kimni? so‘rog‘iga javob bo‘ladi, bosh shakli **ota-ona**, ma’nosiga ko‘ra turdosh ot, aniq ot, shaxs oti, birlik sonda (**-lar** qo‘shimchasini olmagan), egalik qo‘shimchasi qo‘shilmagan, tushum kelishigida, gapda **hurmat qilish** so‘ziga bog‘lanib kelgan. Tuzilishiga ko‘ra juft ot.

- **adab** – ot, nima? so‘rog‘iga javob bo‘ladi, bosh shakli **adab**, ma’nosiga ko‘ra turdosh ot, mavhum ot, birlik sonda (**-lar** qo‘shimchasini olmagan), egalik qo‘shimchasi qo‘shilmagan, gapda **bilan** ko‘makchisi bilan birgalikda qanday? so‘rog‘iga javob bo‘lib, **turib** so‘ziga bog‘lanib kelgan.

- **xizmatlarini** - ot, nimalarni? so‘rog‘iga javob bo‘ladi, bosh shakli **xizmat,** ma’nosiga ko‘ra turdosh ot, mavhum ot, ko‘plik sonda, ko‘plik ma’nosi morfologik usulda hosil qilingan (**-lar** qo‘shimchasini qo‘shish orqali), III shaxs – **i** egalik qo‘shimchasi qo‘shilgan, tushum kelishigida, gapda **bajarish** so‘ziga bog‘lanib kelgan.

- **vazifamizdir –** ot, nimamizdir? so‘rog‘iga javob bo‘ladi, bosh shakli **vazifa**, ma’nosiga ko‘ra turdosh ot, mavhum ot, birlik sonda (-**lar** qo‘shimchasini olmagan), I shaxs ko‘plikdagi egalik qo‘shimchasi qo‘shilgan, bosh kelishikda.

Xullas, talaba mustaqil ishni yozish davomida, ishdagi har bir jumlani morfologik tahlil qilish mobaynida ot turkumiga oid barcha ma’lumotlarni, atamalarni esga oladi, takrorlashga erishadi. Yuqoridagi ot turkumining morfologik tahlili qolipidan foydalanib, talaba boshqa jumlalarni ham shunday tahlil qilishga harakat qiladi. Albatta, matnda bir qancha turkumlarga tegishli so‘zlar mavjud. Ularning morfologik tahlilini tashkil etishda yuqorida ta’kidlanganidek, har bir turkumning o‘ziga xos morfologik xususiyatlari e’tiborga olinadi.

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BO‘LAJAK TARBIYACHILARNI INNOVATSION FAOLIYATGA TAYYORLASHNING PEDAGOGIK ASOSLARI

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Annotatsiya. Maqolada ta’limning zamonaviy sharoitida bo‘lajak tarbiyachi pedagoglarni zamon talablari darajasida innovatsion faoliyatga tayyorlash, hamda o‘quv faoliyatida uning bajarilish holati bayon etilgan.

Kalit so‘zlar. Maktabgacha ta’lim, bo’lajak tarbiyachi, innovatsion kasbiy faoliyat, qobiliyat, kreativlik, kompetensiya, faoliyat, pedagogik qobiliyat**.**

Abstract. The article describes the preparation of future teachers for innovative activities at the level of modern requirements in modern conditions of education, as well as the state of its implementation in educational activities.

Key words. Preschool education, future educator, innovative professional activity, ability, creativity, competation, activity, pedagogical ability.

Аннотация. В статье описана подготовка будущих педагогов к инновационной деятельности в современных условиях образования, а также состояние ее реализации в образовательной деятельности.

Ключевые слова. Дошкольное образование, будущий педагог, инновационная профессиональная деятельность, способности, креативность, компетентность, активность, педагогические способности.

Kirish.

Mamlakatimiz ta’lim tizimida innovatsion texnologiyalarga asoslangan ta’lim - tarbiya tizimini takomillashtirish uning milliy zaminini mustahkamlash ijtimoiy faol va malakali raqobatbardosh kadrlar tayyorlashni jahon talablari darajasiga ko‘tarishga yo‘naltirilgan tadqiqotlar keng ko‘lamda olib borilmoqda. Ta’lim tizimidagi sifat o‘zgarishlari va yuqori samaradorlik, ularning jahon ta’lim talablari bilan mosligi va pedagoglarning kelgusi mehnat faoliyatlarida o‘zlashtirgan bilim, ko‘nikma va malakalarini qay darajada amaliyotga tatbiq qilinayotganligiga bevosita bog‘liqdir. Ta’lim-tarbiyadagi sifat o‘zgarishlar va yuqori samaradorlik mazkur sohaga ijobiy yangilik kiritish natijasida ta’limda sifat va samaradorlik ta’minlanib, pedagogik innovatsiya jarayoni vujudga keladi.

Pedagogik ta’lim tizimi, zamon talablariga javob beradigan, bo‘lajak tarbiyachilarni kasbiy-innovatsion faoliyat olib borishga tayyorlash uchun zamonaviy o‘qitish tizimining yangi, ilmiy asoslangan model va texnologiyalarini taklif qilgan holda, taraqqiy etib bormoqda. Zamonaviy sharoitlarda tobora ortib borayotgan pedagogika sohasining maqomi va mazkur yo‘nalishdagi malakali mutaxassislarga bo‘lgan talabning ortib borishi, oliy pedagogik ta’limning yaxlit tizimida ularning kasbiy-pedagogik tayyorgarligini zamon talablari darajasida modernizasiyalash zaruratini belgilaydi. Oliy ta’limda bo‘lajak tarbiyachilarni pedagogik - innovatsion faoliyatga tayyorgarligini takomillashtirish jarayoni uzluksiz ta’lim tizimini modernizatsiyalashning umumiy qoidalariga asoslanadi.

Ta’limni modernizatsiyalash g‘oyasining ishlab chiqilishi va uning zamonaviy ilmiy nashrlar hamda normativ hujjatlarda aks ettirilishi uning mohiyatini, oliy ta’limda amalga oshirishning yo‘nalishlari va yo‘llarini tushunish zarurligini anglatadi. O‘zbekiston Respublikasi Prezidentining “Oliy ta’lim tizimini yanada rivojlantirish chora-tadbirlari to‘g‘risida”gi 20.04.2017 yil №PQ-2909 - sonli Qarori oliy ta’lim tizimini tubdan takomillashtirish, mamlakatimizni ijtimoiy-iqtisodiy rivojlantirish borasidagi ustuvor vazifalarga mos holda, kadrlar tayyorlashning ma’no-mazmunini tubdan qayta ko‘rib chiqish, xalqaro standartlar darajasida oliy malakali mutaxassislar tayyorlash uchun zarur sharoitlar yaratish maqsadida qabul qilingan [2].

Natijalar va muhokamalar.

Ta’lim samaradorligini ta’minlashda bo’lajak tarbiyachilardan chuqur pedagogik-psixologik tayyorgarlik, har bir bolaning o’ziga xos jihatlari haqida aniq ma’lumotga ega bo’lishi hamda shaxsiy reja tuzishda quyidagi talablarga qat’iy rioya qilishi talab etiladi:

- vujudga keladigan pedagogik muammolarni bashorat qila olishi: buning uchun bo’lajak tarbiyachilar pedagogik jarayonda vujudga keladigan muammolarni oldindan ko’ra bilish va uni bartaraf etish layoqatiga ega bo’lishi lozim;
- vujudga keladigan muammolarni bartaraf etish metodlarini o’zlashtirishi;
- vujudga keladigan muammolarni bartaraf etishning eng qulay usullarini tanlay olishi va uni amalda qo’llay olishi;
- bolalarga pedagogik ta’sir ko’rsatish, ularni qo’llab-quvvatlash mahoratiga ega bo’lishi;
- har bir bolaga individual yondasha olishi va h.

Bo‘lajak pedagoglar ta’lim muassasasi talabalarining kasbiy mahoratlarini hosil qilishda ta’lim-tarbiyaning ijtimoiy hayot bilan uyg‘unligini ta’minlash prinsipiga qat’iy amal qilish kerak. Shu asosda bo‘lajak pedagog-tarbiyachilarning tarbiyaviy ishlarining mazmuni, shakllari, vositalari va metodlarini o‘zlashtirishlariga erishiladi. Bularning barchasi bo‘lajak pedagoglarda ma’naviy hislatlarni tarkib toptirish uchun asos bo‘lib xizmat qiladi [1]. Maktabgacha ta’lim tashkiloti pedagog-tarbiyachilar bolalarda ijobiy hislatlarni tarkib toptirish bilan bir qatorda, ular xulq-atvoridagi salbiy xususiyatlarning oldini olish, ularni bartaraf qilish tajribasiga ham ega bo‘lishlari kerak. Ko‘pincha maktabgacha ta’lim tashkilotiga yangi kelgan bolalarda tortinchoqlik, injiqlik, guruh hayotiga moslashmaslik kabi holatlar kuzatiladi. Bunday holatlarni bartaraf etish, bolalarni jamoa hayotiga moslashtirish, ularni muloqot vaziyatlariga olib kirish, ruhiy osoyishtaliklarini ta’minlash pedagog-tarbiyachilarning muhim vazifalari sirasiga kiradi. Bolalar xarakteridagi salbiy jihatlarni bartaraf qilishga ko‘maklashish, ularni to‘g‘rilik va haqgo‘ylikka o‘rgatish, irodasini mustahkamlash pedagog-tarbiyachilarning muhim vazifalaridandir. Bunda pedagog-tarbiyachilar jamoaviy ta’sir ko‘rsatish metodidan foydalanishlari kerak. Pedagog-tarbiyachilar bolalarni tevarak atrofdagi voqyelik bilan tanishtirish, ularni shu jarayonda ishtirok etishlari uchun tayyorlashi kerak. Bolalar oldiga aniq, o‘rtacha murakkablikdagi vazifalar qo‘yilgandagina, ularda tashabbuskorlik, qiziquvchanlik, faollik ko‘rsatish istagi namoyon bo‘ladi. Natijada bolada mas’uliyat hissi paydo bo‘ladi, pedagog tomonidan bildirilgan ishonchni oqlashga intiladi. Ko‘rinib turibdiki, bo‘lajak pedagoglar oldiga qo‘yiladigan vazifalar murakkab va ko‘p qirralidir. Shuning uchun ham bo‘lajak pedagog-tarbiyachilarda ilmiy dunyoqarash asoslari, yuksak ma’naviy hislatlar, jamoa, jamiyatda o‘zini tuta bilish ko‘nikma va odatlarini tarkib toptirish sohasida tizimli tarzda ish olib borish talab etiladi.

Pedagogik amaliyot davrida bo’lajak pedagog-tarbiyachilarda o’z kasbiga moyillik, pedagogik faoliyatga ijodiy yondashish, o’zi egallagan zamonaviy bilimlarni amaliy tajribasida qo’llash, rahbarlik ko’nikmalarini egallash, bolani pedagogik-psixologik o’rganish, tahlil qilish, madaniy ommaviy tadbirlarni tashkil etish metodlarini o’zlashtirish kabi ko’nikmalar faollashadi hamda mustahkamlanadi. Bularning barchasi talabalarni tarbiyachilik faoliyatiga tayyorlaydi. Shu bilan bir qatorda bo’lajak tarbiyachilar o’z kasbiy faoliyatlari davomida amal qiladigan bir qator qoidalarni ham o’zlashtirishlari kerak. Ular:

- bolalarda ongli intizomni tarkib toptirish;
- bolalarga nisbatan adolatli munosabatda bo’lish;
- guruhdagi bolalarni qo’llab-quvvatlash va ularga yordam ko’rsatish;
- bolalarning mustaqil faoliyatlarini munosib rag’batlantirish;
- bolalar bilan topshiriqlar ustida tizimli ishlash va bu jarayonda ularni faollashtirish;
- guruhda bolalari orasida tarbiyaviy tadbirlarni tizimli tarzda tashkil etish kabilar.

Shu bilan bir qatorda bo’lajak tarbiyachilar innovatsion kasbiy faoliyatga tayyorlashda ma’ruzalar, amaliy mashg’ulotlari davomida dialogga kirishish, fanga oid yangi ma’lumotlar ustida ishlash, mustaqil bilim olish, manbalar ustida ishlash hamda o’rgangan tajribalarini tahlil qilish muhim o’rin egallaydi.

Pedagog-tarbiyachilar bolalarda atrof-muhit, tabiat, nutq va hisoblashga oid dastlabki ko’nikmalarni hosil qilish bilan bir qatorda ularni kompleks rivojlantirishga xizmat qiladigan milliy urf-odatlarimizni ham singdiradilar. Ular bolalarda juda yoshlikdan boshlab, haqgo’ylik, bag’rikenglik, birdamlik, o’zaro yordam kabi sifatlarni shakllantirishga intiladilar. Xalq ta’limining sifati ta’limning keyingi bosqichlarida bolalarning bilimlarini sifatli o’zlashtirishlarini kafolatlaydi. Buning uchun xalq ta’limi muassasalarini modernizatsiyalashga oid yagona talablarni ishlab chiqish, ushbu talablar sifatli ta’lim va tayanch ko’nikmalarni hosil qilishni nazarda tutadi.

Bizga ma’lumki, innovatsiyalar uzluksiz ta’lim tizimini rivojlantirishning yetakchi omillaridan hisoblanadi. Ular ta’lim jarayonida bolalarning sifatli bilim olishlarini kafolatlabgina qolmay, ularning intellektual qobiliyati, mustaqillik tafakkurini shakllantirishga olib keladi.

Demak, innovatsiyalar yangiliklar asosida vujudga keladi va ta’lim jarayonini rivojlantirishda muhim ahamiyatga ega bo’ladi. Ta’lim jarayonida innovatsiyalardan o’rinli foydalanish tarbiyachi uchun ham bola uchun ham ko’plab qulayliklarni yaratib beradi. Shuning uchun bo’lajak tarbiyachilarni innovatsion ta’lim asosidagi ta’limiy jarayonlarga tayyorlash faqat va faqatgina samaradorlikning oshishiga olib keladi.

Xulosa.

Xulosa o‘rnida avvalo talaba yuqori darajali bilim olishi va yuqori kasbiy kompitentligini shakillantirishga qaratish ularning kelgusida yuqori salohiyatli va raqobatbardosh kadrlar bo‘lib yetishishlariga yordam beradi. Bu avvalo, jamiyatni rivojlantirishga asosiy omil bo‘lib xizmat qiladi. Zero, yuqori malakali pedagog kadrlarni tayyorlash avvalo kelgusida ham ta’lim va tarbiya beradigan dargohidan salohiyatli yoshlar yetishib chiqishini ta’minlaydi.

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ILMIY-PEDAGOGIK FAOLIYATDA TIZIMLI TAHLIL TEXNOLOGIYALARI VA BOSHQARUV QARORLARINI QABUL QILISHNING O'RNI VA AHAMIYATI

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Kalit so‘zlar. Ta’lim, boshqaruv, qaror qabul qilish, tizim, tizimli tahlil, innovatsion metod, ta’lim texnologiyalari.

Keywords. Education, management, decision making, system, system analysis, innovative method, educational technology.

1. Kirish. Tizimli tahlil muammosining dolzarbligi. O‘tgan XX-asrning ikkinchi yarmidan boshlab dunyodagi deyarli barcha mamlakatlarda davlat va jamiyat boshqaruvida, ta’limning hamma bo‘g‘inlarida, ijtimoiy-iqtisodiy hayotning turli muammolarini hal etishda tizimli tahlil va qaror qabul qilish texnologiyalariga, axborot-tahliliy faoliyatga jiddiy e’tibor qaratilib kelinmoqda hamda bugungi kunda bu sohalarda olib borilayotgan tadqiqot ishlari yanada rivojlantirilmoqda. Ayniqsa, biz uchun bu borada yuksak darajada rivojlangan mamlakatlarning tajribasi muhim ahamiyatga ega. Chunki ularda davlat va jamiyat boshqaruvi bilan bir qatorda korporatsiyalar, kompaniyalar, ishlab chiqarish korxonalari, firmalar, ta’lim muassasalar, ijtimoiy boshqaruv tashkilotlarida tizimli-tahliliy faoliyat, qaror qabul qilishni ilmiy asoslash o‘ta muhim vazifalar hisoblanadi. Shu narsa ravshanki, rivojlangan davlatlar tajribasidan ijobiy foydalanish bizning mamlakatimiz taraqqiyori uchun muhim omillardan biridir. Bu sohada keying yillarda O‘zbekiston Respublikasi Prezidenti, hukumatimiz tomonidan jiddiy qadamlar qo‘yilib, bir qator ishlar amalga oshirilmoqda. Yangi O‘zbekistonning taraqqiyot styrategiyasida mutacxassis – kadrlarni tayyorlashda ta’limdagi xalqaro tajribalar, yutuqlar, innovatsion texnologiyalarga alohida e’tibor qaratilmoqda.

Hozirgi davrda har bir zamonaviy ilmiy-pedagog xodim axborot-tahliliy faoliyat yuritishning usul va vositalarini bilishi hamda yuzaga keluvchi vaziyatlarni tadqiq etishda va mos qarorlar qabul qilishda ulardan samarali foydalana olishi lozim. Zamonaviy pedagog bubungi kunda katta hajmdagi ma’lumotlarni tahlil qila olishi, o‘zining pedagogic qarorlarini ilmiy asoslay bilishi, o‘z tajriba va bilimlariga tayangan holda tizimli fikrlay olishi va nihoyat tizimli prognozlashtirish qobilyatiga ega bo‘lishi lozim.

Hozirgi zamon ta’lim tizimidagi bosh maqsadlardan biri chuqur bilimli, tizimli fikrlay oladigan, hayot va mehnat faoliyatida duch kelishi m umkin bo‘lgan katta-kichik muammolarni hal etish yo‘llari haqida ijodiy fikrlay oladigan zamonaviy komil insonni tarbiyalash tizimini yaratishdir.

Boshqaruv qarorlarini qabul qilishda tizimli tahlilning ilmiy uslublarni e’tiborga olmaslik, yoki ulardan foydalana bilmaslik nafaqat moddiy va ma’naviy resurslarning isrof qilinishiga olib kelishi, balki qabul qilingan qarorlarning ijrosi natijasida salbiy oqibatlar kelib chiqishi hamda keyinchalik qabul qilinadigan muhim qarorlar uchun ham salbiy ta’sir ko‘rsatishi mumkin.

Yuqorida keltirilgan fikrlar, ta’lim jarayonida tizimli tahlil asoslarini zamonaviy texnologiya sifatida qo‘llashni o‘rganishimizni va undan maqbul qarorlar qabul qilishda foydalana bilishimizni talab etadi.

2. Tizimli tahlil va qaror qabul qilish texnologiyalarini o‘rganishdagi

maqsad va vazifalari. Insoniyat sivilizatsiyasi, tabiyat va jamiyatni bilish bo‘yicha evolyutsion jarayon bir tomondan juda ko‘p yangi faktlar, turli sohalarga oid ilmiy ma’lumotlarning ochilishi va to‘planishiga olib kelgan bo‘lsa, boshqa tomondan olib qaraganda, insoniyat oldiga ularni tizimlashtirishdan iborat muhim bir vazifani ham qo‘ydi. Bilim sohalarining bir-biri bilan aloqasi, fanlar integratsiyasi hozirgi zamon ilmiy-texnik taraqqiyoti uchu muhim omil bo‘lib qolmoqda. Albatta, har bir fan sohasi o‘z tadqiqot uslublariga, o‘ziga xos metodologiyasiga ega. Ammo, bugungi kunda shu narsa ravshanki, *barcha bilim sohalarida analiz (tahlil), sintez va qismlar o‘rtasidagi o‘zaro aloqa, bog‘lanish, munosabatlarni anglash orqali tizimli bilish jarajoni amalga oshiriladi.*

Qisqasi, tizimli tahlil barcha sohalardagi muammolarni hal qilish metodologiyasi sifatida barcha zarur uslub, bilim, vositalar va muammoni yechish uchun lozim bo‘lgan harakatlarni umumlashtiruvchi ustun vazifasini bajaradi. Tizimli tahlil u yoki bu metoddan qaysi bosqichda va qanday shaklda foydalanish lozimligini aniqlahlab beradi.

Bugungi kunda oliy ta’lim muassasalari professor-o‘qituvchilarining muntazam kasbiy o‘sishida interaktiv metodlar, pedagoglarning tahliliy va ijodiy fikrlashini rivojlantirishga yo‘naltirilgan innovatsion metodikalar, masofadan o‘qitishni, mustaqil ta’lim olishni kengaytirishni nazarda tutuvchi texnika va texnologiyalardan foydalangan holda mashg‘ulotlar olib borishni rivojlantirish katta ahamiyatga ega [1; 2, 3 bb.].

Ta’lim jarayonida tizimli tahlil va qaror qabul qilish texnologiyalaridan foydalanish bo‘yicha zarur bilimlarga qo‘yiladigan talablardan ko‘zda tutilgan asosiy maqsad vazifalar quyidagilardan iborat:

Asosiy maqsad: tizimli tahlil va qaror qabul qilish asoslaridagi uslub, uslubiyat va yondashuv, mezonlar, bosqichlar va texnologiyalar bo‘yicha kerakli nazariy bilim va amaliy ko‘nikmalarga ega bo‘lish handa ularni ilmiy-pedagogik faoliyatda, shuningdek boshqa ijtimoiy munosabatlarda qo‘llay bilish.

Asosiy vazifalar:

- Tizimning asosiy belgilarini farqlay bilish va pedagogil faoliyatda uchrashi mumkin bo‘lgan muammoli holatlarni tizim sifatida qarashni o‘rganish; muammoning hal qilinganligini aniqlovchi ko‘rsatkichlarni (mezonlarni) aniqlashni o‘rganish.
- Tizimli yondashuv va tizimli fikrlash haqida zarur nazariy va amaliy bilimga ega bo‘lish.
- Ilmiy-pedagogik faoliyatda uchrashi mumkin bo‘lgan muammolarni hal etish bo‘yicha qaror qabul qilish nazariy sasoslarini bilish.
- Tizimli tahlil va qaror qabul qilish uslub va vositalari bo‘yicha amaliy ko‘nikmalarga ega bo‘lish.
- Axborot-tahliliy hujjatlar asosida o‘quv jarayonini tashkil etish va boshqarish asoslarini bilish.
- Ta’lim jarayonidagi muammolarni hal qilishda zamonaviy axborot texnologiyalari imkoniyatlaridan foydalanish bo‘yicha chuqur bilim va ko‘nikmalarni egallash.

3. Tizimli yondashuvning mohiyati. Anglab yetishning o‘ziga xosligi – fikrlashning analiz (taxlil) va sintez ko‘rinishlaridan foydalanishdir. Bu esa bir butunni qismlarga bo‘lish, murakkablikni nisbatan sodda bo‘lgan tarkibiy qismlar ko‘rinishida namoyon qilish va aksincha, sodda bo‘laklarni birlashtirgan holda murakkablikni tashkil etishda namoyon bo‘ladi.

Inson bilimining tahliliy asosda shakllanishi turli fanlarning mavjudligi, gfanlsarning differensiyasi, har biri o‘zicha qiziqarli, muhim, kerakli tor masalalarni yana ham chuqurroq o‘rganishda ko‘rinadi.

Shu bilan birga bilimlarni sintez qilish jarayoni ham juda muhimdir. Bunday yondashuv bionika, biokimyo, sinergetika va boshqa shu kabi “chegaraviy” fanlarni vujudga keltirdi. Bugungi kunda sintetik fanlar sirasiga formal, texnik, gumanitar va boshqa bilimlarni birlashtiruvchi tizimli tahlil, informatika, kibernetika va boshqalarni kiritish mumkin. Shu asnoda ta’kidlash joizki, fikrlashni tahlilga, sintezga bo‘linishi va bu qismlar o‘rtasida o‘zaro aloqaning mavjudligi tizimli tahlilning yaqqol nishonasidir.

Maxsus fikrlash turi bo‘lgan tizimli fikrlash – *jarayon yoki hodisa mohiyatini nafaqat tushunishni, balki uni boshqarishni istaydigan tahlilchiga xosdir.* Tizimli yondashuv – bu obyekt, hodisa va jarayonlsarni o‘rganishda tizimlar nazariyasiga asoslangan uslubiyatdir.

Tizimli fikrlash (tizimli yondoshuv) – bu uslub bo‘lib, u predmetli fikrlashga nisbatan kengroq (o‘z ichida ikki va undan ortiq predmetli fikrlashga ta’luqli bo‘lgan ob’yektlarni mujassamlashtirgan) lekin aniq bo‘lgan muayyan yo‘nalishga (voqeaga, hodisaga) qaratilgan ilmiy jarayondir.

Tizimli fikrlash qoidalariga asosan har qanday tizim boshqa bir tizimga ta’sir ko‘rsatadi. Bundan kelib chiqib ta’kidlaydigan bo‘lsak, bizni o‘rab turgan butun borliq – bu bir-biri bilan doim aloqada bo‘lgan tizimlar majmuidir.

Tizimli tahlil – aniq maqsadli ilmiy tadqiqot faoliyatning bir turi bo‘lib, bunda tadqiqotchi diqqat-e’tibori ilmiy bilimlar haqida, ularning shakli, mazmuni, shuningdek, batafsil tekshirish, aniq tushuncha va tasdiqlarni ilgari surish darajasiga muvofiq maqbul tasavvurni yaratishga qaratilgan bo‘ladi.

4. Tizimli tahlilning o‘ziga xosligi. Ilmiy bilish uslubiyati sifatida tizimli tahlil (TT) uchun quyidagi shartlar zarurdir [2; 3, 4 bb.]:

- Predmetli sohaning mavjudligi (tizim va tizimli jarayonlar);
- Tizimning umumiy xususiyatlarini aniqlash va izohlash;
- Tizimlardagi qonuniyatlar va rivojlanish tendendensiyalarini aniqlash va izohlash;
- Tizimlarning hatti-harakati va atrof-muhit bilan bo‘lgan aloqasini anglash uchun mos qonuniyatlsarni o‘rganish;
- Tizimlar to‘g‘risidagi bilimlarni to‘plash, saqlash va foydalanish.

TTda birinchi masala bo‘lib bir qator maqsadlarning mavjudligi sharoitida muammoning o‘zini aniqlash belgilanadi. Maqsadlasrning muhimlik darajasi (ya’ni ular ko‘p va bir-biri bilan munozarali bo‘lishi mumkin) tizimli tahlilchi tomonidan muammoni yechishning maxsus jihatlarini ishlab chiqish va baho berish asosida

aniqlnadi. Ushbu holatda maqsad va sarf qilinadigan resurslar o‘rtasidagi o‘zaro bog‘liqlikni *matyeamatik va boshqa usullarga* tayanib izohlashga harakat qilinadi.

Shu o‘rinda ta’kidalash lozimki, TTda matematik usullar muhim o‘ringa ega, ya’ni ulsar mavjud bo‘lgan ko‘plab qarorlarni tizimli tartibga solishga, qarorlarni asoslash algoritmini ishlab chiqishga, nisbatan yuqori ko‘rsatkichlarga ega optimal, maksimal samarali qarorlarni asoslashga imkon beradi.

TT metodikasining o‘ziga xos tomoni shundaki, u tizim tushunchasiga asoslanishi hamda tizimni qurish, faoliyat yuritishi va rivojlanishi qonuniyatlaridan foydalanishi kerak.

Bundan kelib chiqib aytadigan bo‘ldsak, *TT barcha metodikalariga tizimlarning faoliyat yuritishi qonunini aniqlash, tizim tuzilmasi variantlarini shakllantirish va dekompozitsiya vazifalarini hal qilish, tizimni tahlil va sintez qilish, eng maqbul variantni tanlash umumiy hisoblanadi.*

Kompleks muammolarni hal qilish uchun TTdan foydalanishning muhim 3 afzalligi mavjud [5; 6 b.].

Birinchidan, tizimli konsepsiya muammoning ham umumiy, ham maxsus *sifatlarini belgilashga* imkon beradi.

Ikkinchidan, TT qabul qilingan qarorni natijasi yoko oraliq natijasini to‘g‘ri aniqlashga imkon beradi. Oxiri nima bilan tugashini aniqlovchi yechim oraliq natijalarga va muqobillarga aloqasi bo‘lmagan yakuniy natijalarni izohlaydi.

Uchinchidan, tizimli yondoshuv muammolarni yechish uchun ularni tzshkillashtirish imkon beradigan *ob’yektiv standartni* yaratishga yordam beradi.

5. Hulosa. *Bu aytilganlardan shu narsa kelib chiqadiki, Tizim g‘oyasi alohida hodisalarni o‘rganish uchun mo‘ljallanmagan, balki ushbu vaziyat, jarayon va uning muhitini keltirib chiqaruvchi to‘liq voqealar kompleksini o‘rganadi. Tizimli tahlil asosida qaror qabul qilish va muammoni yechish uslubiyati quyidagilarga imkon berishi kerak:*

- Muammoni yechishning umumiy jarayonini funksional tashkillashtiruvchi tizximni belgilash.
- Muammoni yechish uchun zarur bo‘lgan tuzilmaga ega tizim parametrlarini aniqlash.
- Muammoni yechish jarayoning muqobil variantlari (“chiqishlari”) olish va baholashga yordam beradigan tizim modelining imkoniyatlarini izohlash.
- Ishlab ciqilgan tizim modelining tadqiqi asosida maqbul qaror qabul qilish usullaridan foydalana bilish va ularni baholay olish.

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АНАЛИЗ СОВРЕМЕННЫХ ПОДХОДОВ К МЕТОДИЧЕСКОМУ СОПРОВОЖДЕНИЮ ПЕДАГОГОВ В ПРОЦЕССЕ ПОВЫШЕНИЯ КВАЛИФИКАЦИИ

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Ключевые слова. Система подготовки кадров, профессиональная компетентность, сопровождение, методическое сопровождение, виды сопровождения.
Keywords. Personnel training system, professional competence, support, methodological support, types of support.

Введение. Развитие профессиональной компетентности современного педагога обусловлено потребностью общества и государства в учителях с высоким уровнем теоретической подготовки, практической деятельности, готовых к профессиональному самосовершенствованию и мобильности. Следует отметить, что основной проблемой внедрения государственных образовательных стандартов общего образования в Республике Узбекистан представляется готовность к этому учителя, его философская и педагогическая позиция, методологическая, дидактическая, коммуникативная, методическая и другие компетентности [3].

Цель исследования. Теоретически обосновать особенности сопровождения профессионального развития учителя начальных классов в процессе повышения квалификации. Анализ научной литературы, показал, что данное понятие сформировано на основе концепций гуманистической педагогики. Изучением понятия «сопровождение» занимались М.Р. Битянова, Е.А. Казакова, И.А. Кибак, Н.Л. Коновалова, А.В. Мудрик, Н.С. Пряжников, О.Г. Ридецкая, С.Н. Читякова, Т.М. Чурекова, Л.М. Шипицина и другие.

Общефилософская основа определения «сопровождение» – это теория свободного выбора, равно как условие, как условие развитие. Личностно-ориентированный подход является первоначальным положение формирования научных начал сопровождения. Данный подход подразумевает развитие как выбор субъектом линий профессионально-личностного совершенствования. В данном случае ситуация подбора создает множество решений, зависящих от общественных обстоятельств.

Согласно словарю С.И. Ожегова понятие «сопровождение» от глагола «сопровождать» обозначает сопутствовать чему-либо, служить приложением,

дополнением к чему-либо. М.Р. Битянова, Е.А. Казакова, И.А. Кибак, Н.Л. Коновалова, А.В. Мудрик, Н.С. Пряжников, О.Г. Ридецкая, С.Н. Читякова, Т.М. Чурекова, Л.М. Шипицина определят термин «сопровождение» как комплексную технологию социальнопсихологической помощи индивида.

1. В своих работах Н.С. Глуханюк определяет понятие «сопровождение» как метод образования условий для принятия наилучших решений в ситуации актуального выбора. Как отмечается в работах Е.А. Тютина ключевая задача сопровождения – «разработка таких социально-педагогических условий, каковых любой ребёнок способен быть субъектом собственной жизни: своей деятельности, общения и своего внутреннего мира. При этом частная задача – развитие образовательной среды, содействующей благополучному обучению и поступательному психическому развитию обучающихся. Значимость личного выбора человека, его самоопределение в важных жизненных ситуациях [1].

Понятие «сопровождение» можно квалифицировать в зависимости от типа сопровождения [2; с. 12]:

– сопровождение процесса как той или иной ситуации профессионального развития (педагогическая технология реализации процесса решения конкретной профессиональной задачи);

– сопровождение объектов, в рамках которого происходит профессиональное становление (система создания профессиональной или образовательной среды для гармоничного развития всех субъектов профессионального сообщества). Виды сопровождения в зависимости от специфики деятельности сопровождающего:

– педагогическое сопровождение (особая сфера деятельности педагога, направленная на решение конкретных проблем, чаще всего через приобщение сопровождаемого к социально-культурным и нравственным ценностям, на которое он опирается в процессе самореализации);

– психологическое сопровождение (целенаправленная совместная деятельность психологической службы с другими участниками образовательного процесса, направленного на разрешение проблем сопровождающего);

– психолого-педагогическое сопровождение (модель деятельности педагога-психолога, предназначенная для создания в учебно-воспитательном процессе условий для успешного развития и социализации сопровождаемого);

– тьюторское сопровождение (тьютор в своей деятельности ориентируется на образовательный опыт ученика, активное действие педагога как источник новых направлений в его образовательном движении, выбор ребенка, его осмысленность по отношению к собственным действиям);

– научно-методическое сопровождение (управленческая технология организации сотрудничества субъектов образования, обеспечивающая условия развития и квалифицированной помощи педагогу в его профессиональной карьере);

– организационно-педагогическое сопровождение (особый вид институтуциональной деятельности, предполагающий совокупность организационных действий, определение содержания, форм и метод, создание программно-методического обеспечения, адекватного целям, принципам, закономерностям процесса сопровождения);

– дидактическое сопровождение (создание условий в учебном процессе для естественного свободного развития личности);

– методическое сопровождение (целенаправленная совместная деятельность методической службы и коллектива образовательного учреждения, направленная на повышение качества образовательного процесса);

– комплексное сопровождение (процесс взаимодействия субъектов, интегрирующий развитие организационно-управленческой психолого-педагогической, социально-педагогической, индивидуально-личностной и других личностных составляющих сопровождаемого);

– социально-педагогическое сопровождение (процесс создания педагогом ситуаций, чтобы обучающиеся могли осознанно и самостоятельно определить необходимость действий в построении им своих социальных отношений);

– психолого-акмеологическое сопровождение (особый вид профессиональной деятельности психолога, обеспечивающий с помощью акмеологических средств продуктивное личностное профессиональное развитие субъектов образовательной среды).

Виды сопровождения, в зависимости от количества у частников [38]:

– взаимодействие двух субъектов (под сопровождением понимается новый вид педагогической деятельности, в которой большое значение придается активности сопровождаемого в процессе решения тех или иных проблем);

– триада (сопровождаемым выступает посредник, позволяющий двум субъектам выстраивать эффективное взаимодействие.

В качестве сопровождающего чаще всего выступает психологическая служба, помогающая субъекту профессионального пути выстраивать эффективное взаимодействие с другими субъектами);

– в процессе сопровождения участвуют все субъекты профессионального сообщества (комплексная система, обеспечивающая условия для профессионального развития личности).

Содержание методического сопровождения рассматривается в нескольких направлениях:

– активное внедрение инновационных технологий в образовательный процесс;

– разработка теоретических основ для формирования творческого потенциала педагогических кадров;

– содействие в овладении компетенциями, которые соответствуют Государственному образовательному стандарту среднего общего образования Республики Узбекистан.

Методическое сопровождение и обеспечение, прежде всего представляет собой разнообразно-функциональную деятельность специалистов, которая включает в себя разработку и совершенствование образовательных программ, методических рекомендаций и пособий. Содержание методического сопровождения в образовательных организациях, определяется нормативно-правовыми документами (Законы РФ, приказы, инструкции), программами развития образования на разных уровнях, методическими наработками, диагностикой и результатами прогнозирования состояния образовательного процесса и пр.

Выводы. Таким образом, одним из ключевых видов сопровождения профессиональной деятельности педагога является консультирование, представляющее собой организованное взаимодействие между консультантом и клиентом, направленное на разрешение проблем и внесение позитивных изменений в деятельность отдельного специалиста или организации в целом. Методическое консультирование - это универсальная форма организации сотрудничества педагогов в решении образовательных проблем и профессиональных задач самого педагога.

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SHAXSLARARO MUNOSABATLARDA INDIVIDUAL PSIXOLOGIK XUSUSIYATLARNING AHAMIYATI

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Annotatsiya. Mazkur maqolada shaxslararo munosabatlarni o’rganish psixologiya fanida eng dolzarb muammolardan biri ekanligi, muloqot va u orqali o’zaro munosabatlar tahlili olib borilgan. Shuningdek shaxslararo munosabatlarda individual psixologik xususiyatlarning ahamiyati yoritib berilgan.

Kalit so‘zlar. Shaxslararo munosabat, intropsixologik kategoriya, insoniy munosabatlar, umumiylik, o’xshashlik, uyg’unlik, ijtimoiy-psixologik hodisa, ontogenez, ota-ona va farzand, perseptiv muloqot, san’at, shaxs.

Аннотация. В данной статье рассматривается вопрос о том, что изучение межличностных отношений является одной из актуальнейших проблем в психологической науке, проведен анализ общения и взаимодействия через него. Также освещается значение индивидуально-психологических особенностей в межличностных отношениях.

Ключевые слова. Межличностные отношения, интропсихологическая категория, человеческие отношения, общность, сходство, гармония, социально-психологическое явление, онтогенез, родитель и ребенок, перспективное общение, искусство, личность.

Annotation. In this article, the study of interpersonal relationships is one of the most pressing problems in the science of psychology, an analysis of communication and interaction through it was carried out. Also in interpersonal relationships, the importance of individual psychological characteristics is highlighted.

Key words. Interpersonal relationship, intropsychological category, human relations, commonality, similarity, harmony, socio-psychological phenomenon, ontogenesis, parent and child, perceptual communication, art, personality.

Kirish. Insoniy munosabatlar shunday o’zaro ta’sir jarayonlarki, unda shaxslararo munosabatlar shakllanadi va namoyon bo’ladi. Shaxslararo munosabatlar deganda aslida odamlar orasida amalga oshadigan o’zaro munosabat, muloqot va muomala jarayoni tushuniladi. Shaxslararo munosabatlarni o’rganish psixologiya fanida eng dolzarb muammolardan hisoblanadi. Chunki, inson shaxsining eng nufuzli va yetakchi faoliyatlaridan biri bo’lgan muloqot va u orqali o’zaro munosabatlar odamlar orasida umumiylik, o’xshashlik, uyg’unlik kabi sifatlar paydo bo’lishiga olib keladi. Ayniqsa, oila muhitida shaxslararo munosabatlarning, chunonchi, ota-ona va farzand orasidagi munosabatlarning o’ziga xos tomonlari shaxsning hayoti, faoliyatining samarasi va mazmuniga bevosita ta’sir etadi. Shunday ekan, insonlar orasida amalga oshadigan shaxslararo munosabatlar, ularning turli psixologik xususiyatlarini o’rganish masalasi ijtimoiy psixologiya fanida muhim dolzarb muammolardan hisoblanadi.

Adabiyotlar tahlili. Shaxslararo munosabatlarda muomalaning inson psixik dunyosiga ta’siri masalalarini psixologlardan L.S.Vigotskiy, S.L.Rubinshteyn, A.N.Leontev, B.G.Ananev, A.V.Zaporojets, A.A.Bodalev, B.F.Lomov, A.A.Leontev, M.I.Lisina tadqiqot ishlarini olib borganlar. L.S.Vigotskiy bola shaxsi ruhiy dunyosi rivoji va taraqqiyotida muomalaning ahamiyati borasida «Bola shaxsiy faolligini namoyon bo„lishining asosiy yo’li kattalar bilan muomalasi hisoblanadi. Uning tashqi olamga munosabati hamisha boshqa odam orqali munosabat bildirishidir» deb ta’kidlaydi.

P.S.Ergashevning ilmiy ishlarida faol o’zaro ta’sir ro’y bermaydigan va munosabat davom etmaydigan sharoitda odam haqidagi ilk taassurotning davomiyligi masalalari maxsus o’rganilgan. Lekin oiladagi shaxslararo munosabatlarning farzand ijtimoiy persepsiyasiga ta‟sirining o’ziga xos tomonlari talqin etilmagan.

F.R.Ro’ziqulovning ilmiy ishlarida o’zbek oilasida ajralishning ijtimoiy-psixologik asoratlari, ajralish tufayli oilada tarbiyalanayotgan bola shaxsining shakllanishiga ta’siri, oilaviy o’zaro munosabatlardagi nizolar va ziddiyatli holatlarning keskinlashuvi muammolari ilmiy tadqiq etib berilgan. Biroq ilmiy izlanishlarda oila barqarorligiga shaxslararo munosabatlarning farzand ijtimoiy persepsiyasiga ta’siri xususiyatlari maxsus tadqiqot predmetiga kiritilmagan.

Bu keltirilgan qisqa tahlildan ko’rinadiki, shaxslararo munosabatlar, oila maskanida ota-ona va farzandlar orasidagi o’zaro munosabatlar qanchalik o’rganilgan va tadqiq etilgan mavzu bo’lishiga qaramay, uning juda ko’p jihatlari, jumladan, oila muhitida farzand va ota-ona orasidagi muomala, o’zaro munosabatlarda amaliy va hissiy tomonlarning ta’siri, shu jihatlarga ko’ra oiladagi bolaning rivojlanish xususiyatlari, oiladagi farzandning ota-ona munosabatlariga ko’ra o’z oilaviy hayotiga nisbatan munosabati o’rganilmagan. Shuning uchun biz ushbu monografiyamizda ota-onalarning o’z farzandlariga nisbatan his etadigan va amaliy jihatdan namoyon etadigan munosabatlarini, shuningdek, farzandlarning ota-onalariga nisbatan kechiradigan hislarining psixologik xususiyatlarini namoyon bo’lishini ko’rsatib berishga urinib ko’rdik.

Shaxslararo munosabatlar har bir inson hayotida muhim rol o'ynaydi. Ular bizning ijtimoiy moslashuvimizni, hayotdan qoniqishimizni va hissiy farovonligimizni belgilaydi. Ushbu munosabatlarning individual psixologik jihatlarini tushunish nazariy psixologiya uchun ham, psixologlar, o'qituvchilar va boshqa mutaxassislarning amaliy faoliyati uchun ham muhimdir. Zamonaviy jamiyat ijtimoiy aloqalarning yuqori dinamikasi va o'zgaruvchanligi bilan ajralib turadi, bu odamdan moslashuvchanlikni va turli xil shaxslararo vaziyatlarga moslashish qobiliyatini talab qiladi. Shaxslararo munosabatlarga ta'sir qiluvchi individual psixologik xususiyatlarni o'rganish ushbu munosabatlarning shakllanishi va rivojlanish mexanizmlarini yaxshiroq tushunishga, shuningdek tuzatish va qo'llab-quvvatlashning samarali usullarini ishlab chiqishga imkon beradi. Ushbu tadqiqotning maqsadi shaxslararo munosabatlarga ta'sir qiluvchi individual psixologik jihatlarni aniqlash va tahlil qilishdir. Shunday qilib, ushbu tadqiqot shaxslararo munosabatlarning individual psixologik jihatlarini chuqur o'rganishga qaratilgan bo'lib, bu psixologiyaning ushbu muhim sohasining nazariy va amaliy jihatlarini rivojlantirishga hissa qo'shadi.

Shaxslararo munosabatlar – ijtimoiy hayotimizning asosiy tarkibiy qismidir. Bu munosabatlar ijtimoiy hamkorlik, o‘zaro tushunish va qo‘llab-quvvatlash orqali rivojlanadi. Shaxslararo munosabatlarning muvaffaqiyatli bo‘lishi ko‘p jihatdan har bir shaxsning individual psixologik xususiyatlariga bog‘liqdir. Ushbu xususiyatlar qanday qilib shaxslararo munosabatlarni ta'sir qilishi va ularning ahamiyati quyida ko‘rib chiqilgan.

1. Individual psixologik xususiyatlar: ta'rif va turlar.

Shaxsiyat: Shaxsiyat o‘ziga xos xulq-atvor, fikr, his-tuyg‘ular va qiymatlarning majmuasidir. U har bir insonning shaxsiy uslubini, ularning ijtimoiy munosabatlardagi rolini belgilaydi.

Emotsional intellekt: Boshqalar bilan samarali muloqot qilish, o‘z his-tuyg‘ularini va boshqalarinkini tushunish qobiliyati. Emotsional intellekt shaxslararo

munosabatlarda muhim ahamiyatga ega bo‘lib, insonlarning muammolarni hal qilish, stressni boshqarish va ijtimoiy aloqalarni mustahkamlashda yordam beradi.

Empatiya: Boshqalarning his-tuyg‘ularini va holatlarini tushunish va ularga hamdardlik bildirish qobiliyati. Empatiya shaxslararo munosabatlarni yaxshilaydi va boshqalar bilan o‘zaro tushunishni rivojlantiradi.

O‘zini baholash: Shaxsning o‘ziga bo‘lgan qarashlari va o‘ziga bo‘lgan ishonch darajasi. O‘zini baholash shaxsning ijtimoiy aloqalarda qanday rol o‘ynashiga va boshqa odamlar bilan qanday munosabatda bo‘lishiga ta’sir qiladi.

2. Shaxslararo munosabatlarda individual psixologik xususiyatlarning ta'siri.

Muloqot Usullari: Shaxsiyat va emotsional intellekt muloqot usullarini shakllantiradi. Masalan, yuqori emotsional intellekt va yaxshi o‘zini baholashga ega bo‘lgan shaxslar muloqotda ochiq va samimiy bo‘lishadi, bu esa ishonchni rivojlantiradi.

Konfliktlarni hal qilish: Empatiya va o‘zini baholash konfliktlarni hal qilishda muhim rol o‘ynaydi. Empatiya konfliktlarni tushunishga va yengillashtirishga yordam beradi, o‘zini baholash esa shaxsning konfliktlarni konstruktiv tarzda hal qilishga qodir bo‘lishini ta'minlaydi.

Ijtimoiy aloqalar: O‘zini baholash va shaxsiyat ijtimoiy aloqalarning sifatini belgilaydi. Yuqori o‘zini baholash shaxsning ijtimoiy aloqalarda faol va ishonchli bo‘lishiga yordam beradi.

Stressni boshqarish: Emotsional intellekt shaxslarning stressni boshqarish qobiliyatiga ta'sir qiladi. Yuqori emotsional intellektga ega bo‘lgan shaxslar stressni samarali boshqarish va ijtimoiy muammolarni hal qilishda yaxshiroq natijalar ko‘rsatadilar.

3. Individual psixologik xususiyatlarni rivojlantirish.

O‘zini tanqidiy baholash: Shaxs o‘zini tanqidiy baholash orqali o‘z xatoliklarini tushunishi va shaxsiy rivojlanishga qaratilgan choralar ko‘rishi mumkin. Bu o‘zgarishlar shaxslararo munosabatlarga ijobiy ta'sir ko‘rsatadi.

Emotsional intellektni oshirish: Emotsional intellektni rivojlantirish uchun maxsus treninglar va mashqlarni amalga oshirish. Bu, shaxslarning his-tuyg‘ularini boshqarish va ijtimoiy aloqalarni yaxshilashda yordam beradi.

Empatiya rivojlantirish: Boshqalarni yaxshiroq tushunish va ularning his-tuyg‘ulariga mos ravishda harakat qilish. Empatiya rivojlantirish orqali shaxslararo munosabatlar yanada kuchayadi.

Samarali muloqot ko‘nikmalarini o‘rgatish: Shaxslararo munosabatlarda muvaffaqiyatli muloqot qilish ko‘nikmalarini o‘rgatish va rivojlantirish. Bu, o‘zaro tushunish va ishonchni oshirishga yordam beradi.

4. Xulosa. Shaxslararo munosabatlarda individual psixologik xususiyatlarning ahamiyati katta. Shaxsiyat, emotsional intellekt, empatiya va o‘zini baholash kabi xususiyatlar shaxslararo munosabatlarning sifatini va muvaffaqiyatini belgilaydi. Ushbu xususiyatlarni rivojlantirish va yaxshilash orqali shaxslar ijtimoiy aloqalarni mustahkamlash, konfliktlarni samarali hal qilish va stressni boshqarish bo‘yicha muvaffaqiyatliroq bo‘lishlari mumkin. Shaxslarning individual psixologik

xususiyatlarini yaxshilash orqali o‘zaro tushunishni va ijtimoiy aloqalarni yanada rivojlantirish mumkin.

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ҚАРАҚАЛПАҚСТАНДА «БИЛИМ» ЖӘМИЙЕТИНИҢ ИСКЕРЛИГИ (1940-1960-ЖЫЛЛАР)

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Аннотация. Мақалада «Билим» жәмийетиниң Қарақалпақстан АССР бөлиминиң дүзилиўи ҳәм 1940-1960-жыллардағы искерлиги ҳаққында сөз етиледи.

Таяныш сөзлер. «Билим», лекция, үгит-нәсият, дин, лектор.

Аннотация. В статье рассказывается о создании отделения Общества «Знание» ККАССР и его деятельности в 1940-1960-е годы.

Ключевые слова. «Знание», лекция, пропаганда, религия, лектор.

Annotation. The article describes the creation of the branch of the Knowledge Society of the KKASR and its activities in the 1940-1960s.

Keywords. “Bilim”, lecture, agitation, religion, speaker.

Пүткил аўқамлық «Билим» жәмийетиниң дүзилиў тарийхы XX әсир орталарынан басланған. Оның тарийхы урысқа шекемги дәўирде ҳәрекет еткен «Гүресшең атеистлер аўқамы»ның искерлигиниң шеклениўи менен байланыслы. Екинши жәҳән урысының басланыўы мәмлекетти динге болған мүнәсибети ҳаққындағы пикирлерин қайта көрип шығыўға мәжбүр етти. Бирақ, идеологиялық тәрбияға деген зәрүрлик урыс дәўиринде де сақланып қалды. Бул ислер фронтларда армиядағы сиясый хызметкерлер, ҳәм тылдағы мобил бригадалар тәрепинен әмелге асырылды. Жеңис жолында мийнет ресурсларын мобилизациялаўға қаратылған үгит-нәсият жумысларына айрықша итибар

қаратылды. Екинши жәҳән урысының екинши дәўириниң басына келип бул исти муўапықластырыў зәрүрлиги туўылды ҳәм ХКСниң 1943-жыл 31-июлдағы қарары менен СССР ХКС жанындағы Жоқары мектеп ислери бойынша комитет жанында лекция бюросы шөлкемлестириледи. Бул бюроның ўазыйпасы төмендегилер етип белгиленеди: «Москва ҳәм пүткил мәмлекет бойлап халық аралық жағдай, актуал әскерий-сиясый ўақыялар, тарийхий, әскерий-тарийхый ҳәм басқа мәселелер бойынша ғалабалық пуллы лекциялар шөлкемлестириў».

СССР ХКС ниң 1945-жыл 2-сентябрдеги буйрығы менен лекция бюросы атамасы СССР ХКС жанындағы Жоқары билимлендириў комитети жанындағы Пүткил аўқамлық лекция бюросы деп өзгертилди. 1946-жылда ол СССР Жоқары билимлендириў министрлиги қурамына өткерилди. 1947-жыл 7-июлде Пүткил аўқамлық сиясый хәм илимий билимлерди тарқатыў жәмийетиниң дүзилиўи менен пүткил аўқамлық лекция бюросы өз искерлигин тоқтатты [1; 99 б.].

Пүткил аўқамлық сиясый хәм илимий билимлер тарқатыў жәмийети (1963 жылдан баслап Пүткил аўқамлық «Билим» жәмийети. – Р.М.) 1947-1954-жыллары жәмийет мәмлекеттиң белгили илимий ҳәм жәмийетлик-сиясый искерлеринен ибарат шөлкем ретинде дүзилди ҳәм раўажланды. Бул дәўирде жәмийеттиң лекциялық искерлиги Совет мәмлекети пуқараларын илим ҳәм техника жетискенликлеринен хабардар қылыўға, коммунистлик дүньяқарасты қәлиплестириўге, халық массасын партия ҳәм ҳүкимет тәрепинен қойылған ўазыйпаларды шешиўге бағдарлаўға қаратылған еди [2; 17-33 бб.].

Өзбекстан илим ҳәм мәденият хызметкерлери жергиликли баспа-сөзде 1947-жыл 23-майда 33 адамнан ибарат топар Сиясый ҳәм илимий билимлерди тарқатыў бойынша Республика жәмийетин дүзиў ҳаққындағы мүрәжатын имзалап, жәриялады. 1947-жыл 24-майда ӨзССР ИА Президенти Т.А.Сарымсақов басшылығында 13 адамнан ибарат Өзбекстан сиясый ҳәм илимий билимлерди тарқатыў жәмийетиниң шөлкемлестириў комитети дүзилди.

Жәмийет лекция жумысын 1947-жыл октябр айынан баслады ҳәм сол жылы 4700 адамды қамтыған 109 лекция оқылады [3; 2, 4, 6, 7 бб.].

Солай етип, 1948-жыл 1-январына дейин республиканың 6 аймағында (Ташкент, Самарқанд, Ферғана, Әндижан, Бухара, ҚҚАССР) областлық бөлими, 4 областта (Наманган - март, Хорезм, Қашқадәрья, Сурхандәрья – июнь, июль) регионаллық комиссарлары шөлкемлестирилди.

Өзбекстан ССР сиясый ҳәм илимий билимлерди үгитлеў жәмийети 1948-жыл 22-апрелде ӨзССР Министрлер Совети ҳәм Өзбекстан компартиясы (б) Орайлық Комитетиниң 787-санлы қарары менен тастыйықланған Устав тийкарында шөлкемлестирилген. Жәмийет басқарыўы Пүткил Аўқам сиясый ҳәм илимий билимлерди тарқатыў жәмийети басқарыўына бойсынады [3].

Солай етип, 1947-жылда Қарақалпақстанда да усы жәмийеттиң бөлими шөлкемлестирилди [5; 17 б.]. Республикалық сиясий билимлерди тарқатыў жәмийетиниң шөлкемлестирилиўи лекторлар санының өсиўине унамлы тәсир көрсетти, олар жумыс дәрежесин сезилерди дәрежеде асырды, лекция ҳәм үгит-нәсияттың форма ҳәм методлары бир қанша өзгерди. Егер 1948-жылда

жәмийеттиң 19 актив ағзасы болған болса, 1950-жылға келип олардың саны 117 ге жетти. 1950-жыл даўамында жәмийеттиң 11 районлық бөлими дүзилип, 5 жәмийет ағзасы ҳәм 4 басланғыш шөлкем, 7 колхоз лекториясы бар еди. Лекциялық үгит-нәсиятты жақсылаў мақсетинде 41 колхоз ҳәм 31 кәрхана менен лекциялар шөлкемлестириў ҳәм оқыў бойынша шәртнама дүзилди [6; 166-167 бб.].

1949-жыл 15-ноябрде ӨзССР сиясый ҳәм илимий билимлерди тарқатыў жәмийети басқарыўы президиумы жыйналысы болып, онда Пүткил аўқам сиясый ҳәм илимий билимлерди тарқатыў жәмийети басқарыўы президиумының «Илимий-атеистлик үгит-нәсиятты жолға қойыў ҳаққында»ғы пәрманы талқыланып республика бойынша жәмийеттиң барлық бөлимлеринде илимий-атеистлик билимлерди үгит-нәсият қылыў секциясы шөлкемлестирилетуғын болды [7; 63-64 бб.].

1949 жылдың июль айында партияның Орайлық комитети «Пүткил аўқамлық сиясий ҳәм илимий билимлерди тарқатыў шөлкеми ҳәм оның жумысын жақсылаў хаққында қарары қабыл етилди. Республикаларда да аймақлық бөлимлериниң жумысы сын көз бенен қайта қарап шығылды.

Усыннан баслап жәмийет ағзаларының орынларда алып барған үгит-нәсият жумыслары темалары арасында илимий-атеистлик темалар саны да арта баслады. Жәмийетиниң Өзбекстан Республикалық шөлкеми тәрепинен илимий-атеистлик темаларда 20 дан артық лекция текстлери таярланып орынларға жибериледи. Олар арасында «Марксизм-ленинизм исламның реакцион мазмуны ҳаққында», «Дин – халық ушын опиум», «Халық санасында диний қалдықларға қарсы гүрес», «Илим ҳәм дин өмир ҳәм инсанның келип шығыўы ҳаққында» ҳәм т.б. бар.

Бул жылларда Пүткил аўқамлық сиясый хәм илимий билимлерди тарқатыў жәмийетин шөлкемлестириў арқалы атеистлик үгит-нәсият системасы қәлиплести. Жәмийеттиң Республикалық бөлими жанында илимий атеизмди үгит-нәсиятлаў бойынша илимий-методикалық кеңес дүзилип, илимий-атеистлик көз-қарасты үгит-нәсият қылыў бойынша арнаўлы бөлим дүзилип, оның ис графиги газета бетлеринде толық жарытып барылды.

Бул жәмийетиниң ҚҚАССР бөлими тәрепинен республикамыз районларында ҳәр қыйлы мазмундағы лекциялар оқып барылған. Олар арасында атеистлик темадағы лекциялар саны жыл сайын артып барған. Мәселен, 1958-жыл февраль айынан 1960-жыл мартына дейинги аралықта 900 мың тыңлаўшыны қамтыған 17400 лекция оқылған болса, солардан 1265 и яғный 7% и илимий-атеистлик темада болған [8; 92 б.]. Ал, бир ғана 1958-жылдың өзинде болса 8520 лекциядан 443 (5,1%) атеистлик темада болған [9; 7, 40 бб.].

1963-жылы Пүткил аўқамлық сиясий ҳәм илимий билимлерди тарқатыў жәмийети Пүткил аўқамлық «Билим» жәмийети болып қайта дүзиледи. Қарақалпақстанда оның бөлими сол 1963 жылы қайта дүзилип, сол жылы Қарақалпақстан бөлиминиң 1657 лекторы жылдың дәслепки 4 айында 5226 лекция оқыған. Бул 1962-жылдың дәслепки 4 айына салыстырғанда 200 лекцияға көп еди. Және де жәмийетке жаңадан 50 ағза қабылланады. Сол 1963-

жылда ҳәр күни 70 лекция оқылған яки жылына ҳәр мың адамға 43 лекция оқылған. Бул дәўирде Шымбай, Төрткүл ҳәм Нөкис қаласындағы жәмийеттиң бөлимлери айтарлықтай дәрежеде көп муғдарда лекциялар оқыған. Усы дәўирде оқылған лекциялардан 411 илимий атеистлик темада еди. Өткерилген лекциялардың нәтийжесинде Қасым Мухамбетяров ҳәм Хайт мақсым Садықов диннен қайтқан [10; 62, 63, 64 бб.].

«Билим» жәмийети бөлими баслығының орынбасары, философия илимлериниң кандидаты Т.Изимбетовтың Республикалық «Билим» жәмийетиниң илимий-атеистлик секциясының бюро баслығы А.Артықовқа жазған жыллық есабатында жәмийеттиң Қарақалпақстан бөлими илимий-атеистлик секциясы өзинде 132 лектор-атеистти ҳәм 7 районлық секцияны бириктиргенлигин ҳәм олардың күши менен 1962-жылда 1351 лекция яки 1961-жылға салыстырғанда 125 лекция көп оқылғанлығын келтирип өтеди. Бул секцияның ҳәр бир ағзасы 10 лекциядан оқығанлығын көрсетеди.

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TALABALARDA KOMMUNIKATIV KOMPETENTLIGINI RIVOJLANTIRISH

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Annotatsiya. Mazkur maqolada talabalarning kommunikativ kompetenligini rivojlantirishning funktsional modeli, shuningdek kommunikativ kompetentlik tushunchasi talqin qilingan.

Tayanch so’zlar. Ta`lim, kompetensiya, kommunikativ, kommunikativ kompetensiya, kompetentlik, yondashuv, funktional, model, rivojlantirish, kasbiy ko‘nikma, akademik bilim, muloqot, qobiliyat, pedagogik shart-sharoit, ta`lim texnologiyasi, ko‘nikma, shakllantirish, faoliyat sub`ekti.

Аннотация. В данной научной статье истолковано понятие функциональной модели развития коммуникативной компетентности студентов.

Ключевые слова. Образование, компетенция, коммуникативность, подход, функциональная модель, развития, профессиональный навык, академические знание, общение (контакт), способность, педагогические условия, технология образование, формирование, субъект деятельности.

Abstract. The functional model of the development of students' communicative competence and the concept of communicative competence are interpreted in this article.

Key words. Education, competence, communicative, communicative competence, competence, approach, functional, model, development, professional skills, academic knowledge, communication, ability, pedagogical conditions, educational technology, experience, formation, subject matter.

Zamonaviy hayotni bugungi kunda ilm-fan, ma'rifat va ta'limning taraqqiyotisiz tasavvur etib bo‘lmaydi. Jahonning yetakchi davlatlarida ta'limni rivojlantirishni muhim vazifa sifatida belgilanishi ham bejiz emas. Negaki, mamlakatning kelgusi ravnaqi aynan shu sohada qo‘lga kiritgan yutuqlari bilan chambarchas bog‘liqdir.

Hech kimga sir emaski, zamonaviy oliy ta`limning vazifalaridan biri oliy ta`lim bitiruvchilarining raqobatbardoshligi va ijtimoiy harakatchanligini oshirishdan iborat. Bugungi kunda bunday talabalarning jamiyatda o‘z o‘rinlariga ega bo‘lishlari uchun fanning muayyan sohalari bo‘yicha akademik bilimlar yetarli emas. O‘z kasbiy faoliytida yutuqqa erishishlari uchun malaka va ko‘nikmaga ega bo‘lishlari lozim. Buni biz kommunikativ kompetentlik tushunchasi bilan izohlaymiz. Kommunikativ - fransuzcha (commune) so‘zidan kelib chiqqan bo‘lib, ma`nosi birgalikda muloqot qilish yoki muloqotda birlashish degan ma`noni anglatadi.

Kompetensiya - lotincha “competere” so‘zidan olingan bo‘lib, layoqatli, munosib bo‘lmoq ma`nosini anglatadi, ya`ni shaxsning biror-bir sohadan xabardorlik, shu sohani bilish darajasini bildiradi. Ya`ni kompetentsiya shaxsga malaka ko‘rsatish imkoniyatini beradigan bilim, ko‘nikma, tajriba.

Kommunikativ kompetentsiyasining turli jihatlari ko‘plab mutaxassislarning ilmiy qiziqishishlari doirasini ifodalaydi: I.R.Altunina, V.V.Bogdanov, V.I.Kashnitskiy, G.A.Kudryavtseva, A.V.Molozhavenko, Yu.V.Mryakina, E.V.Prozorova, I.I.Seregina va boshqalar.

Kommunikativ kompetentsiyasini, avvalambor, hodisa sifatida, so‘ngra pedagogik kategoriya sifatida bosqichma-bosqich ko‘rib chiqish kommunikativ kompetentsiyaning nazariy modelini va integratsiyalashgan shaxsni shakllantirish

tizimini yaratishga xizmat qiladi. Kommunikativ kompetentlilik “tug‘ma” qobiliyat bo‘lmay, inson tomonidan ijtimoiy-kommunikativ tajribani egallash jarayonida shakllanuvchi qobiliyatdir.

Kommunikativ-ijtimoiy tajriba, avvalo, munosabatlarni o‘zgartirish exanizmini o‘z ichiga olib, nutqni stilistik jihatdan turli variantlarda qo‘llashda namoyon bo‘ladi. Bunday o‘zgarishning asosida muloqot ishtirokchilari o‘rtasidagi rolli muloqotlarning o‘zgarishi yotadi ”Kommunikativ kompetentlilik pedagog tomonidan tanlangan kommunikatsiya uslubida va muloqotdagi rolli o‘rinlarda o‘z ifodasini topishi mumkin, ular yetakchilik qiluvchi o‘zaro ta’sir qilish maqsadlari bilan ta’minlanib, barqaror ekspressiv xususiyatlar, shu bilan bir qatorda,muloqot vaziyati jarayonidagi kommunikativ harakatlar bilan tavsiflanadi.

Kommunikativ kompetentlilikning mohiyati va tuzilishini sinchkovlik bilan o‘rganish bizga ikkita, o‘zaro bog‘liq va o‘zaro aloqada bo‘lgan darajalarni ajratish imkonini berdi: birinchi daraja bevosita muloqotning o‘zida kommunikativ kompetentlilikning namoyon bo‘lishini belgilab beradi, ya’ni insonning kommunikativ xulq-atvorida; ikkinchisi, o‘qituvchi kasbiy motivatsiyasining o‘ziga xos xususiyatlari va yo‘naltirilishi, uning muloqotga alohida ehtiyoji orqali pedagogik-kommunikativ qadriyatlarni kiritishi kerak.

Til ta`limining maqsadi chet tilining kommunikativ kompetetsiyasini shakllantirish va rivojlantirishdan iborat. Bu jarayon talabalarning lingvistik va nutqiy kompetentsiyalarini rivojlantirish orqali amalga oshiriladi. Lingvistik kompetentsiya nima? Lingvistik kompetentsiya-tilning tizimi va tuzilishi, shuningdek, matn tahlilida qo‘llaniladigan leksik vositalar va sintaktik konstruksiyalar haqidagi bilimlarga ega bo‘lishdir. Nutqiy kompetentsiya – taklif qilingan til vositalaridan, adabiy materialdan o‘z fikrini yaratish uchun foydalanish qobilyati hisoblanadi. Biz bilamizki, xorijiy tillarni o‘rganishda matning roli muhimdir Matnlarni o‘qitish jarayonida lingvistik, nutqiy va madaniy-adabiy kompetetsiyalar rivojlanadi. Xorjiy tildagi matnni o‘zlashtirishda talabalar har doim qiyinchilikka duch kelishadi. Bu qiyinchiliklarni aniqlab matndan oldingi va keyingi mashq va topshiriqlar tuziladi. Topshiriqlarni tanlashda grammatik mazmuniga, matn mazmuniga va talabaning malaka va ko‘nikmasini shakllanishi mosligiga ham e`tibor qaratiladi.

Talaba tomonidan idrok etilgan bilim har doim ongli yoki ongsiz ravishda o‘zlashtiradi. Chet tilini o‘rgatishda bilimlarni shakllantirishning maqsadli jarayonini tashkil etish muhim ahamiyatga ega. Bu esa vaqt va mehnatni talab etadi. Kommunikativ kompetentsiyaning bilim komponentini shakllantirish uchun mavzular xilma-xilligiga ham ahamiyat berib boriladi.

Bilimlarni taqdim etish uchun guruh bilim darajasidan kelib chiqib, taqdim etilgan ob`ektlar ixchamlashtiriladi. Yangi bilimlar ilgari olingan bilimlar bilan uzviy bog`lanishi ham muhim ahamiyat kasb etadi. Talabalarda kommunikativ kompetentlikni rivojlantirishning funktional modeli tushunchasi shaxs bilimi va tajribasini aks ettiruvchi birlik. Talabalar chet tilini maxsus tashkil etilgan sharoitda o‘zlashtirsa, bilimalrni egallab tez va oson muloqotga kirishadi.

Funktional model bilim turi, uning xususiyatlarini hisobga olish tamoyili asosida ishlab chiqiladi. Bunda bilimlar xilma-xilligi, talabaning qobiliyati hisobga

olinadi. Shu narsa a`yonki, bilimni egallash jarayoni idrok etishdan boshlanadi. Kommunikativ kompetentlikda chet tili intellektual ta'limni yakunlash vositasi sifatida emas, balki muloqot vositasi sifatida namoyon bo‘ladi. Muloqotda o‘quvchi darsda faol ishtirok etadi. O‘quvchilar ta`lim mazmunidan ta`sirlanib, o‘zlarining shaxsiy fikrlarini aytish uchun imkon topadilar. Hozirgi vaqtda chet tilini o‘rganishga ta`sir etuvchi ba`zi omillarni ham hisobga olish lozim Bular o‘quvchining yoshi, jinsi, ijtimoiy holati, ona tiliga moyilligi, oldingi bilim va tajribaga murojaat qilishi va boshqalar. “Kompetensiya” va “kompetentlilik” tushunchalarini farqlashda A.V.Xutorskiyning fikri diqqatga sazovor. “Kompetensiya” – predmet va jarayonlarning ma’lum doirasiga nisbatan shakllanuvchi shaxsning o‘zaro bog‘liq bo‘lgan sifatlari (bilimlar, qobiliyatlar, malaka va ko‘nikmalar, faoliyat usullari) majmuasi bo‘lib, ularga nisbatan sifatli va samarali ta’sir ko‘rsatish emakdir.

Kompetentlilik–kishi tomonidan mos kompetensiyaga ega bo‘lishni anglatib, o‘z ichiga shaxsning unga va faoliyat predmetiga nisbatan muloqotini ham qamrab oladi. Ko‘rinadiki, “kompetentlilik” psixologiya va pedagogikaga oid adabiyotlarda professional faoliyatning ma’lum turlari bilan bog‘liq sifatlargaega bo‘lishni bildiradi. S.I.Ojegovning izohli lug‘atida “xabardorlik, bilganlik, biror sohada obro‘-e’tibor qozonish”ni anglatadi.Shuningdek, L.Xell va D.Zigler kompetentlilikka “psixosotsiologik sifat bo‘lib, kuch va ishonchni bildiruvchi, o‘z ishining muvaffaqiyatli va foydali ekanligidan kelib chiqqan tuyg‘u bo‘lib, insonga uning atrofidagilari bilan hamkorlikda samarali harakat qilishi mumkinligini anglatadi”,deya ta’rif berganlar.

Shaxs muloqot qilayotgan sheriklarining o‘z fikri, dunyoqarashi, g‘oyalarini to‘la-to‘kis ifodalashga psixologik sharoitlar yaratish, vositalarning boy, turli-tuman palitrasini tashkillash, adekvatlikning barcha perseptiv, kommunikativ, interfaol qirralarini egallashga yo‘naltirilgan bo‘lishi kerak”. Shuningdek, har qanday soha mutaxassisi faoliyatining eng muhim jihatlaridan biri bo‘lgan ma’naviy-axloqiy,kasbiy kompetensiya tamoyiliga ham rioya qilishi kerak. Talabalarning kasbiy kompetentliligi bir qator o‘ziga xos tarkibiy qismlardan iborat bo‘lib, ular orasida samarali va foydali faoliyatni ta’minlashda kommunikativ kompetentlilik alohida o‘rin tutadi. Shunday qilib, ma’lum sohada kompetentli bo‘lgan mutaxassis, sohaga oid masalalarda o‘z harakatlarini samarali qo‘llash bilan asosli mulohaza yuritishi uchun mos ravishdagi kompetensiyalarni ham egallagan bo‘lishi kerak. Shu bilan bir qatorda professional kompetentlilik deganda, individual-psixologik struktura ham tushuniladi, u bilim, kasbiy tajriba va pedagogning psixologik tayyorligini o‘z ichiga oladi.

Muloqot yaxshi bo‘lishi uchun faqat grammatik qonuniyatlarni o‘rgatishning o‘zi yetarli emas, ko‘nikmaning barcha turlarini (eshitib tushinish, o‘qib tushunish, yozish, gapirish) qobiliyatini shakllantirish ham zarur. Buning uchun talabaning chet tilini bilish darajasiga mos keladigan leksik matnlar ham to‘gri tanlanadi.

Misol:

- Ich möchte bitte (einen Anzüge)
- Zeigen Sie mir bitte (Anzüge)
- Würden Sie mir bitte (Anzüge) zeigen?

- Waren Sie bitte so freundlich und würden Sie mir (Anzüge) zeigen

Hamma gaplar bir xil ma`noni ifodalaydi, lekin murakkablik darajasi har xil bo‘ladi. Oxirgi gap hatto o‘rtacha nemis tilida so‘zlashuvchini ham qiynab quyadi. Dars jarayonida bularga e`tibor berish kerak. Lingvistik tuzilmani talabaga aytganda, uni tushinishiga ham e`tibor beriladi.

Ushbu yondashuv har bir inson lingvistik tuzilmalarni mustaqil ravishda shakllantira olishidan ko‘ra ko‘proq tushunishini hisobga oladi. Aytilayotgan fikr so‘zlashuv tiliga mos darajada bo‘lsa tinglovchi fikrni tez tushinadi. Matnlar mazmuni talaba qiziqishiga qarab tanlanadi. Adabiyotga qiziquvchilar asta-sekin adabiy matnlar bilan tanishadilar. Chet elga sayohat qilishni xohlovchilar birinchi navbatda kommunikativ ko‘nikmalarga o‘rgatiladi. Lekin bu yerda biroz ehtiyot bo‘lish talab etiladi. To‘rtta ko‘nikmani shakllantirishning bir qismi bilan to‘xtab qolmaslik kerak.

Til o‘rganish orqali o‘quvchilar chet el madaniyatiga ham tayyor bo‘lishlari eng muhim vazifa hisoblanadi. Shu nuqtai nazardan qaraganda, boshqa madaniyatda harakatlana olish nafaqat uning tilini tushunish, balki uning urf-odatlari va an`analarini ham bilishdir. Zamonaviy ijtimoiy va kasbiy sharoitlarda kompetentlilik muloqotini rivojlantirish uni uyg‘unlashtirishning qator prinsipial-muhim yo‘nalishlarini taqozo qilishi mumkin. Biroq amaliyot uchun “kommunikativ kompetentlilikni to‘laqonli rivojlantirish uchun muloqotning xizmatga oid-amaliy yoki rolli, shuningdek, boshqa shaxsiy turlarini cheklash muhim. Odatda, tafovut uchun asos sheriklar orasidagi psixologik masofa bo‘ladi, bu “men-sen-kontakt”. Modomiki, gap nafaqat “tashqi” ma’lumotlar, balki birgalikda hal qilinishi kerak bo‘lgan xizmatga oid namunali (tipovoy) vazifa haqida borar ekan shaxs sherigiga o‘zi, o‘z ichki dunyosini namoyon qiladi, bunda sherikka “yaqin inson” maqomini beradi, muloqot esa tom ma’noda ishonchli bo‘ladi”. Shuningdek, muloqotdagi kompetentlilik, insondan turli uzoqlikdagi psixologik masofada o‘ziga kerakli bo‘lgan aloqani yaratishga tayyorlik va mahoratni talab qilishi mumkin. Ammo qiyinchiliklarning o‘zi aynan “pozitsiyaning inersiya hodisasiga asoslangan – sherikning fe’l-atvori, tabiati hamda vaziyatning o‘ziga xosligiga qaramay, ulardan birortasini egallaganligi va uni har joyda amalga oshirishi bilan bog‘liq bo‘lishi mumkin. Umuman olganda,muloqotdagi kompetentlilik, odatda, eng yaxshisi sifatida biror bir pozitsiyani egallaganligi bilan emas, balki ularning spektriga mos ravishda qo‘shilishiga bog‘liq.

Xulosa qilib shuni aytish kerakki, talabalarning kommunikativ kommpetentligini rivojlantirish dolzarb muammo hisoblanadi. Talabalar, avvalambor, qaror qabul qilishda muloqot qilish texnikasini o‘zlashtirishi, bilim va ko‘nikmalarga ega bo‘lishi lozim. Buning uchun maqsadli tashkil etilgan o‘quv tizimini shakllantirish kerak. Kommunikativ kommpetentsiyani rivojlantirish bosqichlarini yaratib, oddiydan yuqori bosqichga erishish rejalshtiriladi. Til bilishning to‘rt konikmasi bilan bog`liq bilimni talabalar o‘zlashtirshlari uchun mavzular xilma-xilligi, talabaning bilim darajasi va qiziqishi inobatga olinadi. Talaba berilgan mavzuni ongsiz o‘zlashtirishiga yo‘l qo‘ymasdan, uni erkin fikrlashga undash va muloqot qilishi uchun imkoniyat beriladi. Madaniyatlararo muloqotni rivojlanishi uchun tili o‘rganilayotgan mamlakat xalqlarining urf-odatlari, bayram va an`anlarini

bilshlari muhim. Yuqoridagi talablar amalga oshishi fan dasturi va darslikka ham bog`liq.

OQIW PROCESINDE STUDENTLERDIŃ ERKIN PIKIRLEW QABILETLERIN QOLLAP QUWATLAW HAM OLARDI RAWAJLANDIRIW

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Annotatsiya. Bul maqalada joqarı tálim sisteması oqıw processlerinde studentlerdiń erkin pikirlew qábiletlerini qollap-quwatlaw hám olardı rawajlandırıw máseleleri haqqında pikirler júrgizilgen.

Tayanısh sózler. Interaktiv texnologiya, kámal insan, dóretiwshilik pikirlew, mashqalalı oqıtıw, pikirlew qábileti, ǵárezsiz pikirlew.

Annotatsiya. Bu maqolada oliy ta’lim sohasining o’quv jarayonlarida talabalarning erkin fikrlash qobiliyatlarini qo’llab-quvatlash va ularni rivojlantirish masalalari haqida fikrlar keltirilgan.

Tayanich so’zlar. Interaktiv texnologiya, komil inson, ilmiy fikrlash, muammoli o’qitish, fikrlash qobiliyati, mustaqil fikrlash.

Аннотация. В данной статье представлены идеи о поддержке и развитии свободомыслящих способностей студентов в образовательном процессе высшей школы.

Ключевые слова. Интерактивные технологии, совершенный человек, научное мышление, проблемное обучение, мыслительная способность, самостоятельное мышление.

Abstract. This article presents ideas about supporting and developing students' free thinking abilities in the educational processes of higher education.

Key words. Interfacial technology, the perfect human being, creative thinking, problem-based learning, reasoning ability, independent thinking.

Kirisiw. Búgingi kúnde tálim sisteması zamanagóy qánigelerge bolǵan talap tiykarında jaratılǵan jańa standartlar hám programmalar sheńberindegi tálim procesin aldıńǵı usılda alıp barıwǵa jol qoyılmaydı. Usınıń sebebinen de házirgi dáwirde

bilimlendiriw tarawında pedagogikalıq innovaciya pútin quramalı process retinde qaralıp, onıń tárbiyalıq bólimleri, interaktiv sapaları hám tıǵız baylanıslılıǵı izbe-iz qaralıp atır.

Izertlew maqseti. Jámiyet óz aldına ǵárezsiz hám ilimiy pikirleytuǵın erkin shaxstı qáliplestiriw wazıypasın qoyıp atır. Bul óz qádir-qımbatın tusinip jetetuǵın, shıdamlılıǵı bekkem, turmısta anıq maqsetke iye bolǵan insanlardı tárbiyalaw bolıp esaplanadı.

Izertlewdi shólkemlestiriw usılları. Hár qanday jastı tárbiyalaw, onı keleshekke jetik, ilimli, bárkámal áwlad etip tayarlaw sol jumısqa juwapker kisilerden áwele, úlken kúsh hám uqıptı qalaberse, mehir-muxabbattı talap etedi. Áne sol kámallıqqa eristiriwshi faktorlardan biri, bul oqıwshı-jaslarǵa tálim-tárbiya beriwge juwapker bolǵan ustazlar miyneti hám de uqıbı bolıp tabıladı. Bul eki táreptiń tárbiya jolında tuwrı baǵdarlawı, álbette, úlken nátiyje beredi.

Izertlew nátiyjeleri hám talqılawı. Tálim alıwshılardı ǵárezsiz hám dóretiwshilik pikirlew qábiletlerin qáliplestiriwde tárbiya ústin turatuǵın áhmiyetke iye bolıp, ol tálim beriw procesiniń barlıq principlerın óz ishine aladı.

Bilgenimizdey, shaxstıń pikirlew procesi, ózligin ańlay baslawı, ǵárezsiz hám anıq pikirlerdi bayanlaw qábileti tek oqıwshılıq hám studentlik dáwirlerine tuwrı keledi. Sol sebepli de bul dáwirde ǵárezsiz pikirlew jáne onı rawajlandırıw zárúrli bolıp tabıladı.

Geyde student ózi húrmet etken insanǵa elikleydi. Ayrım jaǵdaylarda oqıtıwshı studentti tap ózindey sóylewge, juwmaq shıǵarıwǵa májbúr etedi. Bul bolsa nadurıs. Oqıtıwshı óz pikirleri menen studenttiń pikirlerin qozǵawı, ǵárezsiz hám erkin pikirlewge báǵdarlawı kerek. Onıń ushın oqıw shınıǵıwlarında student ǵárezsiz oylawǵa, oylawǵa úndewshi mashqalalı oqıw tapsırmaları, dóretiwshilik jantasıwǵa baǵdarlawshı wazıypalardı beriw maqsetke muwapıq bolıp tabıladı. Student oqıw tapsırmalardı orınlaw dawamında oylaw processleriniń barlıq basqıshların basıp ótken halda sheshimin tapsın, húkim shıǵarsın. Hár bir oqıw maqsetin bir-birine baylanıstırıp turǵan, tiykarǵı maqset - ǵárezsiz hám dóretiwshilik pikirlew qábiletin rawajlandırıw bolıp tabıladı.

Ǵárezsiz oylaw hár bir shaxs turmısında zárúrli áhmiyetke iye boladı. Sol sebepli, auditoriyada sabaq beriwdiń barlıq formalarında: teoriyalıq, ámeliy, laboratoriya sabaqları, seminarlar, sabaqtan tısqarı jumıslarında studentlerdiń ǵárezsiz oylaw kónlikpeleri quram tabadı hám oqıtıwshı tárepinen rawajlandırıp barılıwı zárúrli áhmiyetke iye esaplanadı.

Ǵárezsiz pikirlew - kórgen, bilgen, oylaǵan zatlardı, hádiyselerdi sanalı qatnasta erkin analiz qılıw, ulıwmalastırıw, salıstırıw arqalı húkim shıǵarıw qábileti bolıp tabıladı.

Studentlerdiń ǵárezsiz hám dóretiwshilik pikirlew qábiletlerin rawajlandırıwdıń tiykarǵı baǵdarlarınan biri mashqalalı hám de dóretiwshilik oqıw tapsırmalardı islep shıǵıw hám ámelde engiziwden ibarat esaplanadı. Oqıw tapsırmalardı atqara alıw ilimiy tájiriybesi studenttiń sana-sezimine jáne pikirlew qábiletin kórsetiwshi ilimiy tájiriybesi bolıp tabıladı. Oqıw tapsırmaların sheshiw nátiyjesinde student bolajaq kásiplik iskerlik máselelerin sheshiw usılların iyeleydi. Xalqımızdıń erteńgi kúni qanday bolıwı perzentlerimizdiń búgin qanday tálim hám tárbiya alıwına baylanıslı.

Onıń ushın hár qaysı ata-ana, ustaz hám tárbiyashı hár bir bala tımsalında áwele shaxstı kóriwi zárúr.

«Kadrlar tayarlaw milliy dasturin»de Ózbekstan Respublikasındaǵı tálim sistemasınıń milliy modeline ayrıqsha itibar qaratılǵan. Bul model bes strukturalıq bólekten ibarat bolıp, olar -shaxs, mámleket hám jámiyet, úzliksiz tálim, pán, islep shıǵarıw. Sonı aytıw kerek, tálim milliy modeliniń tiykarǵı strukturalıq bóleginde «Shaxs» birinshi orında turadı. Sonday eken, pútkil tálim sisteması sonday-aq oqıtıw shaxsqa baǵdarlanǵan bolıwı kerek. Sol sebepli de bárkámal áwladqa bilim beriwde uyqaslıqtı jaslarǵa hár tárepleme tereń analiz etken halda amelge asırıw aktual esaplanadı. Zamanagóy pedagogikalıq texnologiyalar tiykarındaǵı tálim procesi oqıtıwdıń shaxsqa baǵdarlanǵan texnologiyalarına qaray ámelge asırılıwında oqıtılatuǵın hár bir pán, yamasa temanıń tiykarǵı wazıypaları hám múmkinshiliklerиniń hám teoriyalıq, hám ámeliy táreplerin turmıstan alıp túsindiriw maqsetke muwapıq boladı.

Jumaqlaw. Oqıtıwshı studenttiń bul páziyletlerin itibarǵa alıwı shárt, yaǵnıy qatnaslar demokratlastırılıwı kerek. Sonday eken sabaq processinde basqarıw emes - sheriklikte islew, májbúrlew emes - qızıqtırıw, buyırıw emes - túsindiriw, shegaralaw emes - erkin tańlap alıwǵa múmkinshilik beriwi kerek.

El basshımız aytıp ótkenindey, házir biz «Kámil insan degende, áwele, sanası joqarı, ǵárezsiz pikirley alatuǵın, is-háreketi menen ózgelerge úlgi bolatuǵın bilimli, ilimli kisilerdi túsinemiz».

Áne sonday insanlardı tárbiyalaw ulıwma mámleketlik jumıs dep qaralıp atır. Kámil insan qansha kóp bolsa, mámleket sonsha qúdiretli hám abat boladı.

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QORAQALPOG‘ISTON RESPUBLIKASI MEHNAT BOZORINING IQTISODIY TAHLILI

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Annotatsiya. Ushbu maqolada Qoraqalpog‘iston Respublikasi mehnat bozorining sharoiti o‘rganilib tahlil qilib chiqilgan. Shu bilan birga, ichki mehnat bozorini rivojlantirishning joriy ko‘rsatkichlari va istiqbollari ko‘rib chiqilib, mamlakat tarafidan mehnat bozorini tartibga solish imkoniyatlari va yo‘llari tahlil qilindi.

Kalit so‘zlar. Mehnat bozori, bandlik, mehnat bozorini davlat tomonidan tartibga solish, makroiqtisodiy rivojlanish, mehnat resurslari.

Abstract. In this article, the conditions of the labor market of the Republic of Karakalpakstan are studied and analyzed. At the same time, the current indicators and prospects of the development of the domestic labor market were reviewed, and the possibilities and ways of regulating the labor market by the government were analyzed.

Key words. Labor market, employment, labor market regulation by the state, macroeconomic development, labor resources.

Kirish. Iqtisodiy munosabatlarning zamonaviy rivojlanishi sharoitida mehnat bozori muhim o‘rinni egallaydi. Bir tomondan, u iqtisodiy tizimning elementi va milliy farovonlik, jamiyat barqarorligi va ijtimoiy-iqtisodiy o‘zgarishlarning samaradorligi uning faoliyat ko‘rsatish samaradorligiga bog‘liq. Shu bilan birga, u mustaqil tizim sifatida harakat qilib, ushbu taraqqiyotning aholi farovonligiga va ko‘plab ijtimoiy jarayonlarning tabiatiga ta’siri, yuzaga keladigan qarama-qarshiliklarni kuchaytirish yoki yumshatishda vositachilik qiladi.

Mamlakatimiz iqtisodiyotining hozirgi holati kelajakdagi barqaror ijtimoiy-iqtisodiy rivojlanishning boshlanishi deb hisoblanadi, uning muvaffaqiyatini mehnat bozorining samarali faoliyatisiz tasavvur qilib bo‘lmaydi. Uning o‘zgarishi boshqa resurs bozorlarining rivojlanishi bilan birga ijtimoiy yo‘naltirilgan bozor iqtisodiyotini o‘rnatish jarayonida sodir bo‘ladi, bunda asosiy harakatlantiruvchi kuch moliyaviy ta‘minlangan, bilimli, yuqori malakali shaxsga hisoblanadi [1].

Tadqiqot maqsadi. Tadqiqot ishining asosiy maqsadi mehnat bozori faoliyatining o‘ziga xos xususiyatlarini ochib berish, shuningdek Qoraqalpog‘iston Respublikasida mehnat bozorining samaradorligini oshirishga qaratilgan chora-tadbirlarni ko‘rib chiqishdir.

Tadqiqotni tashkil qilish uslublari. Yig‘ilgan materiallarni qayta ishlash va tahlil qilish jarayonida quyidagi umumiy ilmiy usullar qo‘llanilgan: abstrakt-mantiqiy (maqsadni shakllantirish va tadqiqot vazifalarini belgilashda). Bundan tashqari, ishda iqtisodiy-statistik va grafik usullardan (bandlik, ishsizlik va ish haqining o‘zgarishini aniqlash uchun) foydalanilgan.

Tadqiqot natijalari va muhokamasi. Zamonaviy dunyo iqtisodiy taraqqiyotining voqeliklari shuni ko‘rsatadiki**,** dunyoda biron bir davlat yo‘qki, o‘z aholosini ish bilan ta’minlab ularga yaxshi mehnat sharoitini yaratishni qayg‘urmaydigan.

Doimiy ravishda aholini ma’lum darajadagi ish bilan ta’minlash oson emas vazifalardan biri, ayniqsa zamonaviy sharoitlarda, mamlakat taraqqiyotida ma’lum bir davriylik bilan iqtisodiyotni «silkitadigan» hodisalar - inqirozlar yuzaga kelganda.

Bunday holatlarda, bozor iqtisodiyotiga ega bo‘lgan mamlakatlar iqtisodiy choralar ko‘rishga harakat qilishadi, bunday turg‘unlik oqibatlarini kamaytirishga va bandlikni tartibga solish siyosatini amalga oshira boshlaydi.

Bandlikka ko‘maklashish va mehnat sharoitlarini yaratish masalalariga O‘zbekiston Respublikasi Prezidenti Shavkat Mirziyoyev tomonidan alohida e’tibor

qaratilmoqda [2]. Mamlakatda 2022-2026-yillarda «Yangi O‘zbekistonni rivojlantirish strategiyasi» [3] qabul qilindi va mamlakatda yangi ish o‘rinlarini yaratish, aholi daromadlarini oshirish maqsadi va bu orqali 2026 yil oxirigacha kambag‘allikni kamida yarmiga qisqartirish maqsadlari belgilandi.

Bandlik - bu mamlakat aholisining turmush darajasi va sifatini tavsiflovchi ko‘rsatkichdir. Iqtisodiy nuqtai nazardan, bandlik - bu ijtimoiy munosabatlarga asoslangan ma’lum bir ish joyidagi ijtimoiy foydali mehnatda ishtirok etish hisoblanadi.

O‘zbekiston fuqarolari o‘zlarining ishlab chiqarishga va ijodiy mehnatga bo‘lgan qobiliyatlarini tasarruf etish va qonun bilan taqiqlanmagan har qanday faoliyat turi bilan shug‘ullanishga qonuniy huquqga ega.

So‘nggi yillarda O‘zbekistonda jadal iqtisodiy o‘sish kuzatilmoqda. Ammo shuni ta’kidlash joizki, barqaror iqtisodiy o‘sish va qishloq xo‘jaligidan tashqari tarmoqlarda ish o‘rinlari tashkil etilishiga qaramay, aholi bandligini ta’minlash O‘zbekiston taraqqiyotining dolzarb muammosi va asosiy vazifasi bo‘lib qolmoqda.

O‘zbekiston Respublikasining hududlaridan biri bo‘lgan Qoraqalpog‘iston Respublikasi iqtisodiyotida aholi bandligi 2010 yilda 580,8 ming kishini tashkil etgan bo‘lsa, 2022 yilga kelib bazis yilga nisbatan 133,4 ming nafarga o‘sib jami mehnat resurslariga nisbatan 90,9 %ga teng bo‘ladi.

1-rasm. 2010-2022-yillarda Qoraqalpog‘iston Respublikasining aholi soni dinamikasi[5].

Bu davr oraliqda ya’ni 2022 yilda o‘rtacha oylik ish haqi 3246,2 ming so‘mga teng bo‘lib, bunda eng yuqori oylik moliyaviy va sug‘urta faoliyati bo‘yicha 8698,9 ming so‘m, sanoat (4639,8 ming so‘m) hamda tashish va saqlash (4326,1 ming so‘m) tarmoqlariga to‘g‘ri keladi [4].

[5] https://stat.uz/uzsaytidan olingan ma’lumotlar

Ko‘rsatkichlar/Yillar	2010	2015	2020	2021	2022	2022-yilda 2010-yilga nisbatan o‘zgarishi (-, +)
Jami mehnat resurslari, ming kishi	936,0	1026,6	1074,6	1066,1	1067,6	131,6
Shahar, ming kishi	480,6	518,9	542,7	526,3	527,8	47,2
Jamiga nisbatan foizda	51,3	50,5	50,5	49,4	49,4	-1,9
Qishloq, ming kishi	455,4	507,7	531,9	539,8	539,8	84,4
Jamiga nisbatan foizda	48,7	49,5	49,5	50,6	50,6	1,9

1-jadval. Qoraqalpog‘iston Respublikasi aholisining mehnat resurslari[6].

1-Jadvaldagi ma’lumotlarga ko‘ra, Qoraqalpog‘iston Respublikasi aholisining jami mehnat resurslari soni 2010-yilda 936,0 ga teng bo‘lgan bo‘lsa, ushbu ko‘rsatkich aholi soni o‘sishi bilan 2022-yilda 131,6 ming kishiga o‘sib, 1067,6 ming kishiga yetdi. Ushbu mehnat resurslari sonining joylashuviga e’tibor qaratadigan bo‘lsak, 2022-yilda jamiga nisbatan 49,4 %i, ya’ni 527,8 ming nafari shaharda istiqomat qilishini ko‘rish mum-kin. Bu esa o‘z navbatida, mehnat resurslarining 2010-yilga nisbatan 2022-yilgacha bo‘lgan davrda 1,9 ming kishiga shaharda kamayib, qishloq aholisi o‘rtasida ko‘payganligini anglatadi. Bundan ko‘rinadiki, 2022-yilga kelib, shahar aholisining qishloq aholisiga nisbatan tug‘ilishning kamayganligidan dalolat beradi.

Shunday qilib, jamiyatda sodir bo‘layotgan barcha jarayonlar singari, mehnat bozori samaradorligini oshirishga qaratilgan harakatlar quyidagi majburiy qoidalarni o‘z ichiga oladi:

1. Kasaba uyushmalari va davlatning rolini kuchaytirish.
2. Soliqqa tortish qoidalarini qayta ko‘rib chiqish.
3. Milliy iqtisodiyotning ko‘plab tarmoqlari - fan, tibbiyot, qishloq xo‘jaligini moliyalashtirishni ko‘paytirish.
4. Respublika va shahar byudjetlari mablag‘lari hisobidan ishchi kadrlarni malakasini oshiirish tizimini ishlab chiqish.
5. Ishga motivatsiyaning rivojlangan tizimini shakllantirish.
6. Tadbirkorlarning ijtimoiy mas’uliyatini kuchaytirish.
7. Shartnomaga zamonaviy iqtisodiyotning hech qanday o‘zgartirish kiritib bo‘lmaydigan hujjati sifatida qarash.
8. Ishlab chiqilgan dastur va rejalar asosida tadbirkorlarning ishchilarga bo‘lgan ehtiyojlarini o‘z vaqtida tahlil qilib borish.

Xulosa. Xulosa qilib aytishimiz mumkin, Qoraqalpog‘iston Respublikasining mehnat bozorining tahlili shuni ko‘rsatdi-ki mehnat bozorini rivojlantirish sohasidagi davlat siyosatini yanada rivojlantirish lozim, bundan keyin ham huquqiy, iqtisodiy va institutsional faoliyat yuritishning rivojlanishini ta’minlaydigan sharoitlar yaratish kerak [5].

Bunday sharoitlarga erishish uchun quyidagi vazifalarni bajarish lozim:

- mehnat bozorining moslashuvchanligini kuchaytirish va noqonuniy bandlikni qisqartirish;

[6] https://stat.uz/uzsaytidan olingan ma’lumotlar

- kadrlar salohiyatini oshirish va uning kasbiy malakasini oshirish tizimni o‘zgartirish va takomillashtirish;
- mehnat qobiliyatini saqlab qolish imkonini beruvchi mehnat sharoitlarini ishlab chiqish;
- mehnat bozori institutlarini ish faoliyatini chuqur o‘rganib chiqish va takomillashtirish.

Takliflar. Shunday qilib, omil bozorida mehnat eng muhim, o‘ziga xos omildir. Bu bozor iqtisodiyotining eng murakkab elementlaridan biridir. Ishga qabul qilish va ishdan bo‘shatishda xodim va ish beruvchining manfaatlari bir-biriga toqnash kelishi xolatlari juda ko‘p uchraydi. O‘zbekiston Respublikasi Mehnat kodeksiga kiritilgan o‘z huquq va majburiyatlarini bilmaslik esa mamlakatda ishsizlikning kuchayishiga sabab bo‘layotgan omillardan biri bo‘lib kelmoqda. Shu boisdan, institutimiz o‘quv rejasiga barcha ta’lim yo‘nalishlari bo‘yicha talabalarga O‘zbekiston Respublikasi Mehnat kodeksini chuqur o‘rgatadigan «Mehnat huquqi» darslarini joriy etish taklif etiladi.

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BOSHLANG'ICH SINFLARDA "TARBIYA" FANINI O'QITISHDA INNOVATSION METODLARDAN FOYDALANISH METODIKASI

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Annotatsiya. Keyingi yillarda boshlang'ich sinf o'quvchilarining ta’lim va tarbiyasini yaxshilash yo‘llarini izlash yo‘nalishida boshlang‘ich sinf o‘qituvchilarining faolligi oshdi. Bu ta'lim jarayonining yo'nalishini o'zgartirishda, uning umumiy ta'limning davlat standartlari konsepsiyasiga mos keladigan har bir bolaning shaxsini rivojlantirish uchun shart-sharoitlarni yaratishga yo'naltirilishida namoyon bo'lmoqda. Shaxsiy rivojlanish muayyan shartlar va harakatlarni talab

qilmoqda. Yangi ta'lim standartlari ochiqlik, xilma-xillik, moslashuvchanlik bilan ajralib turadigan va o'qituvchi o'z ta'lim yo'lini va maktabga moslashish yo'lini tanlaydigan sharoitlarni taklif qilmoqda. Shu bois, mazkur maqolaning asl maqsadi boshlang'ich sinflarga "Tarbiya" fanini o'qitishda innovatsion metodlarni tadbiq qilishdan iboratdir. Tadqiqot natijasiga ko'ra, boshlang'ich sinflarda "Tarbiya" fanini o'qitishda maqola ta'sis etilgan innovatsion metodlardan foydalanish samarali natija berdi.

Аннотация. В последние годы возросла активность учителей начальных классов в поиске путей совершенствования образования и обучения младших школьников. Это отражается в изменении направленности образовательного процесса, его ориентации на создание условий для развития личности каждого ребенка в соответствии с концепцией государственных стандартов общего образования. Развитие личности требует определенных условий и действий. Новые образовательные стандарты предлагают условия, характеризующиеся открытостью, разнообразием, гибкостью, а учитель сам выбирает свой образовательный путь и способ адаптации к школе. Поэтому основной целью данной статьи является применение инновационных методов преподавания науки «Образование» в начальных классах. По результатам исследования, использование инновационных методов, основанных на статье, в преподавании науки «Образование» в начальных классах дало эффективные результаты.

Abstract. In recent years, the activity of primary school teachers has increased in finding ways to improve the education and training of younger schoolchildren. This is reflected in a change in the direction of the educational process, its orientation towards creating conditions for the development of the personality of each child in accordance with the concept of state standards of general education. Personal development requires certain conditions and actions. New educational standards offer conditions characterized by openness, diversity, flexibility, and the teacher himself chooses his educational path and method of adaptation to school. Therefore, the main goal of this article is the use of innovative methods of teaching the science of “Education” in primary school. According to the results of the study, the use of innovative methods based on the article in teaching science "Education" in primary grades gave effective results.

Kalit so'zlar: Tarbiya fani, o'qitish texnologiyasi, metodika, metod, innovatsion metodlar, boshlang'ich sinf, o'quvchi, o'qituvchi.

O'zbekiston Respublikasi Vazirlar Mahkamasi umumiy o'rta ta'lim muassasalarida "Tarbiya" fanini joriy etish bo'yicha qaror qabul qilindi [1]. Mazkur qarorning asosiy maqsadi umumiy o‘rta ta’lim muassasalari o‘quvchilarining yoshi va psixofiziologik xususiyatlarini inobatga olgan holda ularning ongiga umuminsoniy qadriyatlar va yuksak ma’naviyatni yanada chuqur singdirish, ularni vatanparvarlik va insonparvarlik ruhida tarbiyalash, umumiy o‘rta ta’lim muassasalaridagi ma’naviy-tarbiyaviy ishlarni yangicha asosda tashkil etishdan iboratdir.

Mazkur qarorni amalga tadbiq qilish maqsadida boshlang'ish sinf o'quvchilariga mazkur fanni o'qitish boshlandi. Bizga ma'lum, boshlang'ich maktab bu bolaning hayotidagi qimmatli, prinsipial jihatdan yangi bosqich: tizimli o'qitish

ta'lim muassasasida boshlanadi, uning tashqi dunyo bilan o'zaro ta'siri doirasi kengayadi, ijtimoiy mavqei o'zgaradi va o'zini namoyon qilish zarurati ortadi. Ma'lumki, bolalar o'z qiziqishlariga ergashish, tanlov qilish va bir-biri bilan faol muloqot qilish imkoniyatiga ega bo'lsalar, samarali o'rganishadi. Biz bolalarda o'rganishga bo'lgan ishtiyoq va muhabbatni, tanqidiy fikrlashni rivojlantirishni, o'quvchilarni turli ta'lim shakllaridan foydalanishga undaydigan faol ta'lim orqali ijodiy va ijtimoiy mas'uliyatli shaxslarni tarbiyalashni xohlaymiz. Har bir o'qituvchi o'zini kundalik tajribasining islohotchisi deb bilsa, eng barqaror ta'lim islohoti muvaffaqiyatli bo'ladi.Boshlang‘ich sinflarda innovatsion metodlardan foydalanish ta’limning zamonaviy shakli hisoblanadi. Shu bois, innovatsion metodlardan "Tarbiya" fanini o'qitishda foydalanish katta ahamiyat kasb etadi.

Quyida keltirilgan innovatsion metodlar boshlang'ish sinf o'quvchilarida "Tarbiya" fanini o'qitishda keng qo'llaniladi va o'z samarasini beradi: [2]“Yozma bahslar” metodi. Bu metod o’quvchilarga o’quv xonasidagi tengdoshlari bilan birgalikda shu onda jamoatchilik fikrini to’lqinlantirayotgan mavzularda muloqotlarni rejalashtirish imkonini beradi. Uslub o’quvchilarning berilgan mavzu sohasidagi bilimlarini chuqurlashtirish sharoitini yaratish, munozara madaniyatini o’rgatish va o’z fikrini asoslash qobiliyatini rivojlatirishga xizmat qiladi. Bu metoddan foydalanishda o’qituvchi o’quvchilarni baholash uchun asos xizmatini o’tovchi ajoyib materialga ega bo’ladi. Yozma bahslar uslubiyoti bunday muloqotlarni o’quv xonasidagi barcha o’quvchilar ishtirokida yozma shaklda o’tkazish imkonini beradi [3].

6x6x6» metodi. Ushbu metod yordamida bir vaqtning o’zida 36 nafar o’quvchini muayyan faoliyatga jalb etish orqali ma’lum topshiriq yoki masalani hal etish, shuningdek, guruhlarning har bir a’zosi imkoniyatlarini aniqlash, ularning qarashlarini bilib olish mumkin. «6x6x6» metodi asosida tashkil etilayotgan mashg’ulotda har birida 6 nafardan ishtirokchi bo’lgan 6 ta guruh o’qituvchi tomonidan o’rtaga tashlangan muammo (masala)ni muhokama qiladi. Belgilangan vaqt nihoyasiga etgach o’qituvchi 6 ta guruhni qayta tuzadi. Qaytadan shakllangan guruhlarning har birida avvalgi 6 ta guruhlar bittadan vakil bo’ladi. Yangi shakllangan guruh a’zolari o’z jamoadoshlariga avvalgi guruhi tomonidan muammo (masala) yechimi sifatida taqdim etilgan xulosani bayon etib beradilar va mazkur yechimlarni birgalikda muhokama qiladilar.

«6x6x6» metodining afzallik jihatlari quyidagilardir:

guruhlarning har bir a’zosini faol bo’lishga undaydi;

ular tomonidan shaxsiy qarashlarning ifoda etilishini ta’minlaydi;

guruhning boshqa a’zolarining fikrlarini tinglay olish ko’nikmalarini hosil qiladi;

ilgari surilayotgan bir necha fikrni umumlashtira olish, shuningdsk, o’z fikrini himoya qilishga o’rgatadiEng muhimi, mashg’ulot ishtirokchilarining har biri qisqa vaqt (20 daqiqa) mobaynida ham munozara qatnashchisi, ham tinglovchi, ham ma’ruzachi sifatida faoliyat olib boradi.Ushbu metodni 5, 6, 7 va hatto 8 nafar o’quvchidan iborat bo’lgan bir necha guruhlarda ham qo’llash mumkin. Biroq yirik guruhlar o’rtasida «6x6x6» metodi qo’llanilganda vaqtni ko’paytirishga to’g’ri keladi. Chunki bunday mashg’ulotlarda munozara uchun ham, axborot berish uchun

ham birmuncha ko’p vaqt talab etiladi. So’z yuritilayotgan metod qo’llanilayotgan mashg’ulotlarda guruhlar tomonidan bir yoki bir necha mavzu (muammo)ni muhokama qilish imkoniyati mavjud.Bu interfaol metod o’quvchilarda tanqidiy, tahliliy, aniq, mantiqiy fikrlashning muvaffaqiyatli rivojlanishiga hamda o’z g’oyalari, fikrlarini yozma va og’zaki shaklda ixcham bayon etish, himoya qilish qobiliyatini rivojlantirishga imkoniyat yaratadi.

Xulosa. Xulosa qilib aytadigan bo'lsak, tarbiya yuksak ma’naviy, jismoniy barkamollik, yaxshining yomondan farqini anglash, yuksak insoniy fazilatlarini shakllantirish qudratiga egadir. Tarbiya kishilik jamiyatining xamma bosqichlarida rivojlanib, o‘sib, avloddan-avlodga vorislik vazifasini bajaradigan hodisa. Shu tufayli, maktab darsliklari qatoriga "Tarbiya" fanining qo'shilishi bejiz emas. Boshlang'ich sinf o'quvchilariga "Tarbiya" fanini o'qitishda maqolada keltirilgan: Yelpig'ich metodi, 6×6×6 metodi va yozma bahslar metodlari samarali natija berdi.

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TA’LIM JARAYONIDA RAQAMLI TEXNOLOGIYALARDAN FOYDALANISHNING AHAMIYATI

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Annotatsiya. Jahonda raqamli texnologiyalarning jadal rivojlanishi ta’lim tizimlarining chuqur transformatsiyasiga olib keldi. Ushbu maqolada zamonaviy sharoitda ta’lim jarayonini raqamlashtirish, O‘zbekistonda xalqaro tajriba va tendensiyalarga alohida e’tibor qaratilgan. Tadqiqotda yetakchi mamlakatlar tomonidan qabul qilingan raqamli ta’limga turli xil yondashuvlar o‘rganilib, O‘zbekiston ta’lim tizimi rivojlanishiga axborot berishi mumkin bo‘lgan muvaffaqiyatning muhim omillari aniqlangan. Bundan tashqari, maqolada O‘zbekistonda raqamli ta’limning hozirgi holati baholanib, ta’lim jarayoniga raqamli texnologiyalarni joriy etishga qaratilgan so‘nggi tashabbuslar va loyihalar yoritilgan. Jahon tajribasini qiyosiy tahlil qilish va O‘zbekistonning raqamlashtirish borasidagi sa’y-harakatlarini ko‘rib chiqish orqali tadqiqotda mamlakatda raqamli ta’limni to‘liq amalga oshirishga to‘sqinlik qiladigan infratuzilma cheklovlari va raqamli savodxonlik bo‘shliqlari kabi asosiy muammolar aniqlangan. Natijalar shuni ko‘rsatadiki, O‘zbekiston ta’lim sohasini raqamlashtirishda sezilarli yutuqlarga

erishgan bo‘lsa-da, xalqaro ilg‘or tajribalarni mahalliy sharoitga moslashtirish uchun qo‘shimcha sa’y-harakatlar talab etiladi.

Kalit so‘zlar. Raqamlashtirish, ta’lim jarayoni, xalqaro tajriba, raqamli ta’lim, ta’lim texnologiyalari, onlayn ta’lim, ta’lim islohoti, raqamli savodxonlik, O‘zbekiston.

Keywords. Digitalization, educational process, international experience, digital education, educational technology, online learning, educational reform, digital literacy, Uzbekistan.

Kirish. So‘nggi yillarda raqamlashtirish butun dunyo bo‘ylab turli sohalarni o‘zgartirishda asosiy kuchga aylandi, bunda ta’lim eng ko‘p ta’sir ko‘rsatadigan sohalardan biri hisoblanadi. Ta’limda raqamli texnologiyalarning integratsiyalashuvi an’anaviy o‘qitish jarayonlarini inqilobiy tarzda o‘zgartirdi, ta’limni yanada qulay, interaktiv va samarali qildi. O‘zbekiston modernizatsiya va taraqqiyotning keng strategiyasi doirasida ta’lim tizimiga raqamli texnologiyalarni joriy etish muhimligini e’tirof etdi. Shu bilan birga, ta’limda raqamli transformatsiya jarayoni murakkab bo‘lib, mamlakatning o‘ziga xos ijtimoiy-iqtisodiy va madaniy kontekstini diqqat bilan ko‘rib chiqishni talab qiladi [3; 477-481 bb.]. Jahonda raqamli ta’limga bo‘lgan shiddatga qaramay, O‘zbekiston ta’lim tizimida raqamlashtirish salohiyatini to‘liq ro‘yobga chiqarishda bir qator muammolarga duch kelmoqda. Ushbu muammolarga infratuzilma cheklovlari, o‘qituvchilar va talabalar o‘rtasidagi raqamli savodxonlik bo‘shliqlari va mahalliy sharoitga mos keladigan raqamli yechimlarga bo‘lgan ehtiyoj kiradi. Bundan tashqari, raqamli ta’lim sohasidagi xalqaro ilg‘or tajribalarni O‘zbekistonda qanday qilib samarali moslashtirish va amalga oshirish mumkinligi bo‘yicha keng qamrovli tahlillar mavjud emas [5; 497-504 bb.].

Tadqiqot maqsadi. Tadqiqotning maqsadi xalqaro tajribalarni o‘rganish va O‘zbekistondagi mavjud tendensiyalarni aniqlash orqali zamonaviy sharoitda ta’lim jarayonini raqamlashtirish jarayonlarini tahlil qilishdan iborat. Tadqiqotning maqsadi jahonda raqamli texnologiyalarning ta’lim tizimlariga qanday integratsiyalashuvini o‘rganish va ushbu sa’y-harakatlarning samaradorligini O‘zbekiston kontekstida baholashdan iborat. Bundan tashqari, tadqiqotda O‘zbekistondagi siyosatchilar va ta’lim muassasalari uchun raqamli ta’limni joriy etishni takomillashtirish bo‘yicha amaliy tavsiyalar berish, pirovardida mamlakatda yanada inklyuziv va kelajakka tayyor ta’lim tizimiga hissa qo‘shish maqsad qilingan.

Tadqiqotni tashkil qilish uslublari. O‘zbekistonda raqamlashtirish borasidagi sa’y-harakatlarni boshqa mamlakatlar sa’y-harakatlari bilan taqqoslash maqsadida qiyosiy tahlil o‘tkazilmoqda. Tahlil muvaffaqiyatning asosiy omillari, muammolar va kontekstual farqlarni aniqlashga qaratilgan. Taqqoslash uchun tanlangan mamlakatlarga raqamli ta’lim tizimi yaxshi yo‘lga qo‘yilgan mamlakatlar (masalan, Janubiy Koreya, Finlyandiya) va O‘zbekiston bilan o‘xshash ijtimoiy-iqtisodiy kontekstga ega mamlakatlar kiradi. Maqsad - O‘zbekiston qanday qilib moslashishi va eng yaxshi xalqaro tajribalarni qo‘llashi mumkinligi haqida nozik tasavvurga ega bo‘lish uchun yondashuvlarni solishtirish va qarama-qarshi qo‘yishdir.

SWOT-tahlil. O‘zbekistonda raqamli ta’limning zamonaviy holatini baholash uchun SWOT (Strengths, Weaknesses, Opportunities, Threats) tahlilidan

foydalaniladi. Ushbu tahlil mamlakatdagi raqamlashtirish jarayoniga ta’sir etuvchi ichki va tashqi omillarni tizimli ravishda aniqlashga yordam beradi. SWOT-tahlil natijalari maqolada keyinroq keltirilgan tavsiyalar haqida ma’lumot beradi.

Tadqiqot natijalari va muhokamasi. Raqamli ta’lim bo‘yicha xalqaro tajriba. Janubiy Koreya, Finlyandiya va AQSH kabi mamlakatlardagi raqamli ta’lim tizimlarining qiyosiy tahlili muvaffaqiyatning bir nechta asosiy omillarini aniqladi: Hukumatning qo‘llab-quvvatlashi va siyosat doirasi: muvaffaqiyatli raqamli ta’lim tashabbuslari ko‘pincha hukumatning qat’iy siyosati bilan qo‘llab-quvvatlanadi, bu esa aniq ko‘rsatmalar, moliyalashtirish va infratuzilmaviy qo‘llab-quvvatlashni ta’minlaydi. O‘qituvchilarni tayyorlash va malakasini oshirish- o‘qituvchilarning raqamli vositalar va pedagogikadan foydalanish bo‘yicha uzluksiz malakasini oshirish samarali joriy etish uchun muhimdir. O‘quvchilar va raqamli savodxonlik - muvaffaqiyatli raqamli ta’lim tizimlariga ega mamlakatlarda o‘quvchilarning raqamli ta’lim resurslari bilan samarali hamkorlik qilish imkoniyatini ta’minlaydigan raqamli savodxonlik ko‘nikmalarini rivojlantirishga ustuvor ahamiyat berilmoqda. Texnologik infratuzilma - Internetga kirishning yuqori darajasi, qurilmalar va ishonchli raqamli platformalardan foydalanish muvaffaqiyatli raqamli ta’lim tizimining muhim tarkibiy qismidir.

O‘zbekistonda joriy tendensiyalar. Tadqiqot shuni ko‘rsatdiki, O‘zbekistonda ta’lim sohasini raqamlashtirishda sezilarli yutuqlarga erishildi. Asosiy tendensiyalarga hukumat tashabbuslari, onlayn platformalardan foydalanishni ko‘paytirish, raqamli savodxonlik bilan bog‘liq muammolar, infratuzilma cheklovlari kiradi. O‘zbekiston hukumati "Raqamli O‘zbekiston - 2030" strategiyasi va turli xil elektron ta’lim platformalari kabi raqamli ta’limni rivojlantirish bo‘yicha bir qator tashabbuslarni ilgari surdi. O‘zbekiston bo‘ylab maktab va universitetlarda onlayn ta’lim platformalari va raqamli vositalardan tezkor foydalanish. Biroq, ushbu vositalardan foydalanish shahar va qishloq tumanlari o‘rtasida sezilarli darajada farq qiladi. Ilg‘orlikka qaramay, o‘qituvchilarda ham, talabalarda ham raqamli savodxonlikda sezilarli bo‘shliqlar mavjud. Ko‘pgina o‘qituvchilar o‘zlarining ta’lim amaliyotiga raqamli vositalarni samarali joriy etish uchun keyingi tayyorgarlikni talab qiladilar. Ishonchli internet va raqamli qurilmalardan foydalanish, ayniqsa, qishloq va chekka hududlarda muammo bo‘lib qolmoqda, bu esa raqamli ta’lim bo‘yicha tashabbuslarning qamrovi va samaradorligini cheklaydi.

O‘zbekistondagi muammo va imkoniyatlar. SWOT tahlili O‘zbekistonda ta’limni raqamlashtirish bilan bog‘liq bir qator muammolar va imkoniyatlarni aniqladi. Hukumatning raqamlashtirishga qat’iy sodiqligi, ta’lim sohasida amalga oshirilayotgan islohotlar va yosh, texnologik rivojlangan aholi. Texnologik infratuzilmaning yetarli emasligi, raqamli vositalardan foydalanishdagi tengsizlik, o‘qituvchilar va talabalarning raqamli savodxonligining yetarli emasligi. Raqamli infratuzilmani yaxshilash, elektron ta’lim platformalarini kengaytirish va chekka hududlarda ta’lim uchun mobil texnologiyalardan foydalanish bo‘yicha xalqaro tashkilotlar va texnologik kompaniyalar bilan hamkorlik qilish salohiyati. Raqamli tafovutni kuchaytirishi mumkin bo‘lgan ijtimoiy-iqtisodiy tengsizliklar, ba’zi o‘qituvchilar o‘rtasidagi o‘zgarishlarga qarshilik va kiber tahdidlar xavfi va ma’lumotlar maxfiyligi muammolari.

Qiyosiy statistika. Boshqa mamlakatlar bilan taqqoslaganda, O‘zbekiston uchun bir nechta asosiy ma’lumotlar aniqlandi. Xalqaro ilg‘or tajribalar qimmatli saboqlarni taqdim etsa-da, ularni O‘zbekistonning o‘ziga xos ijtimoiy-iqtisodiy va madaniy sharoitiga moslashtirish kerak. Raqamli ta’lim tashabbuslarining inklyuzivligini ta’minlash, ayniqsa, kam ta’minlangan va qishloq aholisi uchun adolatli ta’lim natijalari uchun juda muhimdir. Mahalliy salohiyatni oshirishga sarmoya kiritish, shu jumladan pedagoglarni o‘qitish va mahalliy ahamiyatga ega raqamli kontentni ishlab chiqish raqamli ta’lim sohasidagi sa’y-harakatlarni qo‘llab-quvvatlash uchun juda muhimdir.

Turli mamlakatlar bo‘yicha raqamli ta’lim tashabbuslarining qiyosiy tahlili O‘zbekistonda raqamli ta’lim sohasidagi sa’y-harakatlarni qanday oshirish mumkinligi haqida qimmatli ma’lumotlarni taqdim etadi. Janubiy Koreya va Finlyandiya kabi davlatlar davlat tomonidan kuchli qo‘llab-quvvatlash, o‘qituvchilarni uzluksiz tayyorlash va yaxshi rivojlangan infratuzilma orqali raqamli texnologiyalarni o‘z ta’lim tizimlariga muvaffaqiyatli joriy etishdi. O‘zbekiston uchun muammo ushbu amaliyotlarni o‘ziga xos ijtimoiy-iqtisodiy va madaniy sharoitga moslashtirishdan iborat. O‘zbekiston, ayniqsa, "Raqamli O‘zbekiston - 2030" kabi tashabbuslar bilan maqtovga sazovor yutuqlarga erishgan bo‘lsa-da, ushbu xalqaro modellarni mahalliy voqeliklarga moslashtirish zarurati mavjud. Misol uchun, yuqori texnologiyali yechimlar shaharlarda samarali bo‘lishi mumkin bo‘lsa-da, Internetga kirish va raqamli qurilmalar cheklangan qishloq joylarida arzonroq, past texnologiyali yechimlar kerak bo‘lishi mumkin. Bu butun mamlakat bo‘ylab inklyuziv va samarali bo‘lishini ta’minlash uchun raqamli ta’lim strategiyalarini kontekstlashtirish muhimligini ta’kidlaydi.

Xulosa. Ta’limni raqamlashtirish butun dunyoda o‘qitish va ta’limni tubdan o‘zgartirish salohiyatiga ega bo‘lgan transformatsion jarayondir. Ushbu maqolada zamonaviy sharoitda ta’lim jarayonini raqamlashtirish, O‘zbekistonda xalqaro tajriba va tendensiyalarga e’tibor qaratilgan. Jahonning ilg‘or tajribasini qiyosiy tahlil qilish va O‘zbekistonning hozirgi sa’y-harakatlarini chuqur o‘rganish natijasida bir qator muhim xulosalar va xulosalar paydo bo‘ldi. O‘zbekistonda ta’limni raqamlashtirish yanada barqaror, kelajakka yo‘naltirilgan ta’lim tizimini qurish yo‘lidagi muhim qadamdir. Safar murakkab va murakkab bo‘lsa-da, raqamli texnologiyalar orqali ta’lim olish imkoniyati, sifati va tengligini oshirish uchun imkoniyatlar juda katta.

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MAKTABGACHA YOSHDAGI BOLALARNI HARAKATLI O’YINLAR ASOSIDA JISMONIY VA AQLIY RIVOJLANTIRISH YO’LLARI

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Annotasiya. Ushbu maqola maktabgacha yoshdagi bolalarga harakatli o’yinlarni o’rgatish tartibi, tarbiyachining qanday qoidalarga amal qilishi, harakatli o’yinlarning bolalar yoshiga mosligi, bolalarga qanday ta’sir qilishi haqida.
Kalit so’zlar. Maktabgacha yoshdagi bolalar, harakatli o’yin, o’rgatish, usul, tashkil qilish, guruh, o’tkazish.

Аннотация. В данной статье речь идет о процедуре обучения подвижным играм детей дошкольного возраста, каких правил должен придерживаться педагог, подходят ли подвижные игры детскому возрасту, как они влияют на детей.
Ключевые слова. Дети дошкольного возраста, экшн-игра, обучение, метод, организация, группа, передача.

Abstract. This article is about the procedure of teaching mobile games to children of preschool age, what rules the teacher should follow, whether mobile games are suitable for children's age, how they affect children.
Keywords. Children of preschool age, action game, teaching, method, organization, group, conducting.

O‘zbekiston Respublikasi Prezidenti Sh.M.Mirziyayev rahbarligida 2017-yil 16-avgust kuni bo‘lib o‘tgan yig‘ilishda maktabgacha ta’lim tizimini tarkibiy jihatdan tubdan isloh qilish, mazkur muassasalarga bolalarni to‘la qamrab olish bo‘yicha muhim vazifalar qo‘yildi. Bu boradagi tahlillar natijasida qisqa vaqtda uch yirik hujjat, O‘zbekiston Respublikasi Prezidentining 9-sentabrdagi “Maktabgacha ta’lim tizimini tubdan takomillashtirish chora-tadbirlar to‘g‘risida”gi PQ-3261 sonli Qarori, 30-sentabrdagi “Maktabgacha ta’lim tizimi boshqaruvini tubdan takomillashtirish chora-tadbirlari to‘g‘risida”gi PF-5198 sonli Farmoni hamda “O‘zbekiston Respublikasi Maktabgacha ta’lim vazirligi- faoliyatini tashkil etish to‘g‘risida“gi PQ-3305 Qarori qabul qilindi.

Yuqorida keltirilgan qaror va farmonlarni joriy qilinishdan maqsad, kelajak avlodni yetuk shaxs bo‘lib yetishishi uchun unung sog‘lom bo‘lishiga zamin yaratishdir. Sog‘lom avlod - sog‘lom yurt demakdir, sog‘lom avlodni tarbiyalash vazifasi esa birinchi navbatda maktabgacha ta’lim tashkilotlari zimmasidadir.

Maktabgacha tarbiyani insonparvarlashtirish uni yangilash jarayonining asosi hisoblanadi. Olimlar, amaliyotchi mutaxassislarning tobora ko'proq qismi

maktabgacha yoshdagi bolalarni jismoniy tarbiyalash tizimi shaxsga majmuali, insoniy ta'sir o'tkazishi, har bir bolaning muntazam va imkon qadar to'la jismoniy rivojlanish huquqi amalga oshirilishini ta'minlashi kerak, degan xulosaga kelmoqdalar. Bolalarni o'rab turgan muhit o'zgarib bormoqda.

Tarbiyachining o‘yin jarayoniga rahbarlik qilishi metodikasini egallagan bo‘lishi o‘yinlarni muvaffaqiyatli o‘tkazishning asosiy sharti hisoblanadi. Harakatli o‘yinlarni tanlash va rejalashtirish dasturga muvofiq amalga oshiriladi. Bunga har bir yosh guruhning ish sharoiti hisobga olinadi, chunonchi bolalarni jismoniy va aqliy rivojlanishining umumiy darajasi harakat ko‘nikmalarining rivojlanishi, har bir bola sog‘lig‘ining ahvoli, o‘ziga xos xususiyatlar, yil fasli, kun tartibi, uyini o‘tkazish o‘rni, shuningdek bolalar qiziqishlarini o‘ziga xos xususiyatlari. Harakatli o‘yinlar dastur talablariga muvofiq asta-sekin murakkablashtirib boriladi, bolalar ongini o‘sishi, ular to‘plagan harakat tajribasini, maktabga tayyorlash zaruriyatini hisobga olgan holda o‘zgartirib turiladi.

Kichik guruhda mazmuni va qoidasiga ko‘ra sodda bo‘lgan mazmunli va mazmunsiz harakatli o‘yinlar tashkil etiladi. Bu o‘yinlarda barcha bolalar bir xil rol yoki harakat topshirig‘ini tarbiyachining bevosita ishtirokida (barcha bolalar – qushchalar, tarbiyachi- ona qush bo‘ladi…) bajaradilar.

3 yoshli bolalar asta-sekin yakka holda rollarni bajarishga o‘rgatib boriladi (barcha bolalar qushlar, bitta yoki ikkita bola avtomobil bo‘ladi). O‘rta guruhda eng oddiy musobaqa usulidagi o‘yinlarni yakka tarzda ham, jamoa tarzda ham o‘tkazish mumkin.

Katta guruhda bolalar uchun harakatli o‘yinlar o‘z mazmuni, qoidalari, rollarning miqdori, topshirishni jamoa musobaqasiga joriy etishga ko‘ra murakkablashtiriladi.

Maktabga tayyorlov guruhi bolalari birmuncha murakkab harakatli o‘yinlar, shuningdek jamoa musobaqalaridan iborat jamoa o‘yinlarni, o‘yin estafetasi, sport o‘yinlarini o‘ynaydilar. Bularning hammasi chaqqonlik, tezkorlik, chidamlilikni rivojlanishi, harakat ko‘nikmalrining takomillashuviga, axloqiy-irodaviy sifatlarni tarbiyalashga yordam beradi.

Bolalarni yangi o‘yin bilan tanishtirish. Uning mazmuni va qoidalarini tushuntirish tarbiyachidan puxta tayyorgarligini talab etadi. Ayrim o‘yinlarning mazmuni oldindan bo‘ladigan suhbatlar asosida bolalarnibilimlarini oydinlashtirish mumkin. Ularning tasavvurlari aniqlashadi, o‘yin obrazlarga nisbatan munosabat tarkib topadi, asosiy hayol o‘sadi.

O‘yinlarni tushuntirish ularning turlariga ko‘ra har-xil o‘tishi mumkin, biroq bu tadbir doimo emotsional jihatdan qizig‘arli, bolalarni quvnoq o‘yin faoliyatiga tayyorlaydigan, o‘yinni tezroq boshlash istagina tug‘diradigan va o‘yin topshiriqlarini ishtiyoq bilan bajarishga undaydigan bo‘lishi kerak. Mazmunsiz o‘yinni tushuntirish qisqa, aniq va ifodali ohangda bo‘lishi lozim. Tarbiyachi o‘yin harakat izchilligini tushuntiradi, bolalar va o‘yin atributlarining joylashish o‘rni (kichik va o‘rta guruhda buyumlarni mo‘ljallab, katta guruhlarda esa mo‘ljalga olmay ko‘rsatadi) fazo iborasidan foydalangan holda ko‘rsatadi va qoidalarni aniqlashtiradi. Shundan so‘ng tarbiyachi bolalarga bir necha savollar beradi.

O‘yinni qoidasi bolalarga tushunarli bo‘lsagina o‘yin quvnoqlik va uyushqoqlik bilan bilan o‘tadi. Musobaqa elementlari mavjud o‘yinlarni o‘tkazishda tarbiyachi o‘yinni tushuntirayotib qoidalarni, o‘yin usullarini, musobaqa shartlarini aniqlashtiradi, bolalarni topshiriqlarni yaxshi bajarishga harakat qilishlar va yaxshi uddalashga ishonch bildirgan holda rag‘batlantiradi. Tarbiyachi bolalarning jismoniy komoloti va yakka o‘ziga xos xususiyatlarini hisobga olgan holda musobaqalashayotgan kuchlari teng guruhlar – komandalarni birlashtiradi; o‘ziga ishonchsiz, tortinchoq bolalarni faollashtirish maqsadida ularni jasur, faol bolalar bilan qo‘shib qo‘yadi.

Ba’zan o‘yinga sport ko‘rinishini berish uchun komanda sardorlari, hakam va uning yordamchilarini saylash mumkin. Mazmunli o‘yinlarni tushuntirish. Tarbiyachining vazifasi bolalar ko‘zi o‘ngida o‘yin vaziyatining ko‘rgazmali manzarasini gavdalantirishdan, o‘yin obrazlarini yorqin tasvirlashdan, bolalar tasavvuri va hislariga ta’sir etishdan, ularning ijodiy tashabbusni faollashtirishdan iboratdir. Buning uchun kichik gruhlarda o‘yinchoq va hikoyadan foydalanishi mumkin.

O‘rta guruhlarda – tanish o‘yinni taklif etib, qoidalarini eslatib o‘tish bilan cheklanishi kifoya.

Katta guruhlarda o‘yin mazmuni eslashni bolalarning o‘zlariga taklif etish maqsadga muvofiqdir. Ulardan biri o‘yin harakatlarining borishini bayon qiladi, ikkinchisi qoidalarni sanab beradi. Keyinchalik bolalar o‘zlari tarbiyachining yordamisiz o‘yinni tashkil eta boshlaydilar.

O‘yinda rollarni taqsimlash. Tarbiyachi pedagogik vazifalarga amal qilib (yangi kelgan bolani rag‘batlantirish yoki aksincha, faol bola misolida botir bo‘lish qanchalik muhim ekanligini isbotlash yoki o‘ziga ishongan bola iltimosini rad etib, bu rolni qo‘rqib turgan tortinchoq bolaga topshirish) boshlovchi tayin etishi yoki bolalarni hursand qilgan holda o‘yinga o‘zi kirishib o‘z zimmasiga boshlovchi yoki oddiy ishtirokchi rolini oladi.

Shuningdek, boshlovchi saylashni bolalarni o‘ziga havola etishi va ulardan bu rolni mazkur bolaga nima uchun topshirganlarini tushuntirib berishlarini so‘rashi mumkin. Kichik guruhda boshlovchi rolini tarbiyachini o‘zi bajaradi. O‘yin jarayonida tarbiyachi bolalar harakati va o‘zaro munosabatlar, qoidalarini bajarilishini kuzatib boradi, qisqacha ko‘rsatmalar beradi, bolalarning hissiy holatlarini boshqarib boradi. Qoidaning ayrim bolalar tomonidan buzilishi haqida o‘yinni qayta o‘tkazishdan oldin gapiradi.

O‘yinni yakunlash. Harakatli o‘yin jismoniy yuklamani kamaytiradigan xolga keltiradigan umumiy yurish bilan tugallanadi. Yurishni ahamiyatiga k o‘ra bir xil bo‘lgan kam harakatli o‘yin bilan almashtirish ham mumkin. O‘yin tugagan zahoti uni yakunini chiqarish kerak emas, bolaning tez harakatdan dam olishga asta-sekin o‘tmasligi yurak faoliyatini va butun organizmiga noxush ta’sir etadi. Tarbiyachi o‘yinni baholashida uning ijobiiy tomonlarini ta’kidlaydi, o‘z rollarini muvaffaqiyatli bajargan, jasurlik, chidamlilik, o‘zaro o‘rtoqlik yordami ko‘rsatgan bolalar nomini aytadi va qoidalarning buzilishi hamda bolalarning shu bilan bog‘liq harakatini kuyinib ko‘rsatib o‘tadi.

Katta guruhlarda tarbiyachi bolalarni harakatli o‘yinlarni mustaqil tashkil etishga tayyorlaydi, bunda o‘yinlarning borishini va ayniqsa, qoidalarni bajarilishini hamda bolalar o‘rtasidagi munosabatlarni kuzatib boradi. U bolalarga harakatli o‘yin variantlarini uning mazmuni, qoidasini, o‘yin harakatlarini o‘zgartirgan holda o‘ylab topish, keyinchalik yangi o‘zi o‘ylab o‘yin topish kabi topshiriљlar beradi. Katta guruh bolalarida mustaqillik, tashkilotchilik malakasini tarbiyalash maqsadida tarbiyachi ularga kichik gruh bolalari bilan o‘yin tashkil etishini taklif etadi. O‘yin kichik guruh tarbiyachisi kuzatuvi ostida o‘tkaziladi.

Harakatli o‘yinlar bolalarni har tomonlama tarbiyalashda muhim ahamiyatga egadir. O‘yin faoliyati qaysi shaklda ifodalanmasin bolani quvontiradi, ularda ijobiy hislarni uyg‘otadi. Harakatli o‘yinlar bola dunyoqarashini kengaytiradi, atrof-muhitni bilishida o‘ziga xos vosita hisoblanadi.

Harakatli o‘yinlardagi qoidalar o‘yinning borishini belgilaydi, bolalar harakat faoliyatini, o‘zaro munosabatlarini yo‘lga soladi, axloqiyirodaviy sifatlarni tarbiyalashga yordam beradi. Har bir bolaning o‘yin qoidasini anglashi va unga rioya qilishda kattalarning rahbarligi katta ahamiyatga egadir. O‘yinlar orqali bolalarda halollik, adolatlilik, do‘stlik, botirlik, o‘zini tuta bilish, qat’iyatlik kabi axloqiy sifatlar tarbiyalanadi.

O‘yin faoliyatida diqqatni, idrokni rivojlantirish, tafakkur, tushuncha va mo‘ljal olishni aniqlashtirish uchun qulay sharoit yaratiladi, o‘yinlar ijodiy hayol, xotira, topqirlik, fikr yuritish faolligini rivojlantirishga yordam beradi. Shunday qilib harakatli o‘yinlar bolaning aqliy rivojlanishiga yordam beradi. Bola o‘yin faoliyati tufayli fazo va buyum voqeligini amalda o‘zlashtiradi, shu bilan birga fazoni idrok etish mexanizmini o‘zi ham juda takomillashadi. Masalan, bola tomonidan harakat yo‘nalishini mustaqil tanlash va harakatini o‘yin qoidasida qat’iy belgilangan yo‘nalishda bajarishi bir tomondan o‘yin vaziyatini va ko‘rishmotor reaksiyasini darhol baholashni, ikkinchi tomondan o‘z harakatlarini fazo-o‘yin muhitida anglash va tasavvur qilishni talab etadi.

Adabiyotlar ro`yxati

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2. O’zbekiston Respublikasi Prezidentining 2017 yil 9 sentyabrdagi PQ-3261-son “Maktabgacha ta’lim tizimini tubdan takomillashtirish chora-tadbirlari to’g’risida”gi Qarori.

3. O’zbekiston Respublikasi Prezidentining 2018 yil 30 sentyabrdagi “Maktabgacha ta’lim tizimini boshqarishni takomillashtirish chora-tadbirlari to’g’risida”gi PQ-3955-sonli Qarori.

4. O’zbekiston Respublikasi Prezidentining 2017 yil 30 sentyabrdagi PF-5198-son “Maktabgacha ta’lim tizimi boshqaruvini tubdan takomillashtirish chora tadbirlari to’g’risida”gi Farmoni.

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THE ROLE OF COOPERATIVE LEARNING METHOD IN CLIL

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Annotatsiya. Ushbu maqola kooperativ CLIL darslarida qo'llaniladigan umumiy amaliyotlarni to'liq tushuntirishga bag'ishlangan. Kontent va tilni integratsiyalashgan o'rganish uchun ushbu usullar ingliz sinflarida foydalanish uchun juda yaxshi. Talabalarning muloqot qobiliyatlari CLIL orqali turli faoliyat turlarini kashf etish va rivojlantirish orqali yaxshilanadi.

Kalit so'zlar. CLIL, hamkorlikda o'qitish usuli, ikki tilli dars, yakkaxon faoliyat.

Аннотация. Эта статья посвящена подробному объяснению общих практик, используемых на совместных занятиях CLIL. Эти методы интегрированного обучения с содержанием и языком отлично подходят для использования в классах английского языка. Коммуникативные способности учащихся улучшаются за счет открытия и развития различных видов деятельности с помощью CLIL.

Ключевые слова. CLIL, метод кооперативного обучения, билингвальный урок, самостоятельная деятельность.

Summary. This article is devoted to provide a thorough explanation of the common practices used in cooperative CLIL classes. These methods for content and language-integrated learning that are excellent for use in English classrooms. Students' communication abilities are enhanced by the discovery and development of different activities through CLIL.

Key words. CLIL, cooperative learning method, bilingual lesson, solo activity.

First of all, it is important to remember that a number of student-related problems decrease the significance of CL and restrict its effective application in CLIL history lectures. Nonetheless, there are other factors to take note of in order to advance group instruction and interactive education in the classroom. The concern of not being able to effectively use cooperative learning in the classroom that CLIL history teachers have can also cause the use of CL to delay. Educators could also be anxious to give up traditional ways of instruction. In addition, negative attitudes towards group work in the classroom can result from teachers' pedagogical experience and perfectionism regarding lesson structure and content [6; p. 30]. Idealistic behavior promotes systematization and order [18; p. 200], but it may negatively impact students' independent learning and ability to come up with original ideas or approaches if teachers insist on having complete control over the framework of the CLIL history lesson. The pedagogical experience of conducting cooperative

instruction may suffer due to CLIL history teachers' tendency to control the flow of the lesson and maintain students' highest concentration on details and important facts, which may otherwise be removed or overlooked in independent work [6; p. 30].

Furthermore, instructors' lack of expertise incorporating cooperative learning activities into CLIL history classes is seen as a sign of their methodological incompetence and lack of preparation. Teachers' inability to build a CL environment in CLIL history classes is a result of their lack of experience in this area as well as the lack of coordination and collaboration among the teaching staff [16; p. 151]. Therefore, the implementation of cooperative learning in CLIL history classrooms may be hampered by CLIL instructors' unwillingness as well as their lack of the requisite skills and methodological abilities.

CLIL history teachers should possess and be aware of some crucial abilities and elements when it comes to implementing a learner-centered interactive pedagogy. For example, teachers' comprehension of the fundamental cooperative components - positive dependence, individual accountability, interaction, social skills, and group processing - is a major influence of the cooperative methodology's application. Understanding these fundamental components of CL by instructors would probably be the first step towards making interactive learning a reality. It makes sense that there is no question about the significance of teachers' participation and role in CL contexts. A CL course cannot function properly without the teacher putting in the necessary time and effort [12; p. 3058].

In addition to the above-described CL structures, there exist methods through which teachers put into practice cooperative activities. Cooperative study methods include the application of group formation, pair and group work organization, jigsaw and language switching [5; p. 3]. In-depth knowledge of commonly applicable cooperative methods would assist in shaping bilingual lessons and result in well-structured, coordinated teaching. The following section will cover comprehensive information on generally employed methods in cooperative CLIL history classrooms.

Numbered Heads Together: by allocating the numbers one through four to students, this method leaves a classroom open to spontaneous grouping. Group members collaborate and share ideas throughout each assignment so that they can provide a thorough response to the teacher's enquiries. In this instance, students must exhibit personal accountability [19; p. 145].

Switching Roles: this strategy refers to a collaborative way in which two people engage in debates over a specific subject. The approach states that before students share their thoughts, they should first discuss the opinions offered by their partners [19; p. 146].

Think-pair-share is a three-step process that is mostly used for individual thought on a problem or assignment assigned by the teacher. Following the application of their prior knowledge to comprehend a task, students are further encouraged to leverage their persuasive skills and cooperative collaboration abilities to persuade their partner of the value of their ideas and reach a consensus. Making the audience—in this case, the classroom—aware of the deductions made by each pair would be the last tactic [2; pp. 88, 89-95]. Think-pair-share is a cooperative approach that aims to highlight students' unique and authentic perspectives and viewpoints

while promoting idea sharing among peers. It prohibits the suppression of students' truthful ideas and their restrictions.

When teachers use this teaching style, there should be no limitations on the size of the classroom or the subject area. By letting students make mistakes, this approach may improve their knowledge, critical thinking, and collaborative abilities [8; p. 1]. According to **the Round Robin method**, each group of four to six students takes turns asking and responding to questions that are presented to them by the teacher. A group's focal point, or the so-called time-controller, establishes the time, distributes the questions to all participants in a clockwise fashion, and logs each participant's response. Round robin improves student understanding by allowing them to review and commit to memory previously provided sample answers and study materials.

By encouraging teammates to accept and acknowledge one other's beliefs, preferences, and ways of thought, it also contributes to team development [3; p. 1]. Additionally, improving presentation and critical thinking abilities might help students become more independent and autonomous learners [1; pp. 139-147]. It's because, with the instructor's help and supervision, students work with the materials, read through them, and have independent discussions about them. Similar to other cooperative learning approaches, round robin can be used to meet students' educational needs regardless of their academic performance, grade (from kindergarten to graduate school), and the subjects being taught (sciences and math, foreign languages, social skills, etc.) [7; p. 12]. Its three-step process, Team-Pair-individual, outlines the stages of group, pair, and individual labor. The procedure begins with a shared assignment and a group discussion on a specific topic.

After that, the group is divided into pairs and given another comparable work to complete. Students then work in pairs to complete a distinct but related task on their own, creating a team-pair-solo cycle [17; p. 119]. Learners are thus more equipped to complete their assignment since they have the benefit of having their team members' guidance, support, and diversity of viewpoints on the subject before reaching the final step of completing the prescribed duties autonomously. The primary goal of the team-pair-solo method is to improve students' reading comprehension abilities [4; pp. 48-55].

Students have the ability to refine their reading abilities in a non-traditional classroom environment with greater seriousness, openness, and support. Ogunleye's (2011) research indicates that the team-pair-solo approach has been effectively employed in the instruction of natural sciences. When conducted through direct instruction, laboratory experiments and scientific discoveries are less engaging and useful; but, when teachers adopt a cooperative methodology, these activities can become more engaging. Students studying science have enhanced their passion for learning and produced excellent achievements utilizing this strategy [9; pp. 259-276]. This demonstrates once more how useful CL is in all fields, including physics, geography, history, and the arts.

Instructors can alternatively conduct the team, pair, and solo activities in the opposite order by flipping the previously mentioned sequence. This approach has a lot of potential, particularly in terms of improving students' public speaking and

presentation abilities. During the presentation, teammates can provide valuable support and encouragement to quiet students who are hesitant to discuss their work. Furthermore, after developing materials and creating content for presentations separately, teams can provide comments to one another. By employing this approach, students can enhance their understanding of the subject matter and become more engaged with it [17; p. 120].

The Three-Step Review is a deliberately employed technique that increases class effectiveness by ensuring that all types of learners comprehend the material and facilitating student clarifications. When using this method, students discuss the relevant lesson topic in groups of four. The first round of discussion occurs between pairs in lawns, when they exchange roles to ask each other clarifying questions and get answers.

In their groups, each student distributes the answers to their peers [15; pp. 49-62]. All students make a special effort in this way to guarantee that the concepts relevant to the lesson are fully comprehended and accepted. To avoid misconceptions or an unclear comprehension of the material, experts advise using this strategy at the start, middle, or finish of the course [14; p. 90].

The idea behind the **Three-Step Interview** is somewhat similar to that of the earlier Three-Step Review cooperative method. This approach involves two partners in a group that the students have chosen doing an interview in which one partner questions the other without expressing an opinion on the subject under discussion. Subsequently, they exchange places, with one partner conducting the peer interview. Each student presents their partner's answers to the group in the last phase [10; p. 147].

Every CL method, structure, and strategy has value in CLIL instruction. They may, however, also be detrimental to some learning contexts and groups. Overall, CL helps students because of the creative and clever atmosphere that cooperative activities foster [13; pp. 33-42], therefore history professors teaching CLIL students need to be aware of standard cooperative methods.

For students to successfully complete collaborative learning tasks, teachers must devote their precious time to selecting the lessons and how to present them to the class.

With time and practice, teachers integrate seemingly disconnected features of cooperative learning activities into a meaningful whole, making the connections between particular tasks and social skills. Group members begin to associate cooperative learning activities with the corresponding cooperative behaviors [11; pp. 20-25].

Overall, CLIL instructors play a critical role and serve a vital function in cooperative learning. Educators do well when they guide their students' actions towards learning autonomy and independence. Some teachers quickly transfer knowledge to their students at the same time, which may deny them of the chance to create a learning method. Various factors may necessitate their constant participation in order to avoid independent learning inside their classes. It is important to remain aware of the knowledge gaps between students and teachers when practicing cooperative learning activities. Therefore, I would recommend using educational

materials to raise instructors' understanding of cooperative methods, activities, objectives, and goals. In order to train and create effective students, one needs experienced instructors. Thus, continuing programs might improve the pedagogical viewpoints and methods of instruction of CLIL teachers, resulting in the use of cooperative learning strategies that are more output-oriented and efficient.

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TARIXIY MA'LUMOTLAR VOSITASIDA TA'LIM OLUVCHILARDA MILLIY O'ZLIKNI ANGLASH KOMPENTENSIYALARINI SHAKLLANTIRISH

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Annotatsiya. Milliy o'zlikni anglash tuyg'usini shakllantirish, shaxs manfaati va ta'lim ustuvorligi, o'smir yoshlar, shaxsni rivojlantirish qonuniyatlari, ilmiy izlanishlar, etnopedagogik qadriyatlarning asosi, ma'naviy-ahloqiy tarbiya.
Kalit so'zlar. Milliy o'zlik, etnos, tarix, tarixiy ongi, tarixiy xotira, ta'lim, shaxs, ma`naviy meros, globallashuv, integratsiya.

Abstract. Formation of a sense of national self-awareness, the interests of the individual and the priority of education, adolescent youth, the laws of personality development, scientific research, the basis of ethnopedagogical values, and spiritual and moral education.
Keywords. Ethnic identity, history, historical consciousness, historical memory, education, identity, spiritual heritage, globalization, integration.

Milliy o`zlikni anglash millat ma`naviy kamolotining muhim belgisidir. Milliy o`zlikni anglash millatning o`z tarixi, madaniyati, milliy qadriyatlarini bilishi, milliy urf-odat va an`analarini e`zozlashi, ajdodlarining ma`naviy merosidan bahramand bo`lgan holda uni asrab-avaylab kelajak avlodga qoldirishi kabi xususiyatlar tushuniladi. Shu ma`noda O`zbekiston Respublikasi Prezidenti Sh.Mirziyoevning "Buyuk tarixda hech narsa izsiz ketmaydi. U xalqlarning qonida, tarixiy xotirasida saqlanadi va amaliy ishlarda namoyon bo`ladi. Shuning uchun ham u qudratlidir. Ajdodlarimiz asrlar davomida barpo etgan etnopedagogik qadriyatlarning asosi va mazmun mohiyatini yosh avlodda milliy o'zlikni anglash tuyg'usini shakllantirishni tashkil etadi. O'smir yoshdagi o'quvchilarda milliy o'zlikni anglash tuyg'usini shakllantirish har doim vatanparvarlik, xalqparvarlik, bardoshlilik, fuqarolik bilan uyg'un tarzda amalga oshirilgan. Bu ayniqsa, milliy va tarixiy qadriyatlarda yaqqol namoyon bo'ladi. Ma'lumki jamiyatimizda «shaxs manfaati va ta'lim ustuvorligi»

e’tirof etilgan bir davrda erkin shaxsni rivojlantirish qonuniyatlari, yoshlar shaxsini hayotga moslashtirish shakl va metodlari, mazmuni va tomoyillarini o‘rganadi. Bu esa, o‘z navbatida, umuminsoniy va milliy qadriyatlarning mazmun-mohiyatini chuqur o‘rganishni taqozo etadi.

Mustaqillik yillarida haqqoniy, milliy o’zligimiz va ma'naviyatimizni tiklash, rivojlantirish asosiy vazifalardan biri bo’lib qolmoqda. O’zbekiston Respublikasi mustaqillikni qo’lga kiritib, mustaqil taraqqiyot yo’liga o’tgach, jamiyatimizning o’z tarixiy o’tmishini anglashga qiziqishi keskin kuchaydi. Bu hol buyuk tariximizning muayyan davrlarini haqqoniy va xolis baholash, O’zbekiston xalqlari rivojlanishining yangi, ajoyib, ulug’vor manzarasini yaratish imkonini berdi. Bugungi kunda olib borilayotgan ilmiy izlanishlar tufayli inson jamiyati kundan kunga takomillashib, shaxs dunyoqarashi kengayib madaniy hayot mazmunini boyitib boraveradi. Milliy qadriyatlar, milliy urf-odatlar, buyuk ajdodlarimiz o’lmas meroslari, tarixdan olingan saboqlar etnosning tarixiy ongi va tarixiy xotirasi shakllanishida muhim ahamiyat kasb etib, ertangi yorug‘ kun va porloq kelajakka zamin yaratish uchun sharoit manbasiga aylanib boradi.

Demak, u yoki bu xalq o’z tarixiy ongi, tarixiy xotirasini uzluksiz rivojlantirib borishi va uni etnos vakillari shaxslar ongiga singdirishi natijasida ushbu etnos o’z ongida milliy o’zligi tuyg’usini hosil qiladi. Bu uzliksiz jarayon etnos vakili bo’lgan individ dunyoqarashida alohida his tuyg’u-or-nomus, o’z xalqiga nisbatan hurmat, iftixor va oxir oqibatda millat miqyosida milliy iftixorni shakllantiradi. Milliy iftixor, g’urur xalqni o’z manfaat va ehtiyojlarini qondirishda, boshqa xalqlar oldida o’z manfaatlarini himoya qilishga mustahkam kuchni hosil qiladi. Bundan tashqari ziddiyatli dunyoda o’z mavqeini saqlab qolish uchun millatni jipslashtiruvchi asosiy omil bo’lib xizmat qiladi. Bu o’rinda birinchi Prezidentimizning quyidagi so’zlarini keltirish mumkin: “To’g’i, Movarounnaxr sarhadlariga uzoq tariximiz davomida ne-ne bosqinchilar kirib kelmagan, ko’p yillar, balki, asrlar davomida yurtimizda ne-ne o’zga sulolalar hukmronlik qilmagan, deysiz. Bir so’z bilan aytganda, ming yillar davomida yurtimizga kelib-ketganlar ozmi? Erondan Ahomoniylar, Yunonistondan Aleksandr keldi, Arabistondan Qutayba, Mo`g’ulistondan Chingizxon keldi, rus istilochilari keldi. Lekin xalq, qoldiku. Xo’sh, bunda qanday sir-sinoat bor? Xalq qanday ichki kuch-qudratga tayanib o’zligini saqlab qoldi? Qadim-qadim zamonlardan o’troq yashagani, ilm-ma’rifatga intilgani, buyuk madaniyatga ega bo’lgani, o’z urf-odatlarini muqaddas bilgani uchun emasmi?” bundan kelib chiqadiki, millat o’z hududini g’animlardan himoya qilishda o’zining shu hududda muhim yashab turganligi uni ilgari ham dushmanlardan himoya qilgani uning tarixiy ongi va xotirasida saqlab qolganligi uni ma’naviy jihatdan kuch bilan ta’minlovchi milliy o’zlikni anglash tuyǵusini doyim chin qalbidan his etishidir. Bizning fikrimizcha, tarixiy ong va tarixiy xotira yuqorida ta’kidlanganidek, ajdodlarimiz o’tmishda yaratgan buyuk madaniyatning, milliy qadiriyatlarning muqaddas urf-odatlarni aks etishining bir unsuridir. Shuningdek, hozirgi kunda globallashuv, integratsiya jarayonlarining dunyoni barcha hududlarini jumladan bizni mamlakatimizni ham jadal qamrab olishi, xalqaro, mamlakatlararo ziddiyatlarning keskinlashuvi mamlakatimizni hududimizni yaxlitligiga tahdid solmoqda. G’animlar g’arazli niyatlarda o’tmish tarixni soxtalashtirishga urinmoqdalar. Tarix fani millat va

jamiyatni bunday tahdidlardan himoya qilishi, xalqimizning tarixiy ongi va tarixiy xotirasini mustahkamlashi lozim. Jamiyatning tarixiy bilimlari tarixiy ongi va tarixiy xotirasi milliy ozlikni anglash tuygusining muhim poydevoridir. Bunday vaziyatda birinshi prezidentimiz I.A.Karimov so'zi bilan aytganda "Har bir xalq o'z tarixini har xil ta'sir va tajovuzlardan asrashi kerak". Tarixiy ong, tarixiy xotira etnosni jipslashtiradigan milliy o'zligini anglashiga xizmat qiladi. Insonning falsafiy tushunchalaridan bo'lgan "milliy ozlikni anglash" tuyǵusi shaxs va millat hayotida juda muhim o'ringa ega. Zero, o'smir yoshdagi oquvchilarda milliy ozlikni anglash tuyǵusin rivojlantirishda tarixiy ong kategoriyasi orqali shakllantirish kecha, bugun va ertaning manfaatli bog'liqlik jihatlarini tasdiqlap beradi. Ajdodlarimiz asrlar davomida barpo etgan etnopedagogik qadriyatlarning asosi va mazmun mohiyatini yosh avlodda milliy o'zlikni anglash tuyg'usini shakllantirishni tashkil etadi. O'smir yoshdagi o'quvchilarda milliy o'zlikni anglash tuyg'usini shakllantirish har doim vatanparvarlik, xalqparvarlik, bardoshlilik, fuqarolik bilan uyg'un tarzda amalga oshirilgan. Bu ayniqsa, milliy va tarixiy qadriyatlarda yaqqol namoyon bo'ladi. Ma'lumki jamiyatimizda «shaxs manfaati va ta'lim ustuvorligi» e'tirof etilgan bir davrda erkin shaxsni rivojlantirish qonuniyatlari, yoshlar shaxsini hayotga moslashtirish shakl va metodlari, mazmuni va tomoyillarini o'rganadi. Bu esa, o'z navbatida, umuminsoniy va milliy qadriyatlarning mazmun-mohiyatini chuqur o'rganishni taqozo etadi.

Jahonda tarix, tarixiy ong, tarixiy xotiraga egalik har bir xalqning istiqboli va taraqqiyotiga ta'sir ko'rsatuvchi omil sifatida e'tirof etilayotgan globallashuv sharoitida ta'lim oluvchilarda tarixiy ma'lumotlar vositasida milliy o'zlikni anglash kompentensiyalarini shakllantirish muhim ijtimoiy-pedagogik zaruriyatga aylanmoqda. Germaniya, AQSH, Koreya, Rossiya, Buyuk Britaniya, Yaponiya, Singapur, kabi rivojlangan davlatlarda o'quvchilarda tarixiy bilimlar asosida o'zlikni anglashga yo'naltiruvchi bir qancha dasturlar, metodik vositalar, tarixiy tafakkurni rivojlantirish bo'yicha koplab loyihalar va tadqiqotlar amalga oshirilgan.

Shuningdek o'smir yoshdagi milliy ozlikni anglash tuyǵusin shakllantirish metodikasi bo'yicha Respublikamiz olimlaridan ko'plab tadqiqotlar amalga oshirilgan. Pedagogik nuqtai nazardan ma'naviy-ahloqiy tarbiya, milliy qadriyatlar, milliy o'zlikni anglash masalasi pedagog olimlar tomonidan tarixiy tafakkurga oid tadqiqotlar olib borilgan.

Xulosa o'rnida aytish mumkinki, yosh avlodning milliy o'zlikni anglash tuyǵusini shakllantirishda tarixiy bilimlardan foydalanishning samaradorligini oshirishda tarixiy ong muhim ahamiyat kasb etadi. Chunki tarixiy ong uzoq yo'lni bosib o'tgan o'z genezisiga ega. Uning shakllanishi insoniyat-iqtisodiy va siyosiy taraqqiyoti bilan birgalikda bordi. Tarixiy ong va tarixiy xotira yaxlit birlikda, lekin tarixiy ong birlamchi bo'ladi. Tarixiy ong shakllangan, o'zini mukammal darajasiga yetgan bo'lsa, tarixiy xotira shaxs, xalq, millatda yuqori darajada ko'rinadi. Tarixiy ong, bu - har qanday bilimda bo'ladigan, hatto ma'naviy borliq ham bo'lib o'tganligini anglashdir. o'smir yoshdagi o'quvchilarda fanlarni o`qitishning samaradorligini oshirishda tarixiy materiallardan samarali foydalanish, undagi uzviylik, fanlararo aloqani amalga oshirish milliy o`zlikni anglash jarayoniga katta hissa qo`shadi.

Tarixiy ma’lumotlar vositasida ta’lim oluvchilarda milliy o‘zlikni anglash kompentensiyalarini shakllantirish ushun quyidagisha tavsiyalar etish mumkin: tarixga oid bilimlar vositasida o‘smir yoshdagi o‘quvchilarda milliy o‘zlikni anglash tuyg‘usini rivojlantirish metodikasi kreativ, refleksiv, evristik texnologiyalarni o‘quv materiallariga muvofiq tarzda qo‘llash asosida takomillashtirish; tarixga oid bilimlar vositasida o‘smir yoshdagi o‘quvchilarda milliy o‘zlikni anglash tuyg‘usini rivojlantirish jarayonininng modeli reprezintativlik, mantiqiy izchillik, ob’ektivlik, natijadorlikni nazarda tutgan holda ishlab chiqish.

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РАЗРАБОТКА ПРИНЦИПИАЛЬНОЙ СХЕМЫ И ПЕЧАТНОЙ ПЛАТЫ ДВУСТОРОННЕГО ПРЕОБРАЗОВАТЕЛЯ ДАННЫХ МЕЖДУ USB И UART НА ОСНОВЕ МИКРОСХЕМЫ CH340G

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Аннотация. Рассмотрена принципиальная схема и конструкция печатной платы двустороннего преобразователя данных между USB и UART на основе специализированной микросхемы CH340G.

Ключевые слова. Средства вычислительной техники, принципиальная схема, печатная плата, микроконтроллер, CH340G, USB, UART.

Key words: computing equipment, circuit diagram, printed circuit board, microcontroller, CH340G, USB, UART.

Введение. Современные методы проведения экспериментальных исследований невозможно представить без применения средств вычислительной техники (СВТ). В подавляющем большинстве случаев применение персональных компьютеров (ПК) в качестве СВТ позволяет автоматизировать выполнение рутинных задач с высокой точностью при минимальных временных затратах. Однако в подавляющем большинстве случаев СВТ не позволяют напрямую обмениваться данными с устройствами, имеющими в своей основе микроконтроллеры (МК) или цифровые датчики разного назначения. Для решения данной проблемы необходимо применение специализированных микросхем преобразования данных, позволяющих обмениваться данными между ПК и МК либо датчиками.

Цель исследования. Ввиду имеющейся потребности в современных отечественных средствах связи между СВТ и измерительной аппаратурой, построенной на базе МК, необходимо разработать принципиальную схему и печатную плату универсального преобразователя данных между последовательным интерфейсом ПК и узлом МК, предназначенном для организации связи с другими цифровыми устройствами.

Методы и организация исследования. Проектирование принципиальной схемы и печатной платы преобразователя осуществлялось в кроссплатформенной веб-ориентированной среде автоматизированного проектирования электронной аппаратуры EasyEDA. Среда работает на основе клиент-серверной модели. Клиентская часть приложения полностью выполняется в браузере, поддерживающем HTML5. Инсталляция каких-либо программ или плагинов не требуется. Графическая среда приложения использует движок векторного графического формата SVG, доступный в современных браузерах. Хранение файлов осуществляется на сервере. Система не привязана к файлам пользователя на локальном ПК и позволяет в любой момент продолжить работу на любом ПК, подключённом к сети Интернет.

Результаты исследования и обсуждение. Двусторонний преобразователь данных между последовательным интерфейсом ПК и узлом МК, предназначенном для организации связи с другими цифровыми устройствами, основан на микросхеме CH340G и представляет собой устройство, обеспечивающее связь между универсальной последовательной шиной (USB) и последовательным интерфейсом UART (Universal Asynchronous Receiver-Transmitter). Это устройство разработано для программирования и управления работой МК системы мониторинга и термостатического контроля комбинированной фототеплопреобразовательной установки, которое также может использоваться в различных приложениях в качестве универсального преобразователя между USB и UART, например, для взаимодействия с датчиками разного назначения.

Основой преобразователя данных является микросхема U1 (CH340G), которая выполняет функцию двустороннего преобразования данных между USB и UART (рис. 1). Она обеспечивает преобразование сигналов, позволяя устройствам с последовательным интерфейсом обмениваться данными с ПК или другими устройствами через USB-порт.

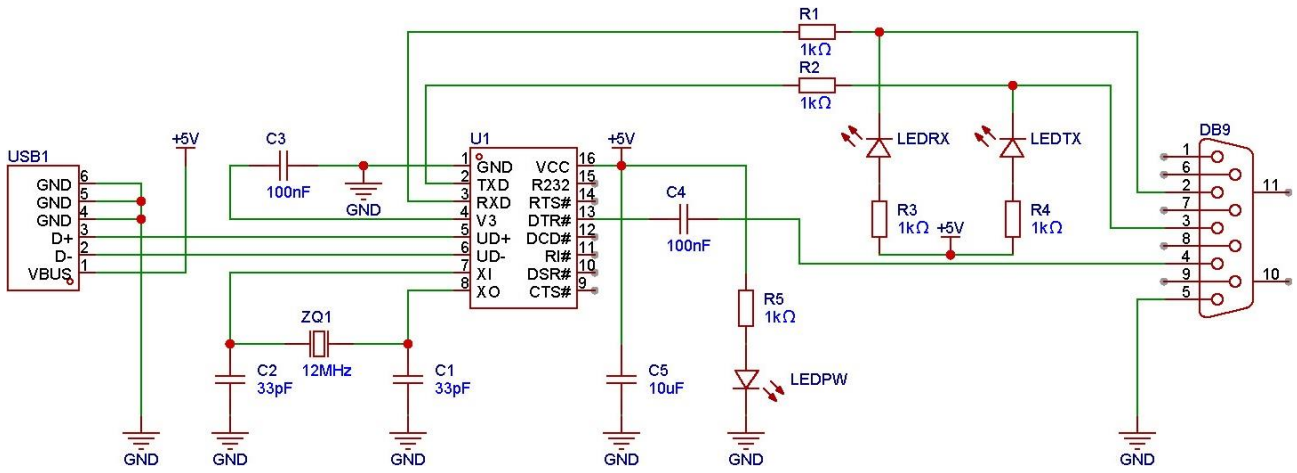


Рис. 1. Принципиальная схема двустороннего преобразователя данных между USB и UART на основе микросхемы CH340G.

Для обеспечения связи микросхема CH340G подключается к стандартному USB-разъёму ПК (USB1, в данном случае USB Type-B) через четыре вывода. При этом она использует стандартный протокол USB для передачи данных. При подключении к USB, CH340G автоматически определяется операционной системой как виртуальный COM-порт, что позволяет программному обеспечению взаимодействовать с устройством через стандартные последовательные команды.

Для получения питания (+5 В) вывод напряжения питания +5V микросхемы CH340G подключён к контакту VBUS USB-разъёма. Для обеспечения общего уровня земли между соединяемыми устройствами и преобразователем вывод GND микросхемы подключён к контакту GND USB-разъёма и пятому контакту разъёма DB9. В данном случае разъём DB9-S (розетка или male) применён с учётом подключения преобразователя к МК устройству посредством стандартного кабеля предназначенного для организации связи по протоколу RS-232. О наличии питания микросхемы свидетельствует непрерывное свечение светодиода LEDPW, подключённого через токоограничивающий резистор R5. Конденсатор C4 в цепи питания CH340G помогает сглаживать пульсации и шумы на линии питания, обеспечивая более стабильное напряжение для микросхемы.

Конденсатор C3, подключаемый к выводу питания V3 (+3,3 В) микросхемы CH340G, выполняет важные функции, связанные с её внутренней работой. CH340G использует внутренние генераторы для синхронизации работы. Конденсатор C3 обеспечивает необходимую стабильность этих генераторов.

Выводы D+ и D− используются для передачи данных по USB: D+ является контактом линии передачи данных с положительным уровнем

(соединён с выводом UD+ микросхемы); D− — контактом линии передачи данных с отрицательным уровнем (соединён с выводом UD− микросхемы).

На выходе CH340G формируется последовательный сигнал, совместимый с UART. Обмен данными по UART интерфейсу происходит через выводы TXD (передача) и RXD (приём), которые используются для передачи и приёма данных соответственно. Выводы TXD и RXD соединены с контактами 2 и 3 разъёма DB9 через токоограничивающие резисторы R1 и R2. О приёмопередаче данных указывает мерцающее свечение светодиодов LEDRX и LEDTX, которые подключены через токоограничивающие резисторы R3 и R4. При загрузке прошивки или чтении/записи данных передаваемых по UART интерфейсу мигание соответствующих светодиодов будет свидетельствовать о наличии связи между ПК и МК системы мониторинга и термостатического контроля комбинированной фототеплопреобразовательной установки.

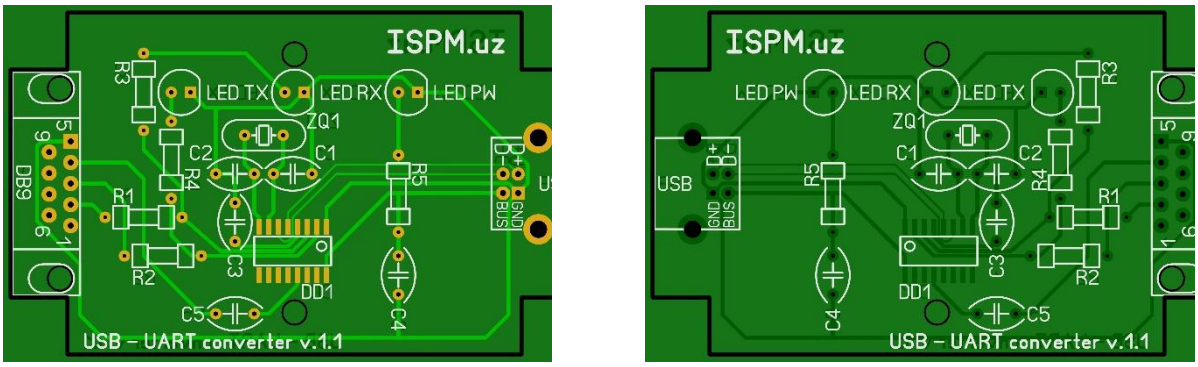
CH340G поддерживает управление потоком данных через сигналы CTS# (Clear To Send или сигнал для подтверждения готовности к приёму данных) и RTS# (Request To Send или сигнал для управления потоком данных), а также вывод DTR# (Data Terminal Ready или сигнал готовности терминала данных). Эти сигналы позволяют организовать надёжную передачу данных, предотвращая потерю информации при высоких скоростях передачи.

В рассматриваемой конструкции двустороннего преобразователя вывод DTR# использован для сброса, подключённого МК. Когда сигнал DTR# устанавливается в низкое состояние происходит сброс устройства, что полезно при загрузке новых прошивок МК системы мониторинга и термостатического контроля комбинированной фототеплопреобразовательной установки. Вывод DTR# микросхемы CH340G через конденсатор C5 соединён с контактом 4 разъёма DB9.

Кварцевый резонатор ZQ1 и конденсаторы C1 и C2 обеспечивают точный и стабильный тактовый сигнал, необходимый для работы микросхемы. Они задают частоту, на которой функционирует CH340G, что критично для синхронизации всех внутренних процессов.

На базе принципиальной схемы двустороннего преобразователя данных разработана его печатная плата (рис. 2). Печатная плата (ПП) преобразователя выполнена из огнестойкого стекловолоконного материала FR-4 пропитанного эпоксидной смолой, который устойчив к деформациям при температурах до 130 °C. ПП имеет размеры 75×45 мм с прямоугольными вырезами по углам размером 7×7 мм, которые необходимы для размещения в заранее выбранном корпусе будущего изделия. Толщина ПП — 1,6 мм. На нижней стороне ПП расположены токопроводящие дорожки и контактные площадки из технической меди. Токопроводящие дорожки защищены от коррозии и возможного электрического контакта слоем изоляционной защитной маски зелёного цвета. Контактные площадки для защиты от коррозии и лучшего соединения электронных компонентов и разъёмов с токопроводящими дорожками легированы слоем свинцово-оловянного припоя. Обозначения компонентов и прочие надписи на нижней и верхней стороне ПП выполнены методом шелкографии. Размеры отверстий для выводных электронных

компонентов и разъёмов выполнены в соответствии с размерами, указанными в технических спецификациях на них.



а) *б*)

Рис. 2. Печатная плата двустороннего преобразователя данных между USB и UART на основе микросхемы CH340G: а) нижняя сторона; б) верхняя сторона.

Заключение. Таким образом разработана принципиальная схема и печатная плата универсального двустороннего преобразователя данных между USB и UART на основе микросхемы CH340G, который будет применяется для загрузки программного обеспечения в микроконтроллер и будет позволяет отслеживать данные в реальном времени через последовательный интерфейс. Его простота в использовании, высокая степень совместимости и возможность управления потоком данных делают его незаменимым инструментом в области разработки и интеграции электронных систем.

ҚОРАҚАЛПОҚЛАРНИНГ НИКОҲ ТЎЙЛАРИ БИЛАН БОҒЛИҚ АЙРИМ УРФ-ОДАТЛАР

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Резюме. Ушбу мақолада қорақалпоқларнинг никох туйлари билан боғлиқ анъанавий қарашлар ва тасаввурлар хусусида баъзи маълумотлар берилган. Сўз юритилган масалалар асосан муаллифнинг дала тадкикотлари натижасида тўпланган бўлиб, унинг асосини диний урф-одатлар ташкил килади.

Калит сўзлар. Қорақалпоқлар, анъана, диний маросимлар, урф-одат, табу.

Резюме. В данной статье изложены некоторые сведения о традиционных воззрениях и представлениях каракалпаков, связанные со свадебной обрядностью. Затронутые в статье вопросы, касающиеся религиозных обычаев и обрядов, обоснованы материалами полевых исследований автора.

Ключевые слова. Каракалпаки, традиция, религиозные ритуалы, обычаи и обряды, табу.

Summary. This article provides some information about the traditional views and ideas of the Karakalpaks related to wedding rituals. The issues rose in the article regarding religious customs and rituals are substantiated by materials from the author's field research.

Keywords. Karakalpaks, tradition, religious rituals, customs and ceremonies, taboos.

Қорақалпоқларнинг анъанавий никоҳ тўйи маросимлари кўплаб босқичлардан иборат. Улар нафақат урф-одат ва диний меъёрлар, балки кўплаб магик тасаввурларни ўзида мужассам этади. Этнология фанида ушбу муаммо энг қизиқарли масалалар сирасига киради. Этнографларнинг фикрича, никоҳ тўйи урф-одатларини шартли равишда уч босқичга, яъни тўй олди, тўй давомидаги ва тўйдан кейинги маросимларга ажратиш мумкин [3; 55-64 бб.].

Тўй олди босқичининг дастлабки тадбири тўй кунини танлашдан иборат. Бу тадбир кўплаб магик қарашларни ўзида намоён этади. Уларнинг асосини туркий халқларнинг аксариятида кенг тарқалган инициал магиянинг унсури ташкил қилади.

Қорақалпоқларнинг анъанавий қарашларига кўра, совчиларнинг келинникига бориши ва тўйнинг асосий тантанаси учун энг мақбул кун деб чоршанбани танлашга ҳаракат қиладилар. Ҳафтанинг шу кунини қорақалпоқлар *"сәтли"*, яъни омадбахш, янги келин ва куёвга бахт-саодат, барака келтирувчи кун деб биладилар. *"Уллы той"* (муқаддас тўй) ни чоршанба куни ўтказиш анъанаси XX асрнинг охиригача ҳамма жойда сақланиб келган, аммо бугунги кунда унга қатъий риоя қилинмай, фақат айрим оилалардагина эътибор берилмоқда [4; 50,83 бб.]. Ҳосиятли кун билан боғлиқ бундай тасаввурлар туркман, нўғай, тожик, қозоқ халқларида ҳам мавжуд [5; 31 б. 7; 36 б. 10; 15-16 бб. 13; 54 б.].

Марказий Осиё халқларидаги *сәтли күн*га ишонч билан бир вақтда *сәтсиз күн* (омадсиз кун) билан боғлиқ қарашлар кенг тарқалган бўлиб, баъзида бу тушунча бутун бир ойга нисбатан ҳам қўлланилади. Чунончи, *Сапар* (Сафар) ойи ҳақидаги нохуш тушунча ва эътиқодлар ҳозир ҳам мавжуд. Этнографик асарларнинг аксариятида ушбу ойда тўй тантаналари ўтказилмаслиги тўғрисида маълумотлар учрайди [7; 41 б.]. Қорақалпоқларнинг тасаввурларига кўра, бахтсиз ҳодисалар асосан ушбу ой давомида содир бўлади. XX асрда қорақалпоқларда ушбу талабга қатъий риоя қилиниб, *Сапар* ойида тантанали тадбирлар ўтказилмаган. Аммо асрнинг охирларига келиб, бирмунча юмшатишларга йўл қўйилиб, ойнинг иккинчи ярмида никоҳ тўйларини ўтказишга рухсат берилган.

Никоҳ тўйи маросимларида нон билан боғлиқ тасаввурлар муайян ўрин тутади. Тўй олди удумларига кўра, келин ва куёв тарафлари томонидан розилик белгиси сифатида *"нан сындырыў"* (нон синдириш) маросими амалга оширилади. Бунда бутун нондан бир бўлагини навбат билан ёшларга едирилади

ва айни шу вақтда яхши тилаклар айтиб турилади. Нон – асосий озиқ-овқат маҳсулоти бўлгани учун маросимий амалиётда муҳим ўрин тутади. Ушбу маросимнинг мақсади янги қариндошлик алоқаларини, икки оила бирлигини мустаҳкамлаш ҳамда турмуш қураётган ёшларга бахтли ва мазмунли ҳаёт кечириш тилакларидан иборатдир. Нон билан боғлиқ маросимлар нафақат қорақалпоқлар, балки Марказий Осиёнинг бошқа халқлари орасида ҳам кенг тарқалган.

Ўрта Осиё халқларининг никоҳ тўйига дахлдор урф-одатларида олов ва у билан боғлиқ қатор магик тасаввурлар ўрин олган. Даставвал келин куёвнинг уйига кираётганда хонадоннинг остонаси ёнида ёқилган оловга бир неча марта таъзим бериб, кейингина гулхандан хатлаб ўтган. Ушбу анъана *“от атлаў”* (оловдан хатлаб ўтиш) деб аталади [2; 76 б.]. Мавжуд иримларга кўра, гулхан дарров ловуллаб ёнса, бу ҳол яхшилик аломати ҳисобланиб, ундан кейин бирин-кетин бахтли воқеалар рўй берар эмиш. Агарда бунинг акси бўлса, келиннинг *“аяғы аўыр”* (оёғи оғир) – омадсиз деб ҳисобланар экан. Қорақалпоқларнинг никоҳ тўйи маросимларидан бирида катта овсинлардан биттаси ёқилган чироқни келинга узатиб, одатга кўра, *“келиниң баҳты шырадай жақты болсын!”* (келиннинг бахти чироқдай равшан ёнсин!) деб айтиш одати мавжуд. Хўжайли туманида ёқилган чироқ ўчиб қолса, бўлажак бахтсизликнинг белгиси сифатида тушунилади. Шунинг учун аёллар чироқ тасодифан ўчиб қолмасин деб, уни куёвнинг уйигача жуда эҳтиётлаб олиб боришга ҳаракат қиладилар. Этнографик экспедициялар жараёнида тўпланган маълумотлар аёлларнинг кўпчилиги келин-куёвнинг уйига киришдан олдин гулхандан хатлаб ўтса, ёвуз руҳларнинг барчаси ташқарида колишига астойдил ишониши тўғрисида гувоҳлик беради. Зеро, бу ҳолда олов ёвуз руҳлардан ҳимоя қилувчи магик кучга эга деб ўйлайдилар.

Оловни ёқиш хоразмлик ўзбекларда ҳам кенг тарқалган удумлардан биридир. Этнограф Н.П.Лобачёванинг ёзишича, “ёқилган мойчироқ (лампа) келин билан бир вақтда олиб кирилган. У 2-3 кун ёниши керак бўлган. Агар шундай бўлса, ҳаммаси яхши бўлади. Мабодо олов йўлда ўчиб қолса – бирорта фалокат юз бериши мумкин. Хонқаликларнинг ўйлашларича, бундай ҳолатда ҳатто ёшларнинг биттаси ўлиб қолиши мумкин эмиш” [3; 22 б.]. Самарқандлик ўзбек ва арабларда бўлса, келинга ғамхўрлик қилувчи аёл чимилдиқнинг арқони орасидан иккита ёқилган шамни уч марта олиб ўтиб, келин-куёвнинг бошлари атрофида уч марта айлантиради. Халқона иримга кўра, олов ёмон кўздан тозалайди, шунинг учун тўйларда кампирлар албатта ушбу маросимни бажаришга ҳаркат қилганлар [6; 234 б.].

Келин келганда қилиниши зарур бўлган яна бир амал уни бефарзанд ва оилавий ҳаётда бахтсиз бўлган аёллардан ҳимоялашдга қаратилган.

Қорақалпоқ аёлларининг қарашларига кўра, бефарзанд аёллар магик мақсадларда келин ўтирган кўрпачадан фойдаланса, бу амал келинга зиён етказиши, магик амални бажарган аёл аксинча ҳомиладор бўлиб қолиши мумкин экан.

Магик тасаввурлар билан боғлиқ баъзи одатлари ва иримларни *бет ашар* (юзни очиш) маросимида ҳам учратишимиз мумкин. Яъни, маросим вақтида

келиннинг устига рўмол ёпиб, бир учи мева дарахтининг шохига боғланади. Бу шохни бирор бир ўғил фарзанд ушлаб туриши одат ҳисобланади. Маросимда ўғил боланинг иштироки ёш оилада ўғилнинг *“жас шаңарақ уллы болсын!”* (ёшларда ўғил туғилсин!) тилагини билдиради. Қорақалпоқларда маросим иштирокчиси бўлган бола мева дарахтининг шохини, навоийлик ва самарқандлик қорақалпоқларда – ўқловни, фарғоналикларда эса қошиқни ушлаб келин юзини очиш одат ҳисобланади. Маросимни бажаришнинг мажбурий шарти ўғил боланинг иштироки ҳисобланади. Бундай удум ўзбек ва тожикларда ҳам ўтказилади [11; 324 б. 12; 135 б.]. О.А.Сухарева бу маросимни таърифлаб, шундай ёзган: “куёв қариндошлари қаторидан ўғил бола ушбу мато (оқ мато) ни мева дарахтининг майда новдаси билан олиб қўяди, куёвнинг барча қариндош аёллари навбат билан келиннинг олдига ўтади” [8; 176 б.].

“Бет ашар” маросимини ўтказиш вақтида аҳолининг аёллар қисми орасида кенг тарқалган тасаввурга риоя қилиниб, келиннинг икки тарафида ўғил фарзандлари бор икки жувон туриши шарт бўлган. Қорақалпоқ аёлларининг қарашларига кўра, келиннинг ёнида фарзандли аёллар турса, келин ҳам яқин вақтда она бўлади.

Никоҳ тўйи маросимлари турли хил магик қарашларига бой бўлиб, уларда маросимий чодир – *шымылдық* (чимилдиқ) билан боғлиқ амаллар алоҳида ўрин тутади. Никоҳ тўйи урф-одатларининг ушбу унсури тўғрисида бир қатор этнографларнинг ишларида маълумотлар акс этган. А.Т.Толеубаевнинг ёзишича, “… ушбу парда ёшларни ёвуз руҳлар ва бошқа зиён – заҳматлардан асровчи магик кучга эга деб ҳисобланган” [10; 19 б.]. А.А.Ашировнинг таърифига кўра, “чимилдиқ келинни ёвуз кучлар ва ёмон кўзлардан асровчи ўзига хос афсунгарлик воситаси бўлган. Чимилдиқ айнан шу сабабга кўра келинни рамзий ҳимоя қилиш функциясини бажарган” [1; 23 б.].

Никоҳ тўйини ўтказишда маросимий чодирдан фойдаланиш қорақалпоқларда бугунги кунда ҳам кенг тарқалган. Дала тадқиқотларимизга кўра, тўй ўтказилгандан сўнг *шымылдық* кўп йил давомида оилада сақланиб келади. Шунингдек, айрим овулларда келин-куёвнинг бувисига тегишли чимилдиқдан фойдаланилганига гувоҳ бўлдик. У авлоддан – авлодга ўтиб келган.

*Шымылдық*ни тайёрлашда қуйидаги техник амалларга риоя қилинади: унинг устки қисми матонинг майда қийқимларидан қуроқ техникасида бажарилади, парданинг ўртаси ва пастки қисми ялтироқ ёки қизил матодан иборат. Қорақалпоқ аёлларининг қарашларига кўра, келин-куёвга аталган кўрпа ва кўрпачалар матонинг майда қийқимларидан тайёрланса, ёшлар бу қийқимларга ўхшаб, бир-бирига зич ёпишади ва улар бир умр бирга бўлишади. Шунинг учун бўлса керак, келин-куёвларнинг ота-онаси томонидан ёшларга аталган махсус кўрпачалар айнан қуроқ усулида тикилишига алоҳида аҳамият берилади. Тадқиқотчилар учун эътиборли томони шундаки, бунда мато қийқимларининг ранги ва сони жуда муҳим ҳисобланади. Масалан, келин-куёв учун атаб тайёрланган кўрпа ва кўрпачаларнинг ранги қизил, сони эса тоқ бўлиши керак. Ёшларнинг ёстиғи жуфт бўлмай, узун ва тўғрибурчакли шаклда тикилади. Ўйлашимизча, ёстиқ битта бўлишининг асосини семантик маъно

ташкил қилиб, ёшлар ажрашмасдан, биргаликда узоқ умр кечиришини англатган. Қуроқ билан боғлиқ бундай тасаввурлар нафақат қорақалпоқлар, балки Марказий Осиёнинг бошқа халқларида ҳам мавжуд.

Қуроқли кўрпачалардан ташқари, келиннинг катта овсинлари тўй сандиғига жойланадиган махсус совғалар – *“сарпай”* тайёрлайдилар. Совға-саломлар билан бирга сандиққа ширинликлар, мевалар (жийда, ўрик) солинади. Охирги пайтларда тарқалаётган одатга кўра, юқорида айтилган нарсалардан ташқари, сандиққа ўйинчоқлар солинадиган бўлди. Ахборотчиларнинг хабар беришича, бу одатнинг замирида ёшларга бахт ва фарзанд тилаклари мужассам этган [14].

Шундай қилиб, этнографик тадқиқотлар натижасида олинган маълумотларга асосланиб, оилада ўтказиладиган шодиёналар, биринчи навбатда никоҳ тўйи билан боғлиқ маросимлар локал хусусиятларга эга бўлиб, магик тасаввурлар билан тўйинганини айтишимиз мумкин. Ушбу магик қарашлар никоҳ тўйининг урф-одатларида, хусусан тўй кунининг белгиланиши, нон билан боғлиқ удумлар, келинни олиб келиш ва унинг куёв уйига қадам босиши маросимларида яққол намоён бўлмоқда. Тўй куни амалга ошириладиган удумлар ўзида оқ магиянинг унсурларини мужассам этган. Никоҳ тўйи билан боғлиқ тасаввурлар асрлар давомида сақланиб, бугунги кунда кузатилиб келаётгани семантик маънога эга ҳисобланади. Улар никоҳ тўйи урф-одатлари ва маросимларида муайян ўрин эгаллаб, мустаҳкам оила, бахт, мазмунли ҳаёт, серфарзандликни таъминлашга йўналтирилган.

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AN’ANAVIY QORAQALPOQ HUNARMANDCHILIGINING TURISTIK MARSHRUTLARI (CHIMBOY TUMANI MISOLIDA)

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Annotatsiya. Mazkur maqolada hunarmandchilikning etnoturizmdagi o‘rni, ahamiyatiga to‘xtalib, Chimboy tumanidagi hunarmandchilik turlariga to‘xtalib o‘tiladi. An’anaviy hunarmandchilik bilan shug‘ullanuvchi hunarmandlarning sayyohlik marshrutlari keltirib o‘tiladi.
Kalit so‘zlar. Etnoturizm, Chimboy tumani, hunarmandchilik, turistlik marshrut, Tore ovul.

Аннотация. В этой статье рассматривается роль и значение ремесленничества в этнотуризме, а также виды ремесленничества в Чимбайском районе. Приводятся туристические маршруты ремесленников, занимающихся традиционными ремеслами.
Ключевые слова. Этнотуризм, Чимбайский район, ремесла, туристический маршрут, селение Тоpe.

Abstract. This article examines the role and significance of crafts in ethno-tourism, as well as the types of crafts in the Chimbay district. Tourist routes of artisans engaged in traditional crafts are presented.
Keywords. Ethno tourism, Chimbay district, handicrafts, tourist route, Tore village.

Milliy hunarmandchiligimizni bugungi kunda tiklash va uni rivojlantirish bo‘yicha davlatimiz tomonidan ko‘plab ezgu ishlar amalga oshirilmoqda. Hunarmandchilikning iqtisodiy, madaniy hayotimizga ta’siri juda katta. Shuni hisobga olgan holda etnoturizmni rivojlantirishda hunarmandlarning turistik marshrutlarini ishlab chiqish va targ‘ib qilish juda muhimdir. Aniq, qiziqarli etib ishlangan turistik marshrutlar sayyohlarni ko‘paytirish imkonini beradi. Turistik marshrut sayyohlarning talab va istaklarini to‘liq qondirishga yo‘naltirilgan. Turistik marshrutlar turizmdagi turlarning mavzusi bo‘yicha ham bo‘lishi mumkin.

Etnotur zamonaviy turizmning yangi yo‘nalishlaridan sanaladi. Etnoturlar ma’lum bir xalqning tarixi va yodgorliklariga sayohat qilish, shuningdek, festivallarda ishtirok etish, milliy taomlarini tatib ko‘rish, xalq an’anaviy hunarmandchiligi va urf-odatlari bilan tanishishni o‘z ichiga oladi [1; 51-52 bb.].

Tur firma yoki mehmonxona sayyohlarga boradigan joylarni tavsiya etadi. Bu taklif turistik marshrut deb ataladi. Turistik marshrut uchun turistik resurs kerak. Turistik obyektlarga sayyohlar oqimi faqat turistik marshrutlar yaratilgandan keyingina ko‘payadi. Hunarmandchilik sohasi va etnoturizm resurslaridan biri hisoblanadi. Shu bois bugungi kunda qoraqalpoq an’anaviy hunarmandchiligini olib borayotgan hunarmandlarning turistik marshrutini ishlab chiqish juda muhim.

Chimboy shahri azaldan hunarmandlar markazi hisoblangan. Qalmurat uychi, Jollibek zargar, Juman usta, Zaripbay kulolchi, Jumaniyaz usta, Mirzamurat erganekchi, Nawro‘zbay usta, Orazimbet kulolchi, Raman zargar, Nurbayev Bazarbay miskar kabi hunarmand ustalar bilan mashhur bo‘lgan mintaqa [1]. Aholining bugungi kunda ham aksariyat qismi hunarmandchilikning turli sohalari bilan shug‘ullanadi. Qoraqalpoq milliy o‘tovlarini tayyorlash, musiqa asboblari yasash, beshikchilik, chilangarlik, temirchilik, zargarlik, kashtachilik, quroqchilik, shiy to‘qish kabi hunarmandchilik turlari avloddan avlodga o‘tib kelmoqda. Hududning o‘ziga xos hunarmandchiligini dunyoga tanitish maqsadida bu yerda turizm sohasida jadal rivojlanmoqda. 2019 yil mart oyida mahalliy va respublika ommaviy axborot vositalari hamda sayyohlik tashkilotlari uchun Chimboy tumani an’anaviy hunarmandchiligi bo‘yicha Infotur tashkil etildi. Unda 15 dan ortiq OAV vakillari va 30 dan ortiq sayyohlik tashkilotlari ishtirok etdi. Bugungi kunda etnoturizm yo‘nalishidagi yangi turistik maskanlarni hunarmandchilik ustaxonalari bilan birga yangi oilaviy mehmonxonalar tashkil etish bo‘yicha qator ishlar amalga oshirilmoqda.

Qora uy yasovchi ustalar uychilar deb atalgan. "Uychi qishlog‘i" deb nomlanuvchi qishloq ilgari Kegeyli tumanida bo‘lgan [1], shuningdek, Qo‘ng‘irot, Xo‘jayli, Qonliko‘l, Bo‘zatov hududlarida ham qora uy quruvchi uychilar bo‘lgan. Hozirgi kunda Chimboy va Xo‘jayli hududlarida qora uy yasash bilan shug‘ullanuvchi ustalar qolgan. Chimboyda bugungi kunda Nurman uychi, Salamat uychi, Ko‘chek uychi, Abat uychi, Damir uychi, Azamat uychi singari 25 dan ortiq uychilar bor. Sayyohlar hunarmandchilik buyumlarini xarid qilish bilan birga ularning tayyorlanish jarayonida, mohir ustalar bilan tanishishda harakat qiladi. Shu bois bugungi kunda hunarmandlarimiz tomonidan uy muzeylarini tashkil etish, sayyohlarning ehtiyojlarini inobatga olgan holda o‘z ishlarini olib bormoqda. Ulardan biri Chimboylik hunarmand To‘rekeev Azamat qora uy yasash bilan shug‘ullanib kelayotgan uchinchi avlod. U qoraqalpoq xalqining turar joylaridan biri qora uy quruvchi uychilardan biri. Bu qora uy ko‘chmanchi va yarim ko‘chmanchi xalqlarning asosiy boshpanasi bo‘lgan. Uning kelib chiqish tarixi 1 ming yillik o‘rtalarida qadimgi turkiy xalqlarga borib taqaladi [3; 33 b.]. Qora uy nafaqat qoraqalpoq xalqida, balki chorvachilik bilan shug‘ullanuvchi qozoq, qirg‘iz, mo‘g‘ul, qalmoqlarda ham bo‘lgan [4; 63 b.]. Lekin ular bir-biridan ishlash texnologiyasi, bezak berish jihatidan farq qiladi.

Hozirgi kunda qoraqalpoq, qozoq, mo‘g‘ul qora uylarini tayyorlab buyurtmachilarga yetkazib bermoqda. 6 ta qanot, 8 ta qanot, 12 ta qanot, 16 ta qanot, 30 ta qanotli uylarni tayyorlagan. 6 qanotli qora uyni Dubayga qurib qaytgan [5]. Qora uy qadimgi qoraqalpoqlarning turar joylaridan biri hisoblanadi. Qora uylar

boshqa ko‘chmanchi xalqlardan tashqi va ichki bezaklari, qurilishi bilan ajralib turadi [5].

Qora uyning eshigini (ergenek) uychilar ishlamagan. Uni boshqa usta tayyorlab bergan. Ergenek, beshik tayarlash bilan shug‘ullanuvchi usta Qoblanov Salamat. U ham ustachilikni otadan bolaga meros qilib olib, o‘z otasining hunarini o‘rgangan ustalardan biri. Sayyohlarni qiziqtiradigan yana bir jihati avloddan-avlodga o‘tib kelayotgan hunaridir. Sayyohlar o‘z ota-bobolari izini davom ettirib kelayotgan ustalarga hurmat bilan qarashadi.

Hozirgi kunda qora uyga bo‘lgan talab nafaqat bizning yurtimizda, boshqa mamlakatlarda ham qiziqish ortib bormoqda. Sayyohlar tomonidan qora uyning yasalish texnikasi qiziqtirib Chimboydagi qora uyning ustaxonalariga ko‘plab xorijlik sayyohlarning mehmonga kelishiga sabab bo‘lmoqda. Ularda 10 dan ortiq qora uychilar ishlaydi.

Qora uy baw-shuwlari bilan bezatilsa uni “o‘tov” deb atashgan. Qora uyni bejirim, hayratlanarli darajada bezashda baw-shuwlarning xizmati katta.O‘zining kengligi, naqsh va ishlash texnikasi jihatidan mutlaqo ajralib turadigan ko‘plab “qur”lar uyning ichida ham, tashqarisida ham ishlatilgan [6; 33 b.]. Chimboy shahrida baw-shuw tayyorlash bilan qishloq ayollari shug‘ullanib keladi va ularning daromad manbaiga aylangan. Oq basqur, qizil basqur, bel arqon, yelka baw, eshik qosh, tizma, oyoq baw kabi qora uy bezaklari to‘qiladi. Ko‘prik, qilich, tergish, arqon, seriw, urchuq, charx kabi uskunalardan foydalanadi. To‘qilganda terish va qoqpa deb ataladi. Qoqpani qoqip ketaveradi, tizma teriladi. Bugungi kunga qadar 10 dan ortiq shogird tayyorlagan. Shogirdlar ixtiyoriga, qobiliyatiga qarab tez o‘rganib ketishlari mumkin [8]. Baw-shuwlarda qoraqalpoq xalqining naqshlari tushirilgan.

Chimboydagi sayyohlik maskanlaridan biri Chimboy tumani To‘pa qishlog‘idagi Shiy to‘quvchilar. Ular shiy hunarini butun dunyoga tanitib, sayyohlar qiziqishini uyg‘otib kelayotgan hunarmandlardir. Unutilib borayotgan bu hunarni momolarimizdan biri Alimbetova Juzimgul daromad manbaiga aylantiradi. U 1948-yilda tug‘ilgan. 1965 yilda kelin bo‘lib kelganidan buyon shiy to‘qish, quraq tikish hunari bilan shug‘ullangan. Bir haftada 6 metrlik naqshli shiy to‘qiydi. 6 qanotli qora uy uchun 18 metr shiy kerak bo‘ladi. Rahgli iplardan qora uylar uchun eshik peshtoqi to‘qiladi. Bunda qattiq qamish olinib, qiriladi va rangli dastalar bilan o‘rab to‘qilib boriladi. Juzumgul opaning aytishicha, ilgarilari qariyalar qamishdan bo‘yra ishlashardi, ammo bugungi kunda qishloqda bo‘yra qiladigan odam yo‘qligini ta’kidladi. Boyra qattiq qamishdan to‘qilgan holda bir-biriga o‘rab o‘rilgan, bunda hech qanday ip yoki boshqa materialdan foydalanilmaydi, faqat qamishning o‘zi urib-urib toqilgan. Boyrani to‘shama, qirmon yig‘ishda foydalangan. Boyra to‘qish bilan farg‘onalik qoraqalpoqlar XIX-XX asrlarda shug‘ullangan bo‘lib, bu sohada juda mohir bo‘lgan. Ular asosan daryo bo‘ylarida yashagan bo‘lib, bu yerlarda qamishzorlar ko‘p bo‘lishi, ularning boyrachilik bilan shuhrat topishiga sabab bo‘lgan. Qoraqalpoqlarning o‘sha davrda tayyorlagan qamishdan yasalgan buyumlari o‘zining sifati bilan ajralib turgan. E’tiborlisi, bugungi kunda ham bu hunarmandchilik turi yo‘qolmagan [9]. Juzumgul opa quruq ham tikadi. Asosan gul yoydi, qirq jiyrik, besh say, tuya ko‘z, qushqor shox, o‘raq tish naqshlarini ko‘rpacha, yastiq hamda shimildiqqa solib tikadi. Shogirdlar ko‘p, qiz farzandlari, nabiralari,

kelinlari hammasi Juzimgul onaning shunarini o‘zlashtirmoqda. Bu oilaga bugungi kunda AQSH, Angliya, Fransiya, Germaniya, Rossiya, Ispaniya, Turkiya, Argentina, Qozog‘iston kabi dunyoning ko‘plab mamlakatlaridan turistlar mexmon bo‘lishgan. To‘pa qishloqlik Juzgumul opa etnoturizmni rivojlantirishga xizmat qilayotgan hunarmandlardan biri. Chunki u qishlog‘iga kelgan sayyohlarga o‘z hunarinin ko‘rsatibgina qolmay, qoraqalpoq xalqiga xos bo‘lgan milliy an’analarni, milliy taomlarimizni targ‘ib qilib kelayotgan hunarmandlar qatoriga kiradi.

Chiptachilik hunari Chimboy tumani To‘pa ovul aholisi uchun juda muhim daromad manbai hisoblanadi. Aholi o‘rtasida talabning ortishi, bu joy aholisining 80 foizi ushbu hunar bilan shug‘ullanishiga sabab bo‘lmoqda. To‘pa qishloq aholisining har birining uyi yonida shiy to‘qiydigan "echak"larni (toqish stanogining xalq tilida nomlanishi) uchratish mumkin. Shiylar quyosh nuridan saqlaydi, quyosh olmaydi, shiylar orasidan shamol yaxshi o‘tadi, yaxshi saqlansa, odamga ko‘p yillar davomida xizmat qilishi mumkin.

Qoraqalpoqlarda boshqa xalqlar kabi hunarmandchilik turlari ko‘p. Sayyohlarni qiziqtirib qo‘yadigan ustalardan biri Egar ishlovchi Beknazarov Oynazar. Egar oq tol va kegay yog‘ochidan yasalgan [11; 55 b.]. Lekin hozirgi kunda egar asosan oq toldan ishlanadi. Oq tol yaxshilab quritiladi. Egar 9 ta quroqdan iborat. Oldini uchta, o‘rtasi to‘rtta, orqasi (basari) ikkita. Ish jarayoni mol terisini tayyorlashdan boshlanadi. Teri junidan tozalanishi uchun yerga ko‘mib, boyitiladi, bunga taxminan yoz oylarida ikki kun, qish oylarida bir hafta vaqt ketadi. Teri tozalanadi, so‘ngra teri ichidagi ko‘ki olinadi. O‘zlari tayyorlab qo‘ygan qolip yordamida to‘qqizta quraqdan yasalgan yog‘ochga biriktirilib qo‘yiladi va teri yelimlanadi. Avvallari teridan qilingan yumshoq yelimdan foydalanilgan. Buning uchun teri ikki kun davomida suv quyib qaynatilgan. Teri bo‘shashib, yopishqoq massaga aylangan. Uni kesib olib, xohlagan vaqtida ishlatgan. Bu massani tayyorlashda yoqimsiz hid taralgani sababli buni tayyorlayotgan paytda ustalar qishloq chetiga chiqib ketib o‘sha yerda tayyorlaganlar [12].

Egarning yog‘och bo‘laklari bir-biriga yopishtiriladi. Bir-biriga birikgandan keyin teri bilan qoplanadi. Biz yordamida 8-16 teshik qaziladi. Biz qo‘lda yengchaga simdan yasalib, uning yordamida tikiladi. Teri qurib ketmasligi uchun laklangan, oldin esa yog‘ surtilgan. Katta mol terisidan uchta egar tayyorlash mumkin. Egarini tuya terisidan ham qilish mumkin.Musulmon egaridan tashqari rus egarida bo‘ladi. Rus egarida ikkita yog‘och temirga biriktiriladi. Rus egardan otlarni o‘rgatgan chog‘da poydalanilgan. Tayyorlangan musulmon egar "qush tumshuq" deb ataladi. Egarni bezashda avloddan avlodga o‘tib kelayotgan naqshdan foydalaniladi. Ot anjomlari ko‘p bo‘lib, ular temirchi, zargar, kulol, kashtado‘zning qo‘lidan o‘tgan. Egarlar otlarini tantanavor bezatib to‘y marosimlariga borishgan. Shu bois aholi o‘rtasida:

"Er yigitning bir murodi ot bo‘ladi, ot bo‘lmasa yuragida dard bo‘ladi" degan she’riy misralar uchraydi. Lekin bugungi kunda otlarini u darajada bezayotgan chavandozlar yo‘q atrofda.

Musiqa asboblarini tayyorlovchi hunarmandlardan yana biri Chimboyli Pirniyazov Azat. U qoraqalpoq cholg‘u asboblaridan biri dutor va qobuz tayyorlaydi. Bu cholg‘u asboblari boshqa turkiy xalqlarda uchrasa-da, bu cholg‘u asboblari shakli,

ovozining o‘ziga xosligi bilan ajralib turadi. Murakkab dutor tut yog‘ochidan qilinadi. Musiqa asbobi uchun olingan tut daraxtining shox-shabba bo‘lmasligi, mol g‘ajimasligi kerak. Yoshligida 5-6 mm qalinlikda yog‘och yorib kamida ikki yil quritib qo‘yiladi. Yog‘och suvda 4-5 soat qaynatiladi va qolipga solib 10 kungacha bukib qo‘yiladi. Listlarni (taxtacha) bukish uchun qoliplardan foydalaniladi. Gardan (dutar bo‘yni) alohida olinadi. O‘lcham bo‘yicha gardan bukilgan listlar (taxtalar) joylashtiriladi. Listlar bir-biriga biriktirilib yelimlanadi. Yelimlangandan keyin 4-5 soat iplar bilan mahkam bog‘lab qo‘yamiz. Listlar bir-biri bilan yaxshi birikishi uchun yelimlab boriladi. Bir paytda ikki-uchta dutor yasaladi. Arqon naqsh, darvoza naqsh, qora ko‘z naqshlaridan foydalanadi. Naqshlarning o‘z ma’nosi bor arqon naqsh - xalqning hamjihatligi bo‘lsin, darvoza naqsh - tenglik ma’nosini ifodalagan [13].

Sayyohlarning qiziqishini uyg‘otgan manzillardan biri Chimboyli Tajimuratovlar oilasi. Daribay Tajimuratov rassomlik va haykaltaroshlik bilan shug‘ullansa, o‘g‘li Adil Tajimuratov zargarlik bilan shug‘ullanadi. Zargarlik qoraqalpoq xalqining qadimiy hunarlaridan biri hisoblanadi. Zargarlikning milliy va zamonaviy ko‘rinishlarini sayyohlar e’tiboriga havola etmoqda.Qoraqalpoq ayollari taqinchoqlarini zamonaviy texnologiyalar asosida tiklamoqda. 10 dan ortiq shogirdi bor. Shogirdlari 5-6 yilda alohida usta zargar bo‘lib chiqmoqda. Xalqimiz orasida qiz uzatish, toylarda qizlarimiz milliy zargarlik buyimlaridan foydalanishi milliy zargarlik buyimlariga bo‘lgan talabning ortishiga sabab bo‘lmoqda.

Ko‘plab mamlakatlardan sayyohlar mehmon bo‘lib, zargarlikning o‘ziga xos xususiyatlari bilan tanishish imkoniga ega bo‘lishgan. Qoraqalpoq milliy zargarlik buyimlarini tayyorlash bilan birga zamonaviy ko‘rinishdagi taqinchoqlarni ham tayyorlaydi. Tajimuratovlar oilasi haqida sayyohlar bugungi kunda internet tarmoqlari orqali ma’lumotga ega bo‘lib, shu orqali sayohatga keluvchi sayyohlar ko‘paymoqda. Masalan: Fransiya va Rossiyalik sayyohlar Tajimuratovlar hunarmandchiligi bo‘yicha FACEBOOK orqali ma’lumotga ega bo‘lgan [14].

Chimboyda o‘zining yana bir sayyohlarga tavsiya qiladigan hunarmandlar mahallasi, bu tandirchilar yashaydigan mahalla. Bu yerga Qoraqalpog‘istonga mashhur kulolchi usta Rambergen Zaripov yashab o‘tgan joy.Uning ishlagan pechining o‘rni (ko‘milib tepalik bo‘lib qolgan) hozirgi kungacha mo‘jizakor joy sifatida qadrlanadi. Uning avlodlari tandirchilik bilan shug‘ullanib kelmoqda. Bu yerda bir-ikki tandirchi yashab qolmasdan, 10 dan ortiq tandirchilar yashaydi va ularning barchasi bir ustaning avlodlari.

Xulosa sifatinda shuni aytish mumkinki boshqa hududlarga nisbatan Chimboy tumanida an’anaviy hunarmandchilik turlari uychilar, ergenekchilar, beshikchilar, soz asboblar tayarlovchilar, tandirchilar, shiy to‘quvchilar, kashtado‘zlar, baw-shuw tayarlovchilar, temirchilar, zargarlar bor. Yurtimizga tashrif buyurayotgan sayyohlarning aksariyati Chimboy shahridagi hunarmandlar manzillarini ko‘rishga bo‘lgan qiziqishi boshqa hududlarga nisbatan ko‘proq ekanini hisobga olgan holda Chimboyda hunarmandchilik turlarini yanada qo‘llab-quvvatlash, hunarmandlar shaharchasini tashkil etish maqsadga muvofiq bo‘lar edi.

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RAQAMLI TEXNOLOGIYALARNI QO’LLASH SAMARASI

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Annotatsiya. Maqolada raqamli texnologiya, bulutli texnologiyalar, ta’limda raqamli texnologiyadan foydalanish, raqamli texnologiyani ta’lim tizimi vostilari, raqamli texnologiyasini ustunliklari, narsalar interneti (Internet of Things, IoT), kengaytirilgan haqiqat (AR), virtual haqiqat (Virtual haqiqat, VR) haqida tushunchalar keltirilgan.

Kalit so‘zlar. Raqamli texnologiya, ta’limda raqamli texnologiya, bulutli texnologiya, narsalar interneti (Internet of Things, IoT), kengaytirilgan haqiqat (AR), virtual haqiqat (Virtual haqiqat, VR).

Аннотация. В статье рассматривается использование цифровых технологий и облачные технологии в образовании, инструменты цифровой

системы образования, преимущества цифровых технологий, Интернет вещей (IoT), дополненная реальность (AR), виртуальная реальность (Virtual Reality, VR).

Ключевые слова. Цифровые технологии, цифровые технологии в образовании, облачные технологии, Интернет вещей (IoT); дополненная реальность (AR); виртуальная реальность (Виртуальная реальность, VR).

Abstract. The article discusses the use of digital technologies and cloud technologies in education, tools of the digital education system, the advantages of digital technologies, Internet of Things (IoT), augmented reality (AR), virtual reality (VR).

Keywords. Digital technology, digital technology in education, cloud technology, Internet of Things (IoT), augmented reality (AR), virtual reality (Virtual reality, VR).

Hozirgi davrda raqamli texnologiyalar shiddat bilan rivojlanib boryapti va har bir sohada zamon bilan hamqadam odimlashni taqozo etmoqda. Axborot olish va foydalanish tezligi juda yiriklashgan hozirgi davrda ta’lim tizimida raqamli texnologiyalardan foydalanish ta’lim sifatini oshirish va ijtimoiy faol yoshlarni tarbiyalashda katta axamyatga ega. Biz ilgari ta’lim dasturlarini an’anaviy usuli ya’ni ma’ruzani yirik xajmli kitoblar va qo‘llanmalar orqali amalga oshirilgan shaklida olib borganmiz. Bu esa o‘z navbatida ta’lim sifatining u qadar yuqori bo‘lishini ta’minlamagan. Hozirda ta’lim sifatini ko‘tarishda ta’limni raqamlashtirish jarayoni boshlangan. Ta’lim tizimining hozirgi holati noan’anaviy ta’lim texnologiyalarining roli ortib borayotgani bilan tavsiflanadi. Ta’lim oluvchi tomonidan ularning yordami bilan bilimlarni o‘zlashtirish an’anaviy texnologiyalarga qaraganda ancha tezdir. Ushbu texnologiyalar bilimlarni rivojlantirish, egallash va tarqatish xarakterini o‘zgartiradi, o‘rganilayotgan fanlarning mazmunini chuqurlashtirish va kengaytirish, uni tezda yangilash, samaraliroq o‘qitish usullarini qo‘llash, shuningdek, har bir kishi uchun ta’lim olish imkoniyatini sezilarli darajada kengaytirish imkonini beradi.

Tadqiqot materiallari va metodologiyasi. Raqamli texnologiyani o‘zi – xo‘jalik yuritishning bir zamonaviy shakli bo‘lib. unda ishlab chiqarish va boshqarishning asosiy omili sifatida raqamli ko‘rinishdagi katta ma’lumotlar majmui va ularni qayta ishlash jarayoni xizmat qiladi. Olingan natijalarni amaliyotda ishlatish esa an’anaviy ho‘jalik yuritish shakllariga nisbatan ancha katta samaradorlikka erishishga imkon beradi. Misol sifatida turli xildagi avtomatik ishlab chiqarish jarayonlarini, 3D-texnologiyasini, bulutli texnologiyalarni. masofaviy meditsina xizmatlari ko‘rsatishni, aqlli texnologiyalar yordamida mahsulot yetishtirish va uni yetkazib berishni, turli xildagi tovarlarm saqlash va ularni sotish jarayonlarini keltirish mumkin.

Biz bu maqolada ta’lim tizimida raqamlashtirishni o‘rniga to‘xtalib o‘tamiz. Raqamli texnologiyalar orqali ta’lim berilsa ta’lim oluvchilarga ta’lim olish usullari osonlashmoqda. Bunda esa ta’lim tizimi vostilari rolini multimediyalar, kodoskop, kompyuter, noutbuk, internetga ulangan televizorlar, telefon liniyalar, smart doska, proyektorlar bajarib beradi.

Ta’lim beruvchilarga bunday vositalar bilan dars mashg‘ulotlar o‘tkazish ta’lim sifatini oshirishni ta’minlaydi. Onlayn darslarda raqamli texnologiyalar qo‘llanilishi yaxshi samara berishi hammamizga ma’lum. Masalan, televideniya orqali berib borilgan onlayn darslar raqamli ta’lim olishning bir turi deb olsak bo‘ladi. Demak, raqamli ta’limda: - xohlagan joyida va xohlagan vaqtida ta’lim olish imkoniga ega; - internetdan axborot olish va undan foydalanish madaniyati shakllanadi; - ta’lim tizimini yangi bosqichga ko‘taradi; - vaqt va mablag‘ sarfini keskin kamaytiradi; - “raqamli dunyo”da yo‘qolib qolmaslik va yaxshi ish topishda ustunliklarga ega bo‘lishgi kabilar.

Tadqiqot natijalari. Raqamli ta’lim tizimini yuksalishiga Wi-Fi zonalar IT parklar ochilishi katta xizmat qiladi. Ta’lim beruvchilarni raqamli texnologiyalar bilan ishlash qobiliyatini o‘stirish va internet orqali turli ochiq kurslar tashkil etish imkoniyati tug‘iladi. Bu esa o‘z navbatida ta’lim beruvchilarni o‘z ustida ko‘proq ishlashi va raqobat tufayli ta’lim sifatini yanada ortishiga xizmat qiladi. Bundan tashqari raqamli texnologiyalar yana sun’iy intellekt texnologiyasini joriy etish soliq to‘lashdan bo‘yin tovlash holatlarini aniqlash, firibgarliklarni oldini olish, ma’lumotlarni tahlil qilish va takrorlanuvchi jarayonlarni avtomatlashtirish hamda shaffoflikni oshirishda qo‘l kelsa, katta hajmli ma’lumotlar – **Big data** [ˈbɪg ˈdeɪtə] esa soliq organlariga kelib tushadigan katta hajmdagi ma’lumotlarni saqlash, qayta ishlash, tushumlarni yanada yaxshiroq bashorat qilish hamda to‘lovchilar va soliq organlari o‘rtasidagi hujjat almashinuvini yaxshilash imkoniyatini beradi.

Raqamli texnologiyalarni o‘zlashtirish insoniyat tarixidagi boshqa innovatsiyalarga qaraganda tezroq sodir bo‘lmoqda: bor-yo‘g‘i yigirma yil ichida raqamli texnologiyalar rivojlanayotgan mamlakatlar aholisining qariyb 50 foizini qamrab olishga va ularning yordami bilan jamiyatlarni o‘zgartirishga muvaffaq bo‘ldi. Masalan, sog‘liqni saqlash sohasida sun’iy intellektdan foydalanishga asoslangan ilg‘or texnologiyalar inson hayotini saqlab qolish, kasalliklarni aniqlash va umr ko‘rish davomiyligini oshirishga xizmat qilmoqda.

Ta’lim sohasida virtual o‘quv muhiti va masofaviy ta’limning ta’minlanishi talabalarga boshqa imkoniyatga ega bo‘lmagan dasturlarda qatnashish imkonini berdi. Bundan tashqari, blokcheynga asoslangan tizimlardan foydalanish orqali davlat xizmatlaridan foydalanish qulay bo‘ladi, ularni ta’minlovchi institutlar mas’uliyatini oshiradi va sun’iy intellektdan foydalanish natijasida jarayonlar kamroq byurokratik bo‘ladi. Katta ma’lumotlar, shuningdek, yanada moslashuvchan va aniq siyosat va dasturlarga olib kelishi mumkin.

Muhokama. Raqamli texnologiyaldan bulutili texnologiyalar- internet foydalanuvchisiga on-layn xizmat sifatida kompyuter resurslarini taqdim etiladigan ma’lumotlarni qayta ishlash texnologiyalaridir. Raqamli texnologiyalar - narsalar interneti (Internet of Things, IoT). Raqamli axborotga asoslangan asosiy texnologiyalardan biri bu narsalar internetidir. Ko‘pgina maishiy texnikaning elektr tarmog‘iga ulanganligi odatiy holdir, lekin asta-sekin jismoniy dunyoning tobora ko‘proq ob’ektlari Internetga ulanadi, bu esa ma’lumot to‘plash va hatto ushbu ob’ektlarni masofadan turib boshqarish imkonini beradi. Darhaqiqat, Internetda ob’ekt va tashqi dunyoning turli parametrlarini o‘z ichiga olgan va Internet orqali

ob’ektni boshqarish imkonini beruvchi jismoniy ob’ektning virtual nusxasi paydo bo‘ladi.

Narsalar internetiga misol qilib, kinoteatrdagi proyektor kabi qurilma texnik qo‘llab-quvvatlash xizmatiga aniqlangan nosozlik va rejadan tashqari ta’mirlash doirasida almashtirilishi kerak bo‘lgan ehtiyot qismlar ro‘yxati haqida xabar yuboradi. Raqamli texnologiyalar - kengaytirilgan haqiqat (AR). Eng istiqbolli - bu virtual dunyodan real dunyoga ob’ektlarni qo‘shish imkonini beruvchi to‘ldirilgan reallik texnologiyasi.

Tasavvur qiling-a, ko‘chada yurib, atrofingizdagi narsalar va odamlar haqida qo‘shimcha ma’lumotni ko‘rasiz. Kengaytirilgan haqiqat misollari allaqachon mavjud va faol qo‘llanilmoqda, ba’zi istiroxat bog‘larida siz jismoniy dunyodagi ob’ekt va virtual dunyo o‘rtasidagi aloqalarni ko‘rsatadigan belgilarni allaqachon ko‘rishingiz mumkin. To‘ldirilgan reallik elementlariga ega o‘yinlar faol tarqalmoqda, kiyim-kechak sotiladigan do‘konlarda virtual oyna va jihozlash xonalari mavjud, to‘ldirilgan reallik allaqachon avtomobillarda sinovdan o‘tkazilmoqda. Shu bilan birga, to‘ldirilgan reallik texnologiyalaridan faol foydalanish yo‘lida hal qilinishi kerak bo‘lgan masalalar ham mavjud.

Masalan, geopozitsiyani aniqlash vositalarining aniqligi hali ham etarli emas yoki jismoniy dunyo ob’ektlarini ularning virtual nusxalari bilan bog‘lash uchun kompyuterda ko‘rish texnologiyalari nomukammal. Biroq, ishonch bilan aytish mumkinki, yaqin kelajakda ushbu texnologiya yutuq bilan bog‘liq bo‘lishi mumkin.

Xulosa. Raqamli texnologiyalar - virtual haqiqat (Virtual haqiqat, VR). Insonning virtual haqiqatda bo‘lishiga imkon beruvchi texnik qurilmalarning paydo bo‘lishi ushbu texnologiyani ko‘ngilochar sohada talabga aylantirdi. Virtual haqiqatning dubulg‘alari va kostyumlari, ixtisoslashtirilgan xonalar sizga noma’lum dunyoga kirishga imkon beradi, bu sizning barcha harakatlaringiz virtual olamdan javob berish uchun dasturlashtirilgan, bu sizga o‘zingizni 100% ga cho‘mish imkonini beradi.

Ta’lim sohasida VR o‘quvchilarning bilim olish uslubini o‘zgartiradi.Sinf xonalarida VR dan foydalanish o‘quvchilarga bilimlarni yaxshiroq o‘zlashtirish va qiyin tushunchalarni tasavvur qilish orqali o‘rganishga yordam beradi.

Xulosa sifatida aytish mumkinki raqamli texnologiyalarni turli sohalarga nafaqat ta’lim tizimiga joriy etilishi mamlakat ta’lim tizimini modernizatsiya qilishda katta rol o‘ynaydi. Zamonaviy ta’limni tashkil etish va ta’lim samaradorligini ortishiga xizmat qiladi.

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МАШИНАСОЗЛИК МАТЕРИАЛШУНОСЛИГИДА ТАЛАБЛАР

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Замонавий технологиялар ютуқларини барча соҳаларига жалб қилиниши, инсон меҳнатини ҳар томонлама енгиллаштиришга, унга юклатилган вазифаларни бежирим бажаришга, меҳнат унумдорлиги юқори бўлиши ҳамда хавфсиз ишлашига олиб келади. Технологик қурилмаларнинг таркиби бўлган механизм ва агрегатлар деталларининг ишлаш муддатларини узайтиришда техник қаровнинг, унинг таркибий қисмиларидан бири, доимий равишда ишқаланиш кучи таъсирида ишловчи деталларда ҳосил бўладиган зарарли кучлар миқдорини минимумга камайтиришдир. Унда мойлаш ишларини ўрни катта. Бунда қурилманинг сифатли, аниқ ва узоқ муддат ишлаши билан бир қаторда унга белгиланган барча талаблар доирасида ишлай олишини, маълум ичида бир неча хоссаларини сақлаб қолишини ҳам назарда тутилади. Пировардда эса шу каби маҳсулотларни ишлаб чиқарувчи мутахассисга сифатли маҳсулот яратиш, истеъмолчига эса маҳсулотни мақсадли ишлата билиш мажбуриятини юклайди.

Технологик таълим йўналишини тамомловчи мутахассисларининг келгуси фаолиятларида ишлаб чиқаришнинг тегишли соҳаларида ана шу талабларни қандай даражада тушуниб етганликлари, унга амал қилишлари,

муаммони назорат қила билиш баробарида маҳсулотларни сифати ва истеъмолбоплигига баҳо бера олиш масалалари муҳимдир. Бундай масъулият улардан ҳар бир кўрилаётган масалага жиддий ёндошишларини, амалий тавсияларга тўла амал қила билишларини тақазо этади.

Мутахассисларга ўргатилаётган материалшунослик фани асосларини улар томонидан чуқур ва мукаммал тарзда ўзлаштира олиш бу муаммолар ечимини осон топишда амалий ёрдам беради. Қурилмаларда ишлатиладиган мойловчи материаллар агрегат ҳолатига, олиниш усулига ва мақсадли қўлланишига қараб классификацияланади. Бу турдаги мойловчи материал сифатида қўлланиладиган ашёлар нефтдан олинган суюқ-мой, қаттиқ–қаттиқ мойловчи (графитли, молибден дисульфидли, тўлдиргичли полимерлар) ва мазсимон-пластик мойловчиларга ажратилган. Олинишига кўра эса нефт маҳсулотидан, синтетик ва аралаш турлари мавжуд. Биринчи туридан олинадиганлар мойлар асосини нефть, аралашни эса - нефть ва синтетик компонентлар ташкил қилади [1-2].

Технологик қурилмаларда қўлланиш мақсадларига кўра:

- ИЁД да қўлланиладиган мотор мойлари;
- газтурбина мойлари; трансмиссион мойлар;
- индустриал мойлар мавжуд.

Замонавий машинасозликда аниқ мақсадлар учун белгиланган махсус мой (компрессион, трансформатор, музлатгичлар ва х.к) лар ҳам ишлаб чиқарилади ва қўлланилади. Шуни унитмаслик лозимки, SAE и ISO рақамлари фақат маьлум даражадаги қовушоқликдаги мойларни танлашга ёрдам бериши мумкин холос, аммо бошқа у ёки бу характеристикасини назарда тутмайди. Масалан, ҳаттоки SAE бўйича мойловчи материалларнинг қовушоқлик синфи бир хил бўлганда ҳам гидравлик мойни мотор мойи билан алмаштирилиши мумкин эмас.

Бу турдаги маҳсулотлар ишлатилишда, сақлаш ва транспортировка қилиш талабларига максимал даражада жавоб беришлари шарт ва умумий ҳолда уларга қуйидаги талаблар белгиланган:

- мойлаш хоссасини мавжудлиги, яьни, антифрикцион, ейилишбардошлик, сидирилишга қаршилик кўрсатиш (молибден дисульфидили) хоссасини берувчи хусусиятини уйғунлашганлиги;
- қовушоқлилик, ҳароратга чидамлилик ва дисперсион хоссага эгалилиги, яьни, қовушоқлик ва бошқа физик кўрсатгичларини ҳарорат ўзгаришига кам боғлиқ бўлиши;
- хоссани стабиллиги, яьни, сифат кўрсатгичларини сақлашда, двигателларни берилган эксплуатацион шароитда узоқ муддат ишлаш даври-да ҳам бу хоссаларни сақланиши;
- антикоррозион ва консервацион хоссасини; яьни, конструкцион материалларни коррозиядан сақлаш хоссасига эгалиги;
- ювиш хоссаси, яьни, бунда двигателда ҳосил бўладиган чўкиндиларни пайдо бўлишини олдини олиш хоссаси;
- двигателдан иссиқликни ва ейилишда ҳосил бўладиган маҳсулотни олиб кетиш ва сирпанувчи сиртларни жипслигини таьминлаш;

- минимал заҳарлилик ва ёнғинга чидамлилик;
- юқори иқтисодий маҳсулдорлик.

Базавий нефтъ мойлари олиниш усулларига кўра учга: дистиллятли-мазутни ҳайдашда ажратиладиган, алоҳида дистиллятларни тозалаш усули билан олинган, қолдиқ-гудронни қайта ишлашда олинадиган ва аралаш(компаундированный) дистиллятли мойни қолдиқ билан аралаштиришдан олинганларга бўлинади.

Базавий мойни танлаш қовушоқлик катталиги билан аниқланади, кичик қовушоқлик мотор мойи учун дистиллятли, ўртачаси учун - аралаш ва юқорисига-қолдиқ турлари ишлатилади.

Техник-эксплуатацион ва иқтисодий кўрсатгичларини ошириш учун қўшимчалар киритилиб, уларнинг миқдори 25-30% чегарасида бўлади ва бундаги механизмларни чуқур ўзлаштирилиши зарур.

Технологик қурилмаларда ишлатиладиган мойлардаги мойлаш, стабиллик, чўкиндини олдини олиш, антикоррозион ва консервацион, кўпиклашга қарши ва демульсион ҳамда ишга яроқлилик хоссаларини билиш лозим.

Хулоса қилиб айтганда, ҳар бир мутахассис нафақат маҳсулотни ишлаб чиқаришни, балки, ундан амалда унумли фойдалана билиши керакли самара берар экан.

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O‘ZBEKISTONDA MAKTABDAN TASHQARI TA’LIMNING RIVOJLANISHI VA TARIXI

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Annotasiya. Ushbu maqolada O‘zbekistonda maktabdan tashqari ta’limning tarixi, rivojlanishi va mohiyati, maktabdan tashqari ishlar o‘z mohiyatiga ko‘ra o‘quv va tarbiyaviy xususiyatga ega ekanligi va ta’lim muassasalarida tashkil etilishi, maktabdan tashqari ta’limga doir normativ-huquqiy hujjatlar va undagi qo’yilgan vazifalar ochib berilgan.

Kalit so‘zlar. Maktabdan tashqari ta’lim, maktabdan tashqari ta’lim muassasalari, ta’lim-tarbiya, o’quvchi.

Annotation. This article describes the history, development and essence of out-of-school education in Uzbekistan, the educational and educational nature of out-of-school work in addition to its essence and organization in educational institutions, the normative-legal acts on out-of-school education and the tasks set in them.

Key words. After-school education, after-school institutions, education, student.

Аннотация. В данной статье раскрыта история, развитие и сущность внешкольного образования в Узбекистане, учебно-воспитательный характер внешкольной деятельности и ее организация в образовательных учреждениях, нормативно-правовые акты по внешкольному образованию и задачи, поставленные в них.

Ключевые слова. Внешкольное образование, внешкольные образовательные учреждения, образовательно-воспитательные учреждения, учащийся.

Kirish. Maktabdan tashqari ishlar o‘z mohiyatiga ko‘ra o‘quv va tarbiyaviy xususiyat kasb etib, maxsus ta’lim muassasalarida tashkil etiladi. O‘zbekiston Respublikasining “Ta’lim to‘g‘risida”gi Qonunida maktabdan tashqari sharoitlarda uyushtiriladigan o‘quv va tarbiya ishlari yagona nom bilan “maktabdan tashqari ta’lim” deb yuritilgan. Mazkur hujjatda maktabdan tashqari ta’lim mohiyati quyidagi tarzda ochib berilgan: “Bolalar va o‘smirlarning yakka tartibdagi ehtiyojlarini qondirish, ularning bo‘sh vaqti va dam olishini tashkil etish uchun davlat organlari, jamoat birlashmalari, shuningdek, boshqa yuridik va jismoniy shaxslar madaniy-estetik, ilmiy, texnikaviy, sport va boshqa yo‘nalishalrda maktabdan tashqari ta’lim muassasalarini tashkil etishlari mumkin” [2]. 1993 yilda qabul qilingan “Sinfdan va maktabdan tashqari tarbiyaviy ishlar Konsepsiyasi”da esa maktabdan tashqari sharoitlarda tashkil etiladigan ishlarning umumiy mohiyati batafsil ochib berilgan. Unda ko‘rsatilishicha, maktabdan tashqarida tashkil etiladigan ta’lim-tarbiyaning bosh maqsadi “yosh avlodni ma’naviy-axloqiy tarbiyalashda xalqning boy milliy, ma’naviy-tarixiy an’analarga, urf-odatlari hamda umumbashariy qadriyatlariga asoslangan samarali tashkiliy, pedagogik shakl va vositalarni ishlab chiqib amalga joriy etish” [2] dan iboratdir.

Tadqiqot maqsadi. Maktabdan tashqari ta’limning rivojlanishining nazariy asoslari, pedagogik shart-sharoitlarini aniqlash.

Tadqiqotni tashkil qilish uslublari. Tadqiqot jarayonida tahlil, umumlashtirish usullaridan foydalanildi.

Tadqiqot natijalari va muhokamasi. Tadqiqotni olib borish davrida nazariy tahlilni tizimli yondashuv asosida maktabdan tashqari ishlarda o’quvchilarga ta’lim-tarbiyasiga metodologik asos bo‘lib xizmat qiluvchi manbalarni ma’lum guruhlarga ajratgan holda amalga oshirish maqsadga muvofiq deb topildi. Buning uchun o‘quvchilarga ta’lim-tarbiya berish tizimini shakllantiruvchi yo‘nalishlar nazariy tahlil asosini tashkil etuvchi guruhlar etib belgilandi.

1. Maktabdan tashqari ta’lim tizimi va uni boshqarish.

2. O‘quvchilarni har tomonlama yetuk, erkin va mustaqil fikrli shaxs sifatida kamolga yetkazish.

3. O‘quvchilarda jamoaviylik (oilada, o‘zlari mansub bo‘lgan mikroguruhlarda, mehnat jamoasida) hissini tarbiyalash.

4. O‘quvchilarda shaxsiy va yaqinlari hayoti xavfsizligini ta’minlash, salomatliklarini muhofaza qilish ko‘nikmalariga ega bo‘lishlariga erishish.

Ma’lumki, o‘quvchilar bilan tashkil etiladigan maktabdan tashqari ishlarning asosiy qismi maktabdan tashqari ta’lim muassasalarida amalga oshiriladi. Shu sababli tadqiqot davrida maktabdan tashqari ta’lim muassasalari, ular faoliyatining yo‘lga qo‘yilishi, maktabdan tashqari ta’lim tizimini boshqarish masalalari qay darajada o‘rganilganligini aniqlashga ham alohida e’tibor qaratildi.

J.K.Fozilov tomonidan bajarilgan ilmiy izlanishda maktabdan tashqari ta’lim tizimini boshqarish masalasi tadqiq etilgan bo‘lib, unda qayd qilinishicha, “maktabdan tashqari ta’lim” tushunchasi birinchi marta XIX asrning ikkinchi yarmida bir qator Yevropa davlatlarida kattalar uchun xalq kutubxonalari, xalq uylari, xalq universitetlari, yakshanba maktablari, ishchi klublari va boshqa madaniy-ma’rifiy muassasalarning tashkil topishi bilan bog‘liq holda qo‘llanila boshlagan.

Sobiq Sho‘ro tuzumi davrida maktabdan tashqari ta’lim xalq ta’limining umumiy tizimiga kiritilgan va uning faoliyatiga rahbarlik dastlab “Siyosiy-ma’rifiy boshqarma”, so‘ngra esa “Madaniy-ma’rifiy ishlar boshqarmasi” deb nomlanuvchi muassasa tomonidan amalga oshirilgan” [2].

Ma’lumki, maktabdan tashqari ta’lim muassasalarida “maktabdan tashqari ta’lim” tashkil etiladi. O‘quvchilarni tizimli yondashuv asosida maktabdagi tashqari ishlarda hayotga tayyorlash ham mohiyatiga ko‘ra maktabdan tashqari ta’lim va tarbiya jarayonining muhim tarkibiy qismi sifatida aynan maktabdan tashqari ta’lim muassasalari faoliyati doirasida olib boriladi. Sobiq Ittifoq hududida birinchi maktabdan tashqari ta’lim muassasasi 1918 yilda o‘z faoliyatini boshlagan. Moskva shahrida faoliyat ko‘rsatgan “Yosh tabiatsevarlarning biologik stansiyasi”ning “izdoshi” sifatida Leningrad (hozirgi Sankt-Peterburg) shahrida 1923 yilda “Badiiy maktab” sifatida tashkil etilgan maktabgacha ta’lim muassasasi esa “O‘quvchilar uylari” (o‘sha davrdagi “Pionerlar uylari”) sifatida tashkil topgan bo‘lsa, “O‘quvchilar saroyi” (“Pionerlar saroyi” nomi bilan) o‘z faoliyatini 1935 yilda Xarkov shahrida qo‘lga qo‘ygan.

Keyinchalik maktabdan tashqari ta’lim muassasalari davlat, jamoat hamda yo‘naltiruvchi-metodik tuzilmalar sifatida umumiy o‘rta ta’lim maktablari va bolalar tashkilotlari bilan mustahkam aloqada faoliyat olib borgan. Bu kabi muassasalar bolalar hamda o‘smirlar bilan fan, texnika, madaniyat, sport va turizm sohalari bo‘yicha faoliyat yuritishlari bilan bir-birlaridan farqlangan. Maktabdan tashqari ta’lim muassasalarining quyidagi turlari ommalashgan: o‘quvchilar saroylari va uylari; kasaba uyushmalarining madaniyat uylari va klublari qoshida tashkil etiluvchi bolalar to‘garaklari; bolalar hiyobonlari; maxsus ta’lim muassasalari (yosh texniklar, yosh tabiatshunoslar hamda bolalar ekskursiya-turistik stansiyalari, bolalar va o‘smirlar sport maktablari, bolalar temir yo‘llari, yosh avtomobilchilar va yosh dengizchilar klublari, bolalar oromgohlari va boshqalar. Shuningdek, bolalar kutubxonalari, teatrlari va kinoteatrlari ham qo‘shimcha ta’lim muassasalari sirasidan

o‘rin olgan.

Keyinchalik faoliyat yo‘nalishlariga ko‘ra maktabdan tashqari ta’lim muassasalariga rahbarlik Xalq ta’limi, Madaniyat yoki Aloqa va avtomobil yo‘llari hamda Temir yo‘l vazirliklari, shuningdek, kasaba uyushmalar, jismoniy tarbiya va sport qo‘mitalari va hokazolar tomonidan amalga oshirilgan.

Mazkur davrlarda maktabdan tashqari ta’lim muassasalarining faoliyatlari namunaviy dasturlar asosida yo‘lga qo‘yilgan bo‘lib, ular tomonidan quyidagi yo‘nalishlardagi ishlar amalga oshirilgan:

1) ommaviy-tashkiliy ishlar – slyotlar, bayramlar, lektoriyalar, kinofestivallar, ko‘riklar, tanlovlar, uchrashuvlar, ko‘rgazmalar, o‘yinlar va hokazolar;

2) yo‘naltiruvchi-metodik ishlar – bolalar tashkilotlari faollari, yo‘riqchilar, guruh yetakchilari va boshlang‘ich sinflar yo‘lboshchilari (vojatiylar), pedagoglar, to‘garak hamda klublar rahbarlari va boshqalar o‘rtasida, shuningdek, maktabdan tashqari ta’lim yutuqlari umumlashtirish va ommalashtirish;

3) o‘quv ishlari – turli to‘garaklar, klublar, jamiyatlar, qo‘shiq va raqs ansambllari, teatrlar, orkestrlar va boshqalar faoliyatini nazariy manbalar bilan ta’minlash.

Ushbu muassasalar tomonidan olib borilgan ishlar quyidagi mazmuniga ega bo‘lgan:

1) ijtimoiy-siyosiy – qizil iztoparlar otryadi, o‘lkashunoslik, jangovar va mehnat shon-shuhrati muzeylari, bolalar tashkilotlari tarixi, baynalmilal do‘stlik klublari, agitbrigadalar va boshqalar;

2) o‘quv – to‘garaklar, klublar, o‘quvchilar ilmiy jamiyatlari, bolalar ijodiyoti ko‘rgazmalari va hokazolar;

3) ijtimoiy-foydali – qurilishlar hamda qishloq xo‘jaligi ishlab chiqarishiga asoslangan xo‘jaliklarga yordam, turar-joylarni ko‘kalamzorlashtirish, o‘quv-ishlab chiqarish brigadalari, muzeylar va ilmiy-tadqiqot muassasalarining topshiriqlarini bajarish va boshqalar;

4) jismoniy tarbiya va sport – sport va turistik klublar, to‘garaklar, jamiyatlar, spartakiadalar, harbiy o‘yinlar, bolalar gazetalari sovrini uchun o‘tkaziluvchi musobaqalar va hokazolar;

5) badiiy-ijodiy – ansambllar, xoreografik jamoalar, orkestrlar, qo‘g‘irchoq teatrlari, muziqa klublari, olimpiadalar, ko‘riklar, festivallar va boshqalar.

O‘zbekistonda dastlabki o‘quvchilar saroyi 1935 yilda Toshkentda tashkil etilgan.

J.K.Fozilovning fikriga ko‘ra, maktabdan tashqari ta’lim respublika uzluksiz ta’lim tizimi doirasida o‘quvchilarning doimiy ehtiyojlarini qondirish, bo‘sh vaqtlarini ilmiy asosda, to‘g‘ri kriminogen holatlarning oldini olish, “ko‘cha o‘quvchilari” maqomiga ega bo‘lgan aholi toifasi shakllanishiga qarshi keskin chora-tadbirlarni belgilash, ijtimoiy yordamga muhtoj o‘quvchilarni qo‘llab-quvvatlash asosida ularni ijtimoiy hayotga tayyorlashga yo‘naltirilgan pedagogik faoliyatni tashkil etishi zarur [3].

F.Xidirova tomonidan esa oilada qizlarni mustaqil oilaviy hayotga tayyorlash muammosi tadqiq etilgan. Muallifning e’tirof etishicha, oilada qizlarni mustaqil

oilaviy hayotga tayyorlash murakkab pedagogik jarayon sanalib, mazkur jarayonning samarali tashkil etilishi bu boradagi muayyan kamchilik va muammolarning bartaraf etilishi bilan belgilanadi. Ayni vaqtda esa oilada qizlarni mustaqil oilaviy hayotga tayyorlash borasida bir qator muammolar mavjud bo‘lib, ular quyidagilardan iboratdir:

1. Ota-onalarning oilada qizlarni mustaqil oilaviy hayotga tayyorlash borasida yetarli darajada psixologik va pedagogik ma’lumotga ega emasliklari.

2. Ota-onalarga o‘smir qizlarni oilada mustaqil oilaviy hayotga tayyorlash haqidagi bilimlarni beruvchi manbalarning mavjud ehtiyojning qondira olmasligi.

3. Oila, jumladan, ota-onalarga ijtimoiy tashkilotlar, ta’lim muassasalari hamda muayyan mutaxassislik yo‘nalishlarida faoliyat yurituvchi idoralar tomonidan ko‘rsatilayotgan amaliy yordamning ijtimoiy ehtiyojlarni qondira olmayotganligi.

4. Ommaviy axborot vositalari orqali oila mohiyati, oilaviy hayotni tashkil etish, farzandlar tarbiyasini muvaffaqiyatli olib borish, oilaviy munosabatlar mazmuni, shuningdek, oilaviy nizo va ajrimlarni keltirib chiqarayotgan sabablar va ularni bartaraf etish chora-tadbirlari xususida namoyish (yoki chop) etilayotgan ko‘rsatuv, eshittirish yoki chiqishlar saviyasining yuqori emasligi.

5. Respublikada yuz berayotgan ijtimoiy iqtisodiy o‘zgarishlar aholi ma’naviy axloqiy qarashlarining yangicha mazmun kasb etishiga olib keldi. Ayni vaqtda aholi ruhiyatida ro‘y berayotgan kechinmalarning aksariyat qismini moddiy ehtiyojlarni qondirish ishtiyoqi egallagan bo‘lib, bu holat o‘z-o‘zidan ma’naviy ehtiyojlarni qondirish istagidan ustun mavqe egallashiga sabab bo‘lmoqda [4].

O‘zbekiston Respublikasi Prezidentining “Xalq ta’limi tizimidagi maktabdan tashqari ta’lim samaradorligini tubdan oshirish chora-tadbirlari to‘g‘risida” 2019-yil 30-sentabrdagi PQ-4467-son qaroriga muvofiq quyidagilar dasturning asosiy yo‘nalishlari etib belgilandi: to‘garaklarga malakali mutaxassislarni jalb etish va to‘garak rahbarlari malakasini oshirish tizimini takomillashtirish; umumiy o‘rta ta’lim muassasalari va “Bolalar kutubxonalari” kutubxonachilari malakasini muntazam ravishda oshirish; “Barkamol avlod” bolalar maktablari xodimlari va to‘garak rahbarlari ish haqini bosqichma-bosqich oshirish; xorijiy ekspertlarni jalb etgan holda mashg‘ulotlar jarayoniga jahon amaliyotida keng qo‘llaniladigan zamonaviy ta’lim dasturlari va texnologiyalarini joriy etish, o‘quv reja va dasturlarni takomillashtirish; zamonaviy to‘garaklar, xususan STEAM–ta’lim bo‘yicha to‘garak rahbarlari uchun o‘quv-metodik qo‘llanmalar va ko‘rgazmali vositalarni yaratish; umumiy o‘rta ta’lim maktablari kutubxonalarini o‘quvchilar dunyoqarashini oshirishga, ijodiy fikrlashga o‘rgatadigan qo‘shimcha adabiyotlar bilan ta’minlash; milliy va jahon adabiyotlarini qardosh tillarga tarjima qilish va markazlashgan holda nashr etish; “Bolalar kutubxonalari” va umumiy o‘rta ta’lim muassasalari uchun jahon va milliy adabiyot durdonalariga kiruvchi asarlar audiokitob shakllarini yaratish; umumiy o‘rta ta’lim maktablari va “Barkamol avlod” bolalar maktablarida zamonaviy to‘garaklar faoliyatini yo‘lga qo‘yish; mahalliy budjet mablag‘lari hisobidan xalqaro ko‘rik-tanlovlarda g‘olib bo‘lgan to‘garak a’zolarini rag‘batlantirish tizimini joriy etish; “Barkamol avlod” bolalar maktablari hamda umumiy o‘rta ta’lim muassasalari kutubxonalari moddiy-texnika bazasini mustahkamlash; ilg‘or xorijiy tajribani hisobga olgan holda zamonaviy to‘garaklarni

zarur jihozlar bilan ta’minlash; umumiy o‘rta ta’lim muassasalari kutubxonalariga “Elektron kutubxona” tizimini joriy qilish, kutubxonalarda Wi-Fi zonalarini tashkil etish [1].

Xulosa. Hozirgi kunda, maktabdan tashqari ta’lim, xususan, STEAM–ta’limi bo‘yicha to‘garaklar o‘quv-metodik ta’minotini yaratadi hamda o‘quvchilarni kasbga yo‘naltirish ishlarini tashkil etadi. Har yili umumiy o‘rta ta’lim muassasalari, “Barkamol avlod” bolalar maktablari va “Bolalar kutubxonalari” tomonidan 5 ta muhim tashabbus, kitobxonlik va boshqa ijodiy ko‘rik-tanlovlar, festivallarini o‘tkazish bo‘yicha kalendar reja ishlab chiqiladi va tasdiqlanadi.

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ОПТИЧЕСКОЕ ПОГЛОЩЕНИЕ СТРУКТУРЫ СТЕКЛО/FTO/CdS

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Аннотация. Пленки, полученные CdS методом электроосаждения имели высоко ориентированные кристаллиты с гексагональной структурой (типа вюртцита) и ширина запрещенной зоны большинства осажденных образцов уменьшилась после термообработки для обоих наборов. Запрещенной зоны 2,42 эВ в выращенном состоянии, которая уменьшается до 2,25 эВ после термообработки. Те же тенденции наблюдались и для второго набора образцов. Экспериментально доказано, что процесс термообработки является решающим вопросом в процессе создания тонкопленочных устройств.

Ключевые слова. Электроосаждение, термообработка, плоскость, оптическое поглощение.

Пленки, полученные CdS методом электроосаждения имеют высоко ориентированные кристаллиты с гексагональной структурой (тип вюртцита) с

преимущественной ориентацией вдоль оси с {направление (101)} с дифракционными пиками, дающими d=3,160 Å, перпендикулярными плоскости подложки с низкая интенсивность пиков Графики оптического поглощения для осажденного и термообработанного некоторых выбранных образцов (наборы 1 и 2) показаны на рис. 1 и рис. 2. Значения E_g определяли путем построения графика зависимости квадрата поглощения (A2) от энергии фотона (*hv*). Судя по рис. 1, наилучшие напряжения роста для осажденного и термообработанного образцов составляют 852 мВ и 925 мВ соответственно. Аналогично, для второго набора (рис. 2) напряжения роста были смещены вверх из-за низкого pH, и лучшее напряжение роста составляет 1500 мВ после термообработки.

Из графиков, показанных на рис. 1, видно, что образец, выращенный при катодном напряжении 925 мВ, после осаждения имел ширину запрещенной зоны, близкую к 0,0 эВ. Это ожидаемо, поскольку это поверхность, богатая Cd, и ширина запрещенной зоны металла равна нулю. После термообработки при 400 ^{o} C на воздухе в течение 20 минут ширина запрещенной зоны уменьшилась до 2,42 эВ, что согласуется с теоретическим значением для тонких пленок CdS [1; с. 4]. Однако образец, выращенный при 852 мВ, имеет ширину запрещенной зоны 2,42 эВ в выращенном состоянии, которая уменьшается до 2,25 эВ после термообработки. Те же тенденции наблюдались и для второго набора образцов.

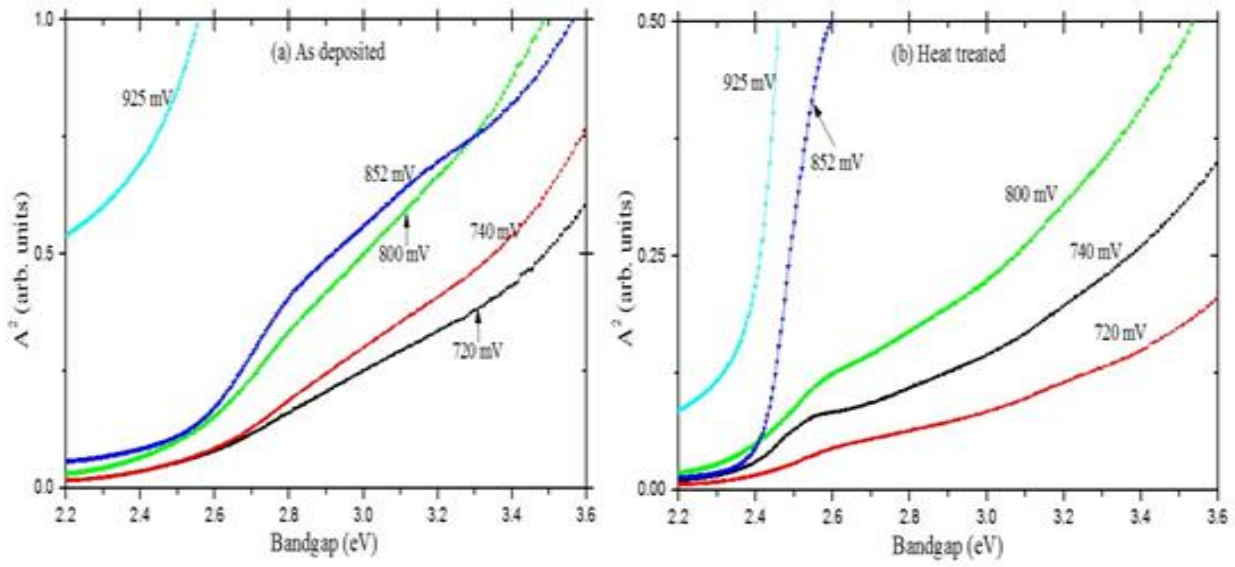

Рис. 1. Кривые оптического поглощения для (а) осажденного и (б) термообработанного стекло/FTO/CdS, выращенного при различных напряжениях на подложках стекло/FTO.

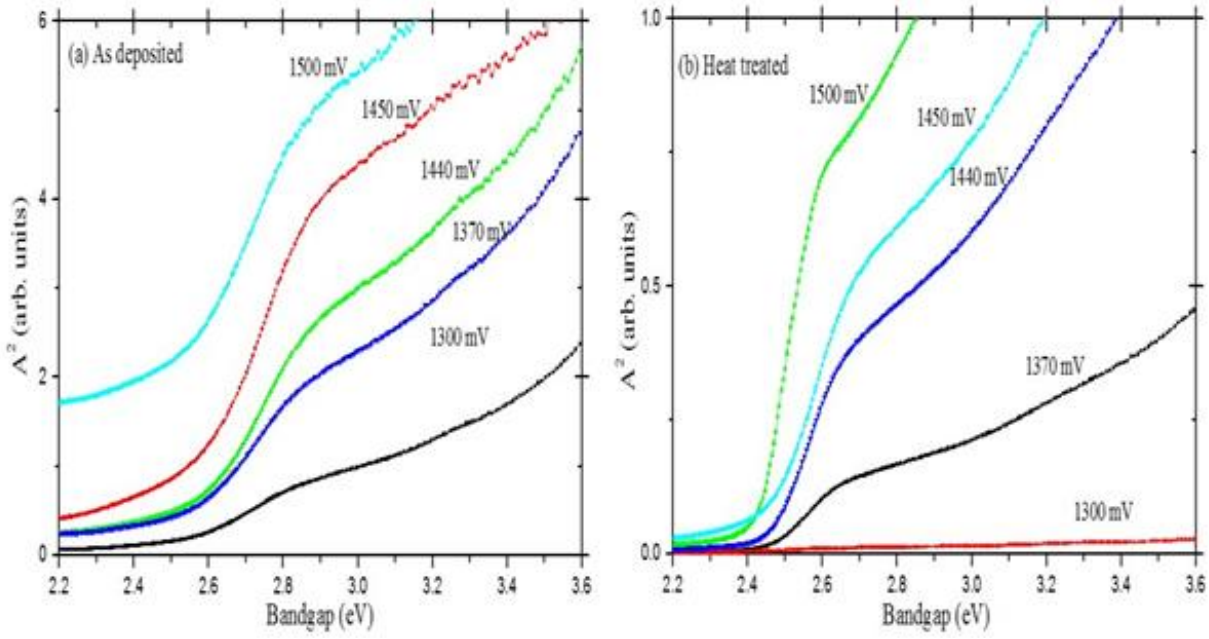

Рис. 2. Кривые оптического поглощения для (а) осажденного и (б) термообработанного стекло/FTO/CdS, выращенного при различных напряжениях на подложках стекло/FTO.

Поэтому термическая обработка является жизненно важным этапом, аналогичным процессу роста. Образцы быстро нагреваются и медленно охлаждаются, обеспечивая оптимальный рост зерен во время рекристаллизации и, следовательно, повышая общую эффективность солнечных элементов. В таблице. 1 ниже показаны напряжения роста и ширина запрещенной зоны для осажденных и термообработанных образцов (наборы 1 и 2). На рисунках 3 и 4 представлены графики зависимости запрещенной зоны от напряжения роста для двух наборов выращенных образцов стекло/FTO/CdS.

Набор 1			**Набор 2**		
Рост Напряжение (мВ)	**E_g (эВ) для AD-CdS**	**E_g (эВ) для HT-**	**Рост Напряжение (мВ)**	**E_g (эВ) для AD-CdS**	**E_g (эВ) для HT-CdS**
720	2,47	2.23	1300	2.40	1,80
740	2.44	2.30	1370	2,52	2.49
800	2,45	2.32	1440	2,52	2,48
852	2.42	2.23	1450	2.53	2,45
925	0	2.42	1500	2.34	2.42

Таблица. 1. Напряжения роста и запрещенная зона для осажденного и термообработанного слоя CdS.

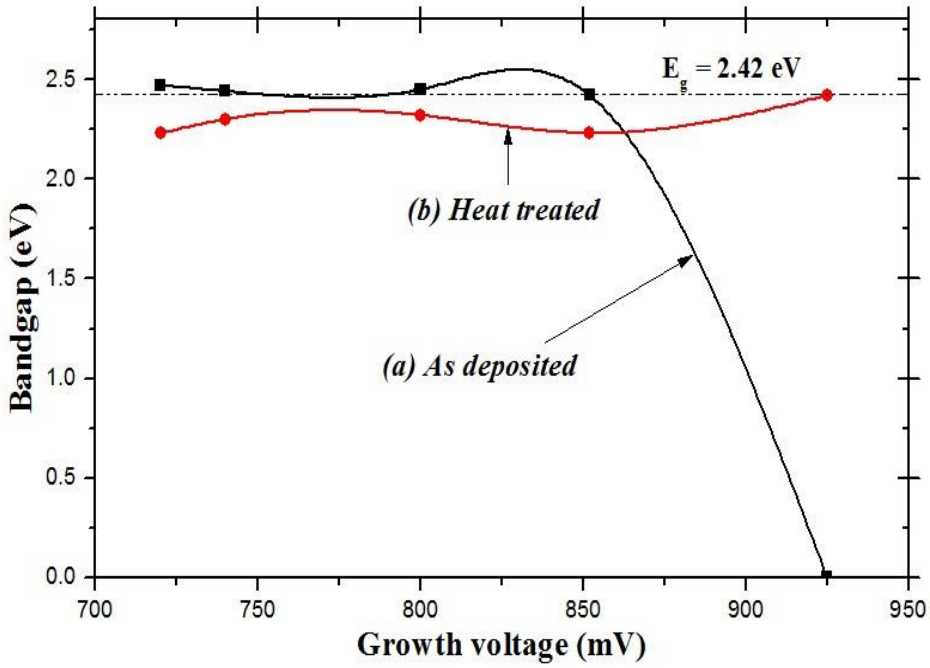

Рис. 3. Запрещенная зона как функция напряжения роста для (а) осажденных и (б) термообработанных слоев CdS (набор 1), выращенных на подложке стекло/FTO.

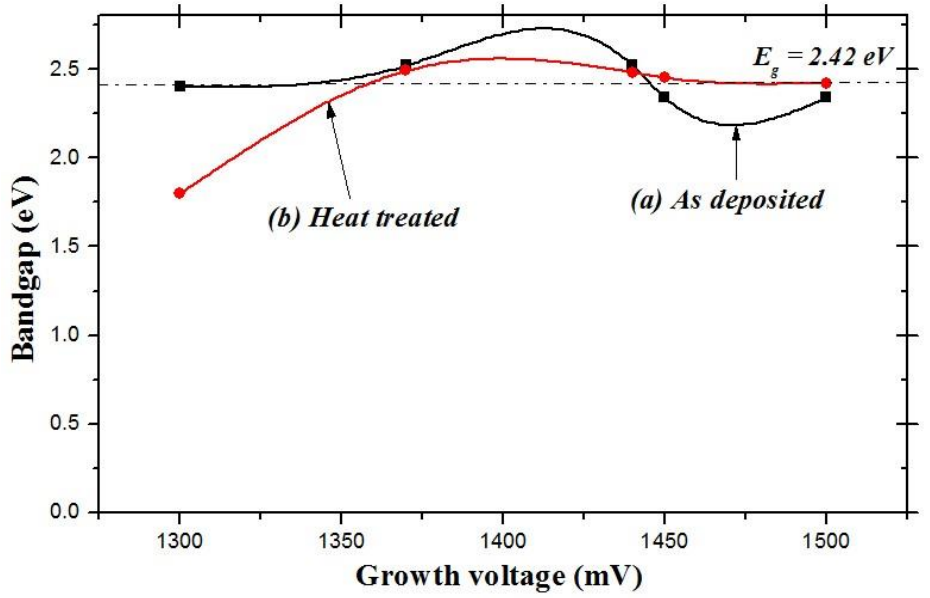

Рис. 4. Запрещенная зона как функция напряжения роста для (а) осажденных и (б) термообработанных слоев CdS (набор 2), выращенных на подложке стекло/FTO.

Из приведенной выше таблицы видно, что ширина запрещенной зоны большинства осажденных образцов уменьшилась после термообработки для обоих наборов. Аналогично, ширина запрещенной зоны для более темных образцов обоих наборов (925 мВ и 1500 мВ) была сдвинута вверх для

получения требуемого значения 2,42 эВ. Это подтвердило, что термообработка является решающим вопросом в процессе создания тонкопленочных устройств.

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INFLUENCE OF PROTON IRRADIATION ON SILICON DOPED WITH IMPURITIES OF TANTALUM

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Abstract. Interest in proton radiation is due to the wide range of material depths to be treated, from 0.1 to 1 mm depending on the energy of the radiation. The main factors influencing the change of properties of semiconductors after proton irradiation are formation of new impurities as a result of nuclear reactions, radiation defect formation and accumulation of hydrogen atoms. Refractory metal silicides are widely used in the microelectronics industry as interconnects and contacts owing to their low contact resistance and thermal stability, which are produced by the refractory metal-silicon reactive diffusion process in the solid state. Among these silicides, tantalum silicide is important in the microelectronics industry for the use as interconnects and contacts because of thermal stability and low contact resistance.

Keywords. Proton radiation, radiation defects, refractory metals, X-ray diffraction, scanning electron microscopy.

At present, management of properties of semiconductor materials and creation of new semiconductor structures by irradiation of ionizing particles is one of modern directions of semiconductor materials science [1; p. 813]. In the production of semiconductor devices, most types of penetrating radiation are efficiently used: fast electrons, gamma quanta, neutrons, protons, alpha particles, etc. The formation of radiation defects (RD) affects the electrophysical and optical properties of semiconductor devices, and under conditions of exposure to ionizing radiation on semiconductor devices, RD is one of the causes of their destruction [2; p. 312].

It is well known that the formation of radiation defects is accompanied by the appearance of local energy levels in the forbidden zone of the semiconductor. Radiation defects are mainly either compensation centers or centers of recombination of non-equilibrium charge carriers [3; p. 256].

The process of radiation defect formation takes place in two stages: generation of primary point defects of Frenkel pairs and formation of secondary defects. The first stage of radiation defects generation is carried out through two processes. First, there is the displacement of the atoms of the crystal lattice, with the formation of the so-called primary knocked-on atom. Secondly, the offsets are cascaded. In the second stage of the formation of secondary radiation defects, the primary radiation defects interact with each other, with defects and impurities existing in the semiconductor. As a result, secondary radiation defects which are stable under the given conditions are formed, which further determine changes in the properties of materials and devices [4].

Interest in proton radiation is due to the wide range of material depths to be treated, from 0.1 to 1 mm depending on the energy of the radiation. The main factors influencing the change of properties of semiconductors after proton irradiation are formation of new impurities as a result of nuclear reactions, radiation defect formation and accumulation of hydrogen atoms. Calculations show that the absolute energy boundary of the protons, at which nuclear losses prevail, is a unit of keV (for Si - 1030 eV) for most of the semiconductor atoms.

Thus, only a few per cent of full ion energy is used to produce radiation defects. The rest goes on to excite and ionize semiconductor atoms. Since the main generation of radiation defects occurs after the proton slows down to 1 keV energy, there is a very uneven generation of radiation defects along the proton track. Since the radiation defect cross-section increases by an order of [5], when the proton energy decreases from 10 to 1 keV, the rate at which radiation defects are generated in the end-run area of the proton (R_p) can be much higher than the rate at the $\sim R_p$. The change in the energy of the bombarding ions results mainly in a change in the location of the area of the maximum generation of radiation defects.

The interaction of tantalum atoms with silicon, under proton irradiation, in which heterodiffusion and the formation of chemical compounds are possible, has so far been little studied. In this regard, the aim of our work was to study the influence of proton irradiation boundary of the tantalum silicon film on the redistribution of components in this system.

The study was carried out using X-ray crystallography analysis on the diffractometer Empyrean Malvern Panalytical. Radiation defects in Ta-Si systems were investigated by X-ray diffraction (XRD), scanning electron microscopy (SEM) analysis before and after irradiation with 650 keV protons. In the Fig. 1. shows of XRD specters of Ta-Si system.

Refractory metal silicides are widely used in the microelectronics industry as interconnects and contacts owing to their low contact resistance and thermal stability, which are produced by the refractory metal-silicon reactive diffusion process in the solid state. Among these silicides, tantalum silicide is important in the microelectronics industry for the use as interconnects and contacts because of thermal stability and low contact resistance [5].

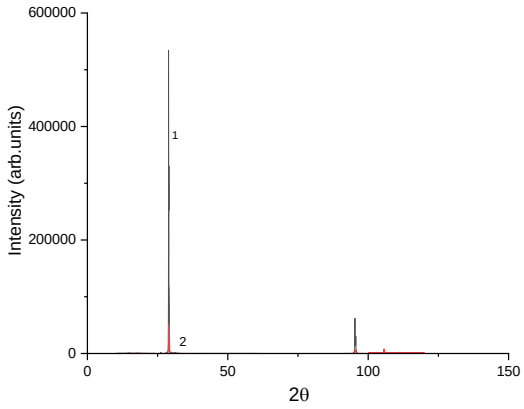
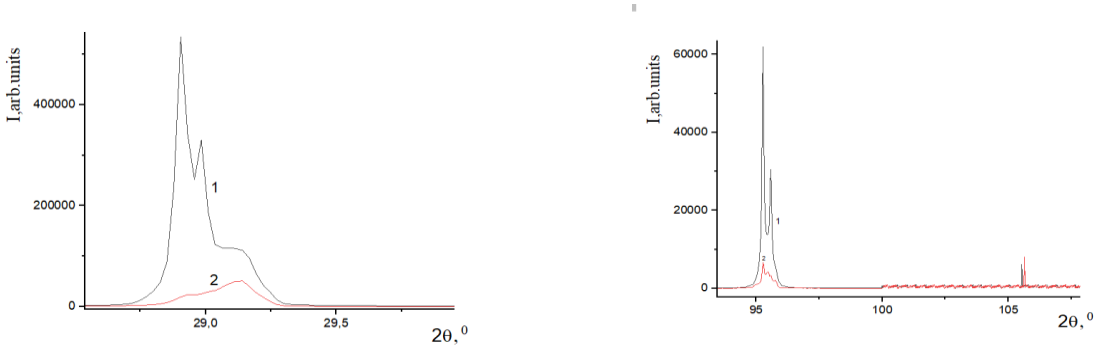


Fig. 1. XRD specters of Ta-Si system (1) and Ta-Si system (2) irradiated by proton.

This is produced by reaction-diffusion at the metal-silicon interface in the solid state. Tantalum silicide ($TaSi_2$) is the potential high temperature material and micro-electronic material. $TaSi_2$ is mainly used as a high-temperature reinforcing material to improve the oxidation resistance, thermal shock resistance, compactness. As so far, the structural stability, mechanical, thermodynamic properties and high temperature oxidation of $TaSi_2$ silicide have also been investigated by experimental and theoretical methods. Experimental and theoretical results indicate that $TaSi_2$ silicide exhibit the brittle behavior [6].



a) b)

Fig. 2. Typical X-rays of Ta-Si system before (1) and after (2) proton radiation: a) 2θ from 28 to 29.5 b) 2θ from 94 to 97.

Figure 1 and 2 shows typical X-rays of the Ta-Si system before (1) and after (2) proton radiation. The obtained results show that the intensity of the peaks in the spectra decreases at proton irradiation (Figure 2) and the values of the resulting peak angle shift a larger side. These changes indicate that exposures produce complexes of radiation defects. Analysis of the results shows that the concentration of radiation defects is dependent on the oxygen content.

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YANGI O‘ZBEKISTONDA MAKTAB, OILA VA MAHALLA HAMKORLIGINING STRATEGIK DOLZARB MASALALARI

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Annotasiya. Ushbu maqolada mamlakatimizda hozirgi kunda ta’lim sohasida olib borilayotgan tub islohotlar, chora tadbirlar yoritib berilgan. Ta’lim-tarbiya jarayonida maktab, oila va mahallaning natijali faoliyat olib borish masalalari tahlil qilindi.
Kalit so‘zlar. Maktab, oila va mahalla hamkorligi, ta’lim, islohotlar, taraqqiyot, konsepsiya, qarorlar.

Abstract. In this article, the fundamental reforms and measures implemented in the field of education in our country are highlighted. The issues of effective activities of the school, family and neighborhood in the educational process are analyzed.
Key words. School, family and neighborhood cooperation, education, reforms, progress, concept, decisions.

Kirish. Yangi O‘zbekistonda barcha sohalarda ulkan islohatlar olib borilmoqda. Olib borilayotgan islohatlarning bosh omili inson, inson manfaatlari uchun hisoblanadi. Shu jumladan, ta’lim-tarbiya sohasida ham tub islohotlar olib borilmoqda. Shu bois dunyo mamlakatlari tomonidan Yangi O‘zbekistonda yoshlarning aqliy, ma’naviy-ma’rifiy va jismoniy kamoloti taraqqiyoti, ularning zamon talablariga mos bilim olishlari, kasbhunar egallashlari, iqtidori va qobiliyatlarini namoyon qilishi va yanada rivojlantirishi uchun yaratilgan imkoniyatlar e’tirof etilmoqda. Bugun O‘zbekiston muhim rivojlanish bosqichini boshidan kechirmoqda. Yaqin yigirma yil ichida bugungi bolalar va o‘smir-yoshlar O‘zbekistonning asosiy rivojlantiruvchi kuchiga aylanadilar. Yoshlar O‘zbekistonni

ijtimoiy va iqtisodiy jihatdan yangi pog‘onaga olib chiquvchi avlod bo‘ladi. Aynan ana shu nuqtayi nazardan mamlakatimiz Prezidentining 2019-yilning 8-oktabridagi “O‘zbekiston Respublikasi Oliy ta’lim tizimini 2030-yilgacha rivojlantirish konsepsiyasini tasdiqlash to‘g‘risida”gi qarori, 2021-yilning 18-yanvaridagi “O‘zbekistonda yoshlarga oid davlat siyosatini 2025-yilgacha rivojlantirish konsepsiyasini tasdiqlash to‘g‘risida”gi 23-sonli qarori. Bu qarorlar mamlakatimizning har bir fuqarosi oldiga, ayniqsa, yoshlar bilan ish olib boruvchi tashkilotlar – oliy va o‘rta maxsus ta’lim muassasalari, mahalla va oila zimmasiga katta mas’uliyat yukladi.

Tadqiqot maqsadi. Oila, mahalla va ta’lim muassasalari ijtimoiy pedagogik hamkorligida ma’naviy-ma’rifiy ishlarni samaradorligini oshirish jarayoni va bu jarayonning mazmuni muhim ahamiyatga ega. Shu bois tadqiq qilinayotgan muammoni asoslash va uning ilmiy yechimini topish maqsadida ta’lim-tarbiya jarayonida oila, mahalla va ta’lim muassasalari ijtimoiy hamkorligida ma’naviy-ma’rifiy ishlarning pedagogik xususiyatlarini tahlil qilish.

Tadqiqot metodologiyasi va empirik tahlil. Oila, mahalla va ta’lim muassasasi hamkorligi samaradorligini oshirishga yo‘naltirilgan ilmiy izlanishlar jahonning yetakchi ilmiy markazlari va oliy ta’lim muassasalarida olib borilmoqda. Jumladan, “Oila, gender, demografiya” ilmiy- pedagogik markaz (Rossiya), “Bo‘lg‘usi onalar maktabi” (Yaponiya), “Oila va maktab” Yapon markazi “Xokkaydo”, oilaviy muammolar, oila, maktab va jamoatchilik faoliyatini tadqiq etuvchi ko‘p tarmoqli ijtimoiy “Oila” markazi (Astraxan) kabi harakat rejalari va tizimli ilmiy loyihalar ishlab chiqilgan. Vatanparvarlikni targ‘ib etuvchi loyihalarga pedagog, jamoatchilik birlashmalari va davlat tashkilotlari vakillari, ta’lim muassasalari va qo‘shimcha ta’lim markazlari xodimlari, ota-onalar, faol yosh volonterlarni jalb etgan holda yoshlarni vatanparvarlik ruhida tarbiyalashning ijtimoiy pedagogik texnologiyalari ishlab chiqilgan, oila institutini ijtimoiy-sotsiologik jihatdan tadqiq etuvchi, yoshlarni oilaga tayyorlovchi, yoshlarda ma’naviyaxloqiy fazilatlarni shakllantiruvchi, oila, mahalla va ta’lim muassasalari hamkorligini kuchaytirish chora tadbirlarini amalga oshirayotgan Respublika Ma’naviyat va ma’rifat markazi, Mahalla va oilani rivojlantirish vazirligi huzuridagi “Oila” ilmiy-amaliy tadqiqotlar markazi faoliyat olib bormoqda. Bugungi kunda barkamol avlod tarbiyasi oila, mahalla va ta’lim muassasasining ijtimoiy, ma’naviy ma’rifiy hamkorligining bosh, ustuvor masalasi hisoblanadi. Buning uchun oila, mahalla va ta’lim muassasasi ijtimoiy hamkorligini ma’naviy-ma’rifiy faoliyat misolida takomillashtirishni yoritish, tahlil qilish jarayonida, “ma’naviy-ma’rifiy” tushunchasini yoritish maqsadga muvofiq. Olib borilgan ilmiy tadqiqotlar natijasida quyidagi holatlar mavjudligi kuzatildi. Ayrim ta’lim muassasalarida ota-onalar yig‘ilishlari rejasi ishlab chiqilib pedagogik kengash qarori bilan tasdiqlanmagan. Ota-onalar yig‘ilishlari rejasi asosida tashkil etilmaydi. Ta’lim muassasalarida yarim yillik semestr yakunlaridagi tashkil qilinadigan ota-onalar yig‘ilishlariga guruhdagi o‘ttiz nafar o‘quvchilardan 15-20 nafarining ota-onalar kelishadi. Ular ham a’lochi, yaxshi o‘qiydigan, tarbiyali o‘quvchilarning ota-onalari. O‘zlashtirishlari past, tarbiyasi muammoli, nosog‘lom oila farzand oilalardagi ota-onalar yig‘ilishlariga kelishmaydi. Hududlar kesimidagi statistik tahlil ota onalarning o‘smirlar

bolalarining dars tayyorlashini nazorat qilishlarini asosiy vazifa deb bilishlarini ko‘rsatdi. Ayni vaqtda farzandlarining kimlar bilan do‘st ekanliklari, bo‘sh vaqtlarini qanday o‘tkazishlari va kitobxonlikka qiziqishlariga e’tibor yetarli emasligini ko‘rsatdi.

Xulosa. Xulosa qilib aytganda jamiyat tashkilotlari yoshlar tarbiyasi bilan o‘z vaqtida o‘ziga xos ravishda shug‘ullanishlari darkor. Biroq buning o‘rniga mas’uliyatdan chetlashib, bu muhim masalani bir-biriga solsa, ya’ni bog‘cha maktabga, maktab mahallaga, mahalla ota-onaga ishonib qolsa, katta muammolar kelib chiqadi. Yuqorida qayd etilganidek, har bir tashkilot, muassasa, ota-ona o‘z burchi va mas’uliyatini sidqidildan ado etgan taqdirda va hamkorlikda ish olib borgandagina bu muammolar yechim topadi.

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TALABALAR UCHUN O‘QUV JARAYONIDA O‘Z-O‘ZINI BOSHQARISH QOBILIYATLARINING PSIXOLOGIK ASOSLARI

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Annotatsiya. Ushbu maqolada yoshlarning o‘z-o‘zini boshqarish qobiliyatlarini rivojlantirish va ularga ta'sir etuvchi psixologik faktorlarni o‘rganilgan. O‘z-o‘zini nazorat qilish, vaqtni boshqarish va o‘rganish strategiyalarini tahlil qilish bo‘yicha amaliy tavsiyalar ishlab chiqilgan.

Kalit so’zlar. Muloqot, konstruktiv mulohaza, motivatsiya, faoliyat, empatiya, qobilyat, vaqtni boshqarish, individuallik, tendensiya, strategiya.

Аннотация. В данной статье изучены способности подростков к самоуправлению и психологические факторы, влияющие на их развитие. Проанализированы аспекты самоконтроля, управления временем и стратегий обучения, а также разработаны практические рекомендации.

Ключевые слова. Общение, конструктивное мышление, мотивация, деятельность, эмпатия, способности, управление временем, индивидуальность, динамика, стратегия.

Annotation. This article explores the development of self-management skills in youth and the psychological factors affecting them. It analyzes aspects of self-control, time management, and learning strategies, and provides practical recommendations.

Key words. Communication, constructive thinking, motivation, activity, empathy, ability, time management, individuality, tendency, strategy.

Kirish. Bugungi shiddatli texnologik rivojlangan dunyoda talabalarning o’quv fanlarini o’zlashtirishdagi pedagogik va psixologik ko’nikmalarni rivojlantirishga qaratilgan ko’plab ilmiy tadqiqotlar turli soha vakillari tomonidan o’tkazilgan bo’lib ularning har biri ma’lum darajada ta’lim sifati va o’quv fanlarini o’zlashtirishdagi qiyinchiliklarni bartaraf etishga talabalarga yordam beradi.

Yoshlar uchun o‘quv jarayonida o‘z-o‘zini boshqarish qobiliyatlarining psixologik asoslari va rivojlanish omillari mavzusi ta'lim tizimida bir qator dolzarb muammolarni hal qilishda muhim ahamiyatga ega.

Tadqiqotni tashkil qilish uslublari. Ushbu mavzuning dolzarbligi va ahamiyati quyidagi jihatlarda namoyon bo‘ladi:

Zamonaviy ta'lim talablari:

Hozirgi ta'lim tizimi yoshlarni nafaqat bilim va ko‘nikmalar bilan, balki mustaqil fikr va o‘z-o‘zini boshqarish qobiliyatlari bilan ham ta'minlashni talab qiladi. O‘z-o‘zini boshqarish qobiliyatlari yoshlarni ta'lim jarayonida muvaffaqiyatli bo‘lishlariga yordam beradi va ularning akademik natijalarini yaxshilaydi.

1. **Shaxsiy rivojlanish:**

O‘z-o‘zini boshqarish qobiliyatlari yoshlarning shaxsiy rivojlanishida muhim rol o‘ynaydi. Ular vaqtni boshqarish, motivatsiyani saqlash va muammolarni hal qilish kabi ko‘nikmalarni rivojlantirishga yordam beradi, bu esa yoshlarning umumiy rivojlanishini qo‘llab-quvvatlaydi.

2. **Psixologik barqarorlik:**

O‘z-o‘zini boshqarish qobiliyatlari yoshlarning psixologik barqarorligini oshiradi. O‘quv jarayonida stress va bezovtalikni kamaytirish, o‘z-o‘zini nazorat qilish va emosional holatni boshqarish kabi qobiliyatlar yoshlarning umumiy ruhiy holatini yaxshilaydi.

3. **Kelajakdagi muvaffaqiyat**:

Mustaqil va samarali ishlash qobiliyatlari yoshlarning kelajakdagi professional va shaxsiy muvaffaqiyatlariga to‘g‘ridan-to‘g‘ri ta'sir ko‘rsatadi. O‘z-o‘zini boshqarish qobiliyatlarini rivojlantirish yoshlarni kelajakdagi murakkab vaziyatlarga yaxshi tayyorlaydi.

4. **Ta'lim strategiyalari:**

O‘z-o‘zini boshqarish qobiliyatlarini rivojlantirish bo‘yicha amaliy tavsiyalar va strategiyalar ta'lim jarayonida samarali yondashuvlarni ishlab chiqish uchun zarurdir. Bu yoshlarning ta'lim jarayonida muvaffaqiyatga erishishlarini ta'minlashda yordam beradi.

5. **Ijtimoiy moslashuv:**

O‘z-o‘zini boshqarish qobiliyatlari yoshlarning ijtimoiy moslashuvini yaxshilaydi. Samarali muloqot, empatiya va ijtimoiy aloqalarni boshqarish qobiliyatlari yoshlarning jamiyatda muvaffaqiyatli bo‘lishlariga yordam beradi.

6. Tadqiqot va innovatsiyalar:

Ushbu mavzu psixologik tadqiqotlar va innovatsiyalar uchun yangi imkoniyatlarni ochadi. Yoshlarning o‘z-o‘zini boshqarish qobiliyatlarini o‘rganish ilmiy tadqiqotlarni rivojlantirish va yangi metodologiyalarni yaratishga imkon beradi.

Ushbu jihatlar mavzuning dolzarbligini va ahamiyatini ta'kidlaydi, yoshlarning ta'lim jarayonida o‘z-o‘zini boshqarish qobiliyatlarini rivojlantirish orqali ularning shaxsiy va professional muvaffaqiyatlarini oshirishga yordam beradi.

Adabiyotlar tahlili va metodologiya. Yoshlar uchun o‘quv jarayonida o‘z-o‘zini boshqarish qobiliyatlarining psixologik asoslari va rivojlanish omillari" mavzusini o‘rganish bo‘yicha bir qator olimlar, psixologlar, pedagoglar va ta'lim tadqiqotchilari faoliyat yuritgan. Ushbu mavzuni o‘rgangan mutaxassislar quyidagi yo‘nalishlarda faoliyat ko‘rsatgan:

1. Psixologiya sohasidagi mutaxassislar.

Benjamin Bloom: O‘rganish jarayonida o‘z-o‘zini boshqarish va metakognitiv qobiliyatlarni rivojlantirish bo‘yicha ko‘plab tadqiqotlar olib borgan. Uning “Bloomning Ta'lim Maqsadlari” modeli o‘z-o‘zini boshqarish qobiliyatlarini o‘rganishda yordam beradi.

Albert Bandura: O‘z-o‘zini boshqarish va o‘z-o‘zini nazorat qilish bo‘yicha ijtimoiy o‘rganish nazariyasini ishlab chiqdi. Bandura o‘z-o‘zini samarali boshqarishning psixologik aspektlarini o‘rganishga katta hissa qo‘shdi.

Richard Mayer: O‘rganish nazariyalaridagi metakognitiv yondashuvlarni o‘rganish orqali o‘z-o‘zini boshqarish qobiliyatlarini rivojlantirishga qaratilgan tadqiqotlar olib borgan.

2. Pedagogika sohasidagi tadqiqotchilar.

Lev Vygotskiy: O‘rganish jarayonida ijtimoiy aloqalar va o‘z-o‘zini boshqarish qobiliyatlarini rivojlantirishning ahamiyatini ta'kidlagan. Uning “Sosial-Tarixiy Teoriya”sida yoshlarning o‘z-o‘zini boshqarish qobiliyatlarini rivojlantirish bo‘yicha bir qator konseptual asoslar mavjud.

Jean Piaget: Kognitiv rivojlanish nazariyasida o‘z-o‘zini boshqarish va shaxsiy o‘zgarishlar bo‘yicha ko‘plab tadqiqotlar olib borgan. Piaget nazariyasi yoshlarning psixologik rivojlanishi va o‘z-o‘zini boshqarish qobiliyatlarining rivojlanishini tushunishga yordam beradi.

3. Ta'lim psixologiyasi va pedagogik tadqiqotchilar.

Carol Dweck: “Growth Mindset” (Rivojlanish fikri) nazariyasini ishlab chiqdi. Dweckning tadqiqotlari yoshlarning o‘z-o‘zini boshqarish va motivatsiya darajasini oshirishda rivojlanish fikrining ahamiyatini ko‘rsatadi.

John Hattie: O‘rganish jarayonidagi effektli strategiyalarni o‘rganib, o‘z-o‘zini boshqarish va samarali o‘rganish bo‘yicha amaliy tavsiyalar beradi. Uning “Visible Learning” (Ko‘rinadigan O‘rganish) tadqiqotlari o‘z-o‘zini boshqarish qobiliyatlarining rivojlanishiga ta'sir ko‘rsatadi.

4. Amaliy tadqiqotchilar va ta'lim mutaxassislari.

Angela Duckworth: “Grit” (Jiddiylik) nazariyasi orqali uzoq muddatli muvaffaqiyatga erishishda o‘z-o‘zini boshqarish va qat'iyatlilikning ahamiyatini tadqiq qilgan.

David Kolb: Tajribali o‘rganish nazariyasini ishlab chiqdi, bu nazariya yoshlarning o‘z-o‘zini boshqarish qobiliyatlarini rivojlantirish uchun amaliy tajribalar va refleksiya jarayonlarini o‘z ichiga oladi.

5. Xalqaro tadqiqotlar.

PISA (Programme for International Student Assessment) tadqiqotlari va xalqaro ta'lim tahlilchilari o‘z-o‘zini boshqarish va vaqtni boshqarish qobiliyatlarini baholashda xalqaro tajribalarni o‘rganadi. PISA tadqiqotlari o‘quvchilarning o‘z-o‘zini boshqarish qobiliyatlari va ta'limdagi muvaffaqiyatlari o‘rtasidagi bog‘liqlikni tahlil qiladi.

Ushbu mutaxassislar va tadqiqotchilar o‘z-o‘zini boshqarish qobiliyatlarining psixologik asoslari va rivojlanish omillarini tushunishga yordam beradi. Ularning tadqiqotlari yoshlarning o‘z-o‘zini boshqarish qobiliyatlarini rivojlantirish bo‘yicha ilmiy va amaliy yondashuvlarni ishlab chiqishda asos bo‘lib xizmat qiladi.

Talabalar uchun individual tartibda o‘quv adabiyotlarni o‘zlashtirishning psixologik xususiyatlarini o‘rganish va bu jarayonni yanada samarali qilish, ta'lim sifatini oshirish va yoshlarning shaxsiy rivojlanishini qo‘llab-quvvatlash uchun zarurdir. Bu, o‘z navbatida, yoshlarning ta'lim jarayonidagi muvaffaqiyatlarini yaxshilashga yordam beradi.

Tadqiqot natijalari va muhokamasi. Talabalarda o'z ustida mustaqil ishlash, o'z bilimlarini rivojlantirish va maqsadlariga erishish uchun juda muhimdir. Bu jarayon ko'plab jihatlarni o'z ichiga oladi:

Rejalashtirish: Mustaqil ishlashda eng birinchi qadam, o'z vazifalaringizni va maqsadlaringizni aniq belgilashdir. Bu sizga qaysi yo'nalishda ishlash kerakligini va qanday resurslardan foydalanishingizni belgilashga yordam beradi.

Vaqtni boshqarish: Vaqtni samarali boshqarish ko'nikmasi mustaqil ishlashning asosiy qismidir. O'zingizga kunlik yoki haftalik jadval tuzib, muhim vazifalarni belgilab olish sizga yordam beradi.

O'z-o'zini baholash: O'z ustida ishlashda o'z-o'zini baholash juda muhimdir. O'z ishlagan materiallaringizni tahlil qilish, xatolarni aniqlash va ularni tuzatish, rivojlanish uchun zarurdir.

Resurslardan foydalanish: Mustaqil ishlashda resurslardan to'g'ri foydalanish kerak. Bu kitoblar, ilmiy maqolalar, onlayn kurslar yoki mutaxassislar bo'lishi mumkin.

Motivatsiya: O'z-o'zini boshqarishda motivatsiya muhim rol o'ynaydi. Maqsadlaringizga erishish uchun doimiy ravishda o'zingizni rag'batlantirishingiz kerak.

O'qish va tadqiqot: O'z ustida mustaqil ishlashda bilim olish va tadqiqot o'tkazish muhimdir. Turli manbalardan bilim olish, yangi ma'lumotlarni o'rganish va tahlil qilish jarayonni yanada samarali qiladi.

Tajriba va amaliyot: O'qish bilan birga amaliy tajriba ham katta ahamiyatga ega. Teorik bilimlarni amaliyot bilan sinab ko'rish, ko'nikmalarni yanada mustahkamlashga yordam beradi.

Xulosa chiqarish: Yig'ilgan bilimlarni va tajribani xulosa qilib, ular asosida yangi strategiyalar ishlab chiqish muhimdir. Bu sizning o'z ustingizda ishlash jarayonini yanada samarali qiladi.

Mustaqil ishlash, ayniqsa, ta'lim sohasida muvaffaqiyatga erishish uchun zarur bo'lgan muhim ko'nikmalardan biridir. Bu ko'nikmalarni rivojlantirish orqali talaba nafaqat akademik muvaffaqiyatga, balki shaxsiy rivojlanishga ham erishishi mumkin.

Yoshlar uchun individual tartibda ishlash, ya'ni o‘z-o‘zini boshqarish va mustaqil tarzda o‘rganish, bir qator muammolarni keltirib chiqarishi mumkin. Ushbu muammolar ta'lim jarayonida samaradorlikni kamaytirishi va yoshlarning shaxsiy rivojlanishiga salbiy ta'sir ko‘rsatishi mumkin.

Xulosa va tavsiyalar.

- O‘z-o‘zini boshqarish qobiliyatlari yoshlarning ta'lim jarayonida muvaffaqiyatli bo‘lishi uchun muhim hisoblanadi. O‘z-o‘zini boshqarish qobiliyatlari, jumladan, vaqtni boshqarish, motivatsiya, stressni boshqarish va maqsadlarni belgilash, yoshlarning o‘quv jarayonida samarali ishtirok etishlariga yordam beradi.
- Motivatsiya va emotsional barqarorlik o‘z-o‘zini boshqarish qobiliyatlarini rivojlantirish uchun asosiy psixologik omillar hisoblanadi. Yoshlar o‘z maqsadlariga erishishda mustaqil ravishda harakat qilishlari va qiyinchiliklarga qarshi turishlari uchun yuqori darajadagi motivatsiya va emotsional barqarorlik zarur.

Tavsiyalar. Ta'lim strategiyalarini ishlab chiqish:

- O‘z-o‘zini boshqarish qobiliyatlarini rivojlantirish uchun ta'lim dasturlarida metakognitiv strategiyalarni qo‘llash. O‘quvchilarga vaqtni boshqarish, maqsadlarni belgilash va o‘z-o‘zini baholash kabi ko‘nikmalarni o‘rgatish.

Amaliy Mashg‘ulotlar:

- O‘quv jarayonida amaliy mashg‘ulotlarni joriy qilish. O‘quvchilar va talabalar o‘z-o‘zini boshqarish ko‘nikmalarini rivojlantirish uchun real vaziyatlar va amaliy vazifalar bilan ishlashlari kerak.

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YOSHLARDA INDIVIDUAL TARTIBDA O‘QUV ADABIYOTLARNI O’ZLASHTIRISHINING PSIXOLOGIK XUSUSIYATLARI

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Annotatsiya. Ushbu maqolada yoshlarda individual tartibda o‘quv adabiyotlarni o’zlashtirishining psixologik xususiyatlari. Zamonaviy sharoitda ta’lim jarayonining barcha imkoniyatlariga ko’ra shaxsni rivojlantirish, ijtimoiylashtirish va unda mustaqil, tanqidiy, ijodiy fikrlash qobiliyatlarini tarbiyalashga yo’naltirilishiga to’xtalib o’tilgan.

Kalit so’zlar. Muloqot, konstruktiv mulohaza, motivatsiya, faoliyat, empatiya.

Аннотация. В данной статье рассматриваются психологические особенности усвоения учебной литературы у молодежи в индивидуальном порядке. Акцент делается на том, что образовательный процесс в современных условиях при всех его возможностях ориентирован на развитие личности, социализацию и воспитание в ней навыков самостоятельного, критического, творческого мышления.

Ключевые слова. Общение, конструктивное мышление, мотивация, активность, сочувствие.

Annotation. Psychological features of the assimilation of educational literature in the individual order in young people in this article. In modern conditions, it is emphasized that according to all the possibilities of the educational process, personality development, socialization and education of independent, critical, creative thinking abilities are directed in it.

Key words. Communication, constructive reflection, motivation, activity, empathy.

Kirish. Bugungi shiddatli texnologik rivojlangan dunyoda talabalarning o’quv fanlarini o’zlashtirishdagi pedagogik va psixologik ko’nikmalarni rivojlantirishga qaratilgan ko’plab ilmiy tadqiqotlar turli soha vakillari tomonidan o’tkazilgan bo’lib ularning har biri ma’lum darajada ta’lim sifati va o’quv fanlarini o’zlashtirishdagi qiyinchiliklarni bartaraf etishga talabalarga yordam beradi. Agar xorij olimlariga to’xtalib o’tadigan bo’lsak Albert Bandura, B.Blum, J.Bruner, A.Luria, H.Gardner, J.Piaje kabi psixolog olimlar o’rgangan.

Tadqiqot maqsadi. Talabalarda o'z ustida mustaqil ishlash, o'z bilimlarini rivojlantirish va maqsadlariga erishish uchun juda muhimdir. Bu jarayon ko'plab jihatlarni o'z ichiga oladi:

Rejalashtirish: Mustaqil ishlashda eng birinchi qadam, o'z vazifalaringizni va maqsadlaringizni aniq belgilashdir. Bu sizga qaysi yo'nalishda ishlash kerakligini va qanday resurslardan foydalanishingizni belgilashga yordam beradi.

Vaqtni boshqarish: Vaqtni samarali boshqarish ko'nikmasi mustaqil ishlashning asosiy qismidir. O'zingizga kunlik yoki haftalik jadval tuzib, muhim vazifalarni belgilab olish sizga yordam beradi.

O'z-o'zini baholash: O'z ustida ishlashda o'z-o'zini baholash juda muhimdir. O'z ishlagan materiallaringizni tahlil qilish, xatolarni aniqlash va ularni tuzatish, rivojlanish uchun zarurdir.

Resurslardan foydalanish: Mustaqil ishlashda resurslardan to'g'ri foydalanish kerak. Bu kitoblar, ilmiy maqolalar, onlayn kurslar yoki mutaxassislar bo'lishi mumkin.

Motivatsiya: O'z-o'zini boshqarishda motivatsiya muhim rol o'ynaydi. Maqsadlaringizga erishish uchun doimiy ravishda o'zingizni rag'batlantirishingiz kerak.

O'qish va tadqiqot: O'z ustida mustaqil ishlashda bilim olish va tadqiqot o'tkazish muhimdir. Turli manbalardan bilim olish, yangi ma'lumotlarni o'rganish va tahlil qilish jarayonni yanada samarali qiladi.

Tajriba va amaliyot: O'qish bilan birga amaliy tajriba ham katta ahamiyatga ega. Teorik bilimlarni amaliyot bilan sinab ko'rish, ko'nikmalarni yanada mustahkamlashga yordam beradi.

Xulosa chiqarish: Yig'ilgan bilimlarni va tajribani xulosa qilib, ular asosida yangi strategiyalar ishlab chiqish muhimdir. Bu sizning o'z ustingizda ishlash jarayonini yanada samarali qiladi.

Mustaqil ishlash, ayniqsa, ta'lim sohasida muvaffaqiyatga erishish uchun zarur bo'lgan muhim ko'nikmalardan biridir. Bu ko'nikmalarni rivojlantirish orqali talaba nafaqat akademik muvaffaqiyatga, balki shaxsiy rivojlanishga ham erishishi mumkin.

Tadqiqotni tashkil qilish uslublari. Yoshlarda individual tartibda o‘quv adabiyotlarni o‘zlashtirishning psixologik xususiyatlari juda muhimdir, chunki bu jarayon shaxsiy rivojlanish, bilim olish va umumiy akademik muvaffaqiyat bilan bog'liq. Bu xususiyatlar quyidagilardan iborat bo'lishi mumkin:

1. **Motivatsiya**: Yoshlarda o‘quv adabiyotlarni o‘zlashtirishda motivatsiya katta rol o‘ynaydi. Ichki motivatsiya (qiziqish, maqsadlar) va tashqi motivatsiya (mukofotlar, baholash) o‘quv jarayonini boshqarishga yordam beradi. Yoshlarda o‘z-o‘zini motivatsiya qilish qobiliyati ularning individual o‘rganish samaradorligini oshiradi.
2. **O‘z-o‘zini boshqarish**: Mustaqil o‘rganish jarayonida o‘z-o‘zini boshqarish qobiliyati muhim ahamiyatga ega. Yoshlarda vaqtni samarali boshqarish, o‘rganish rejasini tuzish va unga rioya qilish qobiliyatlari rivojlanishi kerak. Bu, o‘z navbatida, o‘rganish jarayonida muvaffaqiyatni oshiradi.
3. **Qiziqish va ehtiyojlar**: Shaxsiy qiziqishlar va ehtiyojlar o‘quv adabiyotlarini tanlashda va o‘zlashtirishda muhim rol o‘ynaydi. Yoshlarda o‘z qiziqishlariga mos keladigan materiallar bilan ishlash ular uchun o‘rganishni yanada qiziqarli va samarali qiladi.
4. **O‘rganish uslublari**: Har bir insonning o‘rganish uslubi turlicha bo‘ladi. Ba'zi yoshlar vizual materiallardan yaxshiroq o‘rganishadi, boshqalari esa auditoriya yoki kinestetik uslublarni afzal ko‘rishi mumkin. O‘rganish uslubini aniqlash va unga moslashish o‘rganish samaradorligini oshiradi.
5. **Eslab qolish va o‘zlashtirish**: Eslab qolish jarayoni yoshlarning bilimlarni o‘zlashtirishda qanday qiyinchiliklarga duch kelishini ko‘rsatadi. Eslab

qolish strategiyalari, masalan, xotira texnikalari va takrorlash, o‘rganishni yanada samarali qilishda yordam beradi.

6. **Stress va qiyinchiliklarni boshqarish**: O‘quv jarayonida yuzaga keladigan stress va qiyinchiliklarni boshqarish psixologik xususiyatlardan biridir. Yoshlarning stressga qarshi kurashish usullari va moslashuvchanligi o‘zlashtirish jarayonida muhim rol o‘ynaydi.

7. **Ijtimoiy qo‘llab-quvvatlash**: O‘z-o‘zini boshqarish jarayonida ijtimoiy qo‘llab-quvvatlash ham muhimdir. Ota-onalar, o‘qituvchilar va tengdoshlarning qo‘llab-quvvatlashi yoshlarning motivatsiyasi va o‘rganish samaradorligini oshiradi.

8. **O‘z-o‘zini baholash**: O‘z-o‘zini baholash qobiliyati yoshlarning o‘z-o‘zini rivojlantirishdagi muvaffaqiyatini aniqlashda yordam beradi. O‘z natijalarini baholash va xatolardan o‘rganish qobiliyati o‘rganish jarayonining muhim qismidir.

9. **Yangi ma'lumotlarni integratsiya qilish**: Yoshlarning yangi ma'lumotlarni o‘z mavjud bilimlariga integratsiya qilish qobiliyati o‘zlashtirish jarayonida muhim rol o‘ynaydi. Bu, yangi bilimlarni amaliyotga tadbiq etish va mavjud bilimlar bilan bog‘lash orqali amalga oshiriladi.

Yoshlarda individual tartibda o‘quv adabiyotlarni o‘zlashtirish psixologik jihatdan murakkab jarayon bo‘lib, ularning shaxsiy xususiyatlari, motivatsiya darajasi va o‘rganish strategiyalariga bog‘liq. O‘rganish jarayonini yanada samarali qilish uchun psixologik xususiyatlarni hisobga olish va unga mos ravishda yondashish zarur.

Xulosa. O’quv muvaffaqiyatining tavsifi mavzu – faoliyat, aks ettiruvchi-faoliyat va kasbiy ta’limda kompetensiyaga asoslangan yondashuvlar asosida amalga oshirilishi mumkin. Pedagogik-psixologik kategoriya sifatida “akademik o’zlashtirish” ta’lim natijalarini tushunishga juda mos keladi degan pozitsiya asoslanadi, chunki u ta’lim muvaffaqiyatiga yaxlit yondashuvni, o’quv maqsadlarini baholashni, psixologik, aqliy-aksiologik, axloqiy va dinamik yo’nalishlarni o’z ichiga oladi.

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PAXTANI IFLOSLIKLARDAN TOZALOVCHI USKUNANING KONSTRUKSIYASINI TAKOMILLASHTIRISH

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Annotatsiya. Maqolada paxtani iflosliklardan tozalovchi uskunaning taxlillari, nazariy va amaliy tadqiqotlar natijalari keltirilgan bo‘lib, o‘tkazilgan tajribalar natijasida tozalagichning joylashish burchagi, to‘rli yuza oraliq masofasi va ish unumdorlikgi aniqlandi.

Kalit so‘zlar. Tozalagich, samarasi, ifloslik, koordinata, parametr, havo transport, to‘rli yuza.

Kirish. Jahon tajribasida paxtani dastlabki ishlashning texnika va texnologiyasini takomillashtirish bo‘yicha keng miqyosda ilmiy-tadqiqot ishlari olib borilmokda. Ishlab chiqarishning har bir bosqichida maxsulot sifati va miqdoriga salbiy ta’sir ko‘rsatuvchi omillarni aniqlash va ularni bartaraf qiluvchi texnikaviy yechimlarni, paxtani tozalash texnologik jarayonida uning dastlabki sifat ko‘rsatkichlarini saqlab qolishni imkonini beradigan, maxsulot sifatini boshkara oladigan texnologiyalarni ishlab chiqish, ishlash rejimlari va ko‘rsatkichlarini optimallashtirish yo‘nalishida ilmiy tadqiqotlar olib borish muxim ahamiyat kasb etmokda.

Respublikamizda paxtachilik tarmog‘ini rivojlantirish, paxta tozalash korxonalarini modernizatsiyalash va texnik qayta jihozlash, ishlab chiqarish va paxta xom ashyosini qayta ishlash rentabelligini, shu bilan birga, ishlab chiqariladigan mahsulotlarning raqobatbardoshliligini oshirish bo‘yicha kompleks chora-tadbirlar amalga oshirilmoqda.

Adabiyotlar sharxi. Paxta xomashyosini iflosliklardan tozalash bo‘yicha olib borilgan ilmiy ishlar ikki yo‘nalishda - yirik va mayda iflosliklardan tozalash jarayonini o‘rganish bo‘yicha olib borilgan. Paxta xomashyosini tozalash jarayonida tozalash samaradorligi, ish unumdorligi, chigitning mexanik shikastlanganligi va chiqindi tarkibidagi paxta bo‘laklari miqdori eng asosiy ko‘rsatkichlari sifatida belgilab olingan. Paxta xomashyosini iflosliklardan tozalash bo‘yicha texnologik jarayonlar G.I.Boldinskiy, R.Z.Burnashev, A.YE.Lugachev, YE.F.Budin, A.A. Safoyev, G.I.Miroshnichenko, Sh.Xakimov, P.N.Borodin, M.Agzamov, T.M.Quliyev, B.N.Yakubov va boshqalar ilmiy tadqiqotlar olib borishgan.

A.YE.Lugachev tomonidan paxtani oqimli tizimda tozalash texnologik jarayonlarini asosan ta’minlash qurilmalari va texnologik mashinalarni asosiy ishchi organlarini konstruksiyalarini muqobillash kesimida ko‘rib chiqilgan.

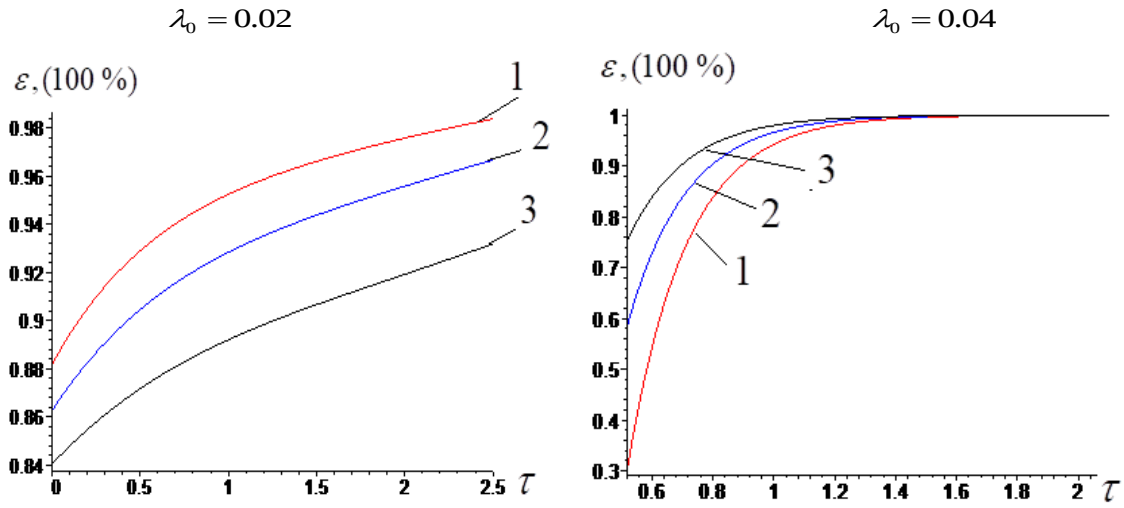
A.Safayev olib borgan tadiqiqotlarida paxtani tozalash jarayonida unga bir xil mexanik ta’sir ko‘rsatilishi tozalash samaradorligini kamayishiga sabab bo‘lishi aniqlangan. Bu muammoni bartaraf etish maqsadida tozalash barabani qoziqlarini har xil shaklda tayyorlashni taklif etgan. Natijada paxta har xil trayektoriyada harakatlanishi, shuningdek, samaradorlik oshishi isbotlangan.

YE.F.Budin va boshqalar tomonidan paxta xom ashyosini namligini mayda iflosliklardan tozalash jarayoni intensivligiga ta’sirini o‘rganilgan. Bundan tashqari ajratuvchi baraban texnologik ko‘rsatkichlarini aniqlash uchun uning aylanishlar soni, diametri, cho‘tkalar soni va arrali baraban aylanishlar soni, diametri o‘rtasidagi

bog‘liqlik nazariy jihatdan aniqlangan. Bu bog‘liqlarga asosan hozirgi kunda ishlatilayotgan diametri 480 mm, aylanishlar soni 290 min-1 bo‘lgan arrali barabanli tozalagichlarda, diametri 300 mm, aylanishlar soni 960 min-1 bo‘lgan ajratuvchi barabanda parraklar soni 14 ta bo‘lishi yetarli. Lekin mavjud ajratuvchi barabanlarda ular soni 20 dona, bu esa uning ekspluatatsiya ishonchliligini oshiradi. Tadqiqotda paxta xomashyosining to‘liq ajratilishi parrakning bikrligiga ham bog‘liqligi ta’kidlangan.

Asosiy qism. Yuqorida o‘tkazilgan taxlillar asosida paxtani mayda iflosliklardan samarali tozalashning texnologik uskunalarini takomillashtirish dolzarbligi aniqlandi va paxtani mayda iflosliklardan havo transport tizimida samarali tozalash jarayonini ta’minlovchi tozalagichning takomillashtirilgan konstruksiyasi ishlab chiqildi.

Tozalash samaradorligi grafiklarda keltirilgan bo‘lib λ ni xar xil qimatlarida τ bo‘yicha o‘zgarishi aniqlangan.



Paxtaning iflosliklarni ajratish samaradorligi koeffitsiyentining paxtaning turli xil tezliklari $\vartheta_{1к} = 0{,}3\ м/с$, $\vartheta_{2к} = 0{,}6\ м/с$, $\vartheta_{3к} = 0{,}9\ м/с$ *qiymatlarida vaqt bo‘yicha o‘zgarish grafigi.*

Nazariy tadqiqotlar natijalaridan olingan yuqoridagi grafiklarda ko‘rinib turibdiki, tozalash texnologiyasi jarayonida uskunalarning tozalash samaradorliklarining yuqori bo‘lishi tozalash koeffitsiyenti λ – ga bog‘liq ekanligi ko‘rinib turibdi. Tozalash koeffitsiyenti o‘z navbatida paxta namligi va xarorati o‘zgarishiga bog‘liq bo‘lib, tajribalardan olingan natijalarga asoslangan holda aniqlandi va paxta tolasi harorati oshib borgan sari tozalash koeffitsiyenti o‘sishi tajribalardan olingan natijalar orqali o‘z tasdig‘ini topadi.

Nazariy taxlillar natijalarini amaliy tajribalar bilan asoslash uchun matematik rejalashtirish usulidan foydalanildi. Bunda, paxtani tozalashning asosiy ko‘rsatkichlaridan biri uning tozalash samaradorligi xisoblanadi. Shuning uchun separator-tozalagichidan ajralayotgan paxtaning sifatini baxolashning kriteriya chegarasi sifatida tozalash samarasi U1 va chigitning mexanik shikastlanishini

oshishi U2 olindi. Dastlabki o‘tkazilgan tajribalar asosida belgilangan kriteriyalarga ta’sir etuvchi asosiy omillar: X1 – Baraban o‘qiga nisbatan plankalarni joylashish burchagi 0S, X2 –planka uchi bilan to‘rli yuza oraliq masofasi, mm, X3 – ish unumdorlik, kg/soat qabul qilindi.

Tajriba natijalarini, kompyuter amaliy programmalaridan foydalanilgan holda, dastlabki ishlash natijasida Fisher kriteriyasi bo‘yicha barcha chiqish parametrlarini yetarli darajada tavsiflovchi quyidagi regressiya tenglamalari olindi:

Xulosa. Hosil bo‘lgan optimizatsiya masalasi tasodifiy qidiruv usuli va zamonaviy kompyuter amaliy programmalar dasturlari yordamida yechildi va quyidagi optimal yechimlar olindi.

Faktorlar	X1	X2	X3
Kodlangan	-0,0534	-0,00896	0,469948841
Natural	19,466	13,982	7,470
Yaxlitlangani	20	14	7

1-jadval. Matematik modelni optimallashtirish natijalari.

Demak, o‘tkazilgan tajribalar natijasi bo‘yicha X1 – Baraban o‘qiga nisbatan plankalarni joylashish burchagi 200, X2 – Planka uchi bilan to‘rli yuza oraliq masofasi, 14 mm, X3 – ish unumdorlik, 7 t/soat qabul qilindi.

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ARRALI JINLARDA TOLANI TOZALASH SAMARADORLIGI ANIQLASH

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Annotatsiya. Tola sifatini yaxshilash uchun arrali jinni o‘zida tolani boshlang‘ich tozalash maqsadida 5DP-130 rusumli jinga 2 dona trapetsiya ko‘rinishidagi ajratuvchi kolosniklar o‘rnatiladi. Jinda yuqori va past navli tolani tozalashda tola sifati o‘rtacha 0,58 (abs)% va 0,87 (abs)% ga yaxshilangan, lekin tola tarkibidan ulyuk va iflos aralashmalarni kerakli darajada ajralmaganligi sababli jinda tolani tozalash jarayoni texnologik talabga javob bermagan. Bundan tashqari tolani jinni o‘zida tozalashda chiqindiga ajralishi yuqori bo‘lib, navlar bo‘yicha chiqindi massasiga nisbatan o‘rtacha 23,8% va 29,6% ni tashkil etgan.

Kalit so‘zlar. Arrali jin, ta’minlovchi stolik, xomashyo valigi, zichlik, paxta, tola, tozalash samaradorlik, sifat.

Kirish. Paxta tozalash korxonalarida arrali jinlar asosiy mashina hisoblanib, texnologik reglament bo‘yicha paxtani jinlash yoki paxtani jinlash va chigitni linterlash sexlariga o‘rnatiladi.

Ma’lumki, jinning samaradorligi undagi arralar sonining oshishi bilan emas, balki, jindagi bir dona arraning ish unumdorligi bilan belgilanadi. Shuning uchun ham rivojlangan AQSH va Xitoy davlatlarida ishlab chiqarilgan jinlarning arrali silindrida arralar soni ko‘p bo‘lib, 170 va 171 donani tashkil etadi. Bundan tashqari ushbu jinlarda tashqi diametri 406 mm ni, qalinligi 1,0-1,1 mm ni tashkil etgan arrali disklar ishlatiladi. Jinlardagi silindrda arralar sonining ko‘pligi, arrali disklar tashqi diametrini katta bo‘lishiga qaramasdan bitta arraning haqiqiy ish unumdorligi jin pasportidagi bitta arraning ish unumdorligiga qaraganda yuqori va past navli paxtalarni jinlashda o‘rtacha 4,5-3,5 kg/arrasoatga kam ekanligini ko‘rsatgan.

1980 yilga kelib paxtani mashina yordamida terib olish xajmi oshgan. Paxtani mashina yordamida terilishi paxtani qo‘l bilan terilishiga qaraganda ifloslik darajasini oshishiga olib kelgan. Texnologiyadagi paxtani mayda va yirik iflosliklardan tozalash agregati UXK bunday paxtadan iflosliklarni kerakli darajada ajratmagan. Texnologik tizim bo‘yicha UXK agregatidan keyin paxta jin uskunasiga berilgan. Bunda paxtani jinlash jarayonidan ishlab chiqarilgan tolaning sifati yaxshi bo‘lishi uchun paxtani jinlashdan oldin arrali jin ta’minlagich-tozalagichida paxta mayda iflosliklardan

tozalangan. Lekin ta’minlagich-tozalagich konstruksiyasining kamchiligidan paxta tarkibidan mayda iflosliklar kerakli darajada ajralmagan. Natijada jinga berilayotgan yuqori va past navli paxtaning ifloslik darajasi yuqori bo‘lib, PDI70-2017- “Paxtani dastlabki ishlashning muvofiqlashtirilgan texnologiyasi”da qayd etilgan 0,9-1,1% o‘rniga ifloslik 1,8-2,2% ni tashkil etgan. Jinga berilgan paxta ifloslik darajasining oshishi toladagi nuqsonlar va iflos aralashmalar massaviy ulushini oshishiga sabab bo‘lib, ishlab chiqarilayotgan tola sifatining pasayishiga olib kelgan.

Asosiy qism. Paxtani dastlabki ishlashning muvofiqlashtirilgan texnologiyasida paxtani mayda va yirik iflosliklardan tozalovchi UXK agregatining tozalash samaradorligi o‘rtacha 80-90% gacha bo‘lishligi qayd etilgan. Lekin agregat konstruksiyasining kamchiligidan yuqori va past navli paxtalarni tozalashda haqiqiy tozalash samaradorligi o‘rtacha 70-80% ni tashkil etib, paxtani bir-necha bosqichda va chuqur tozalash imkoniyati yo‘q. Samaradorlikni oshirish uchun UXK agregatiga qo‘shimcha paxtani tozalash uskunalarini qo‘shish esa ushbu uskunalarni o‘rnatilishida texnologik tizimda muammolarni yuzaga keltiradi. Qo‘shimcha elektr energiya va sarf-harajatlarning oshishiga olib keladi. Bundan tashqari tozalash jarayonida aylanuvchan ishchi qismlarning ko‘payishi paxtani bir-necha aylanuvchi ishchi qismlar bilan o‘zaro ta’sirida paxtadagi tola eshilishi keskin oshiradi va bunday paxtani arrali jinlash jarayonida toladagi nuqsonlar va iflos aralashmalar massaviy ulushining meyoridan oshishiga sabab bo‘lib, tola sifatiga salbiy ta’sir etadi. Odatda tola tarkibidagi ulyuk, chigit qobig‘li tola, chigallashgan tola paxtani jinlash jarayonida yuzaga kelib, ular asosan tolaning ustki qatlamida bo‘ladi va tola bilan yopishqoqlik darajasi kamdir. Shu sababli jinning o‘zida tolani ushbu iflos aralashmalardan tozalash tola tozalagichda tolani tozalash jarayoniga qaraganda oson kechadi.

Paxta sohasida rivojlangan AQSH, Xitoy, Xindiston va boshqa chet davlatlardagi arrali jinlarda tolani tozalash sistemasi qo‘llanilmaydi. Ushbu davlatlarda paxtani jinlashdan ishlab chiqarilgan tola asosan aerodinamik va kondensor turidagi tola tozalagichlarda tozalanadi. Jin samaradorligini o‘rganish uchun ishlab chiqarishda tadqiqot ishlari o‘tkazildi. Tadqiqot ishlari boshlang‘ich namligi 10,5% va iflosligi 9,6% bo‘lgan paxtaning Omad seleksiyali I nav 2-sinfida olib borildi [13-15]. Bunda jin tarnovida paxtaning namligi 8% ni, iflosligi 2,1% ni tashkil etdi.

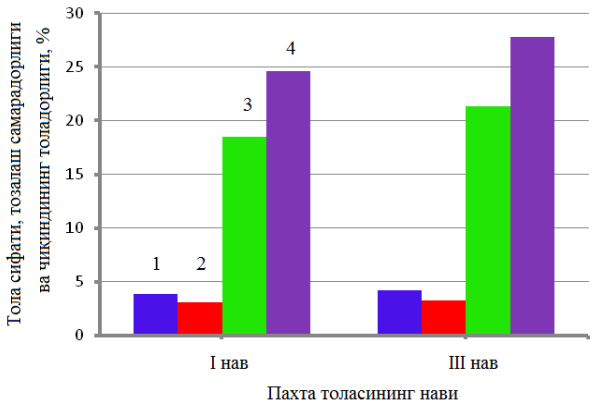
Ma’lumki, so‘ngi yillarda Respublikamizda qiyin tozalanuvchan S-6524, An-Bayavut-2, Porloq-1, Namangan-77, Sulton va boshqa seleksion navli paxtalar yetishtirilmoqda. Yetishtirilayotgan qiyin tozalanuvchan seleksion navli paxtalarning xajmi umumiy yetishtirilayotgan paxta xomashyosini o‘rtacha 75% ni tashkil etadi. Qiyin tozalanuvchan seleksion navli paxta xomashyosida mayda iflosliklarni paxta tolasiga yopishqoqlik darajasi yuqori bo‘lib, bugungi kundagi texnologiyada tola tarkibidan bunday iflosliklarni kerakli miqdorda ajratish imkoniyati yetarli darajada emas. Bundan tashqari qo‘l mehnatini yengillashtirish, qo‘shimcha xarajatlarni kamaytirish maqsadida yildan-yilga paxtani mashina yordamida terib olish xajmi kengaytirilmoqda.

8DP-90 rusumli arrali jindagi tozalash sistemasini samaradorligini o‘rganish maqsadida ishlab chiqarishda tajriba- tadqiqot ishlari olib borildi. Tadqiqot ishlari

O‘zbekiston paxta tozalash korxonasida qo‘l bilan terilgan qiyin tozalanuvchan S-6524 seleksiyali I va III navli 2- sinfli paxtalarda o‘tkazildi. Tadqiqot ishlari davrida paxtani jinlashdan ishlab chiqarilgan va jinda tozalanmagan hamda tozalangan tolaning sifati jinning orqa tomoniga tolani tozalash uchun o‘rnatilgan 3 dona kolosniklardan iborat bo‘lgan kolosnikli panjarani yechish va o‘rnatish orqali aniqlandi. Bunda jin bilan tola tozalagich oralig‘idagi patrubokdan namuna uchun tola olindi. Olingan namunalar korxona laboratoriyasida taxlil etildi. Taxlil natijalari aniq bo‘lishi uchun namunalar 7 marta takrorlanib, o‘rtachasi olindi.

Boshlang‘ich namligi 10,7%, iflosligi 4,6%, jin tarnovidagi namligi 7,8%, iflosligi 1,06% bo‘lgan S-6524 seleksiyali I nav 2- sinfli paxtani jinlashdan ishlab chiqarilgan tozalanmagan toladagi nuqsondor tola va iflos aralashmalarning massaviy ulushi o‘rtacha 3,83% ga teng bo‘ldi [17, 18]. Ushbu tola jindagi kolosnikli panjarada tozalangandan so‘ng toladagi nuqsondor tola va iflos aralashmalarning massaviy ulushi o‘rtacha 3,12% ni tashkil etib, jinning o‘zida tola sifati 0,71 (abs)% ga yaxshilandi. Bunda jinning tola bo‘yicha tozalash samaradorligi o‘rtacha 18,5% ga teng bo‘ldi.

Tolani tozalashda chiqindining toladorligi yuqori bo‘lib, chiqindi massasiga nisbatan o‘rtacha 24,6% ni tashkil etdi. Tozalangan tola jindan keyin o‘rnatilgan 5VP rusumli tola tozalagichga patrubok orqali havo yordamida uzatildi va tola tozalagichda tozalandi. Tozalangan toladagi nuqsondor tola va iflos aralashmalarning massaviy ulushi o‘rtacha 2,13% ni tashkil etib, sifat ko‘rsatkichi davlat standarti bo‘yicha I nav “Yaxshi” sinfga mansubligi aniqlandi. Tolani tozalashda tozalagichning tozalash samaradorligi o‘rtacha 31,7% ni tashkil etib, texnik xarakteristikasidagi tozalash samaradorligiga qaraganda o‘rtacha 3,3 (abs)% ga kam ekanligini ko‘rsatdi.



1-Jinda tozalanmagan toladagi nuqsonlar va iflos aralashmalarning massaviy ulushi;

2- Jinda tozalangan toladagi nuqsonlar va iflos aralashmalarning massaviy ulushi;

3- Tozalash samaradorligi;

4- Chiqindi massasiga nisbatan chiqindining toladorligi.

Tozalangan tola patrubok orqali jindan keyingi 5VP rusumli ikki barabanli tola tozalagichga havo yordamida yuborildi va tozalagichda tozalandi. Tozalangan

toladagi nuqsondor tola va iflos aralashmalarning massaviy ulushi o‘rtacha 2,19% ni tashkil etib, sifat ko‘rsatkichi davlat standarti bo‘yicha III nav “Yaxshi” sinfga mansubligi aniqlandi. Bunda tozalagichning tozalash samaradorligi o‘rtacha 33,2% ni tashkil etib, texnik xarakteristikasidagi tozalash samaradorligiga qaraganda o‘rtacha 3,8 (abs)% ga kam ekanligini ko‘rsatdi.

Xulosa. Paxta tozalash korxonalaridagi 5DP-130 rusumli arrali jinlarda yuqori va past navli paxtalarni jinlashdan ishlab chiqarilgan tolani jinning o‘zida tozalanishi tola sifatini yaxshilanishiga olib kelgan. Lekin kolosniklar sonining kamligi va kolosniklarning bo‘shab qolishidan arrali silindr radiusiga nisbatan joylashish holatining hamda kolosniklar qadamining o‘zgarishi oqibatida tola tarkibidan ulyuk, mayda va yirik iflosliklarni kerakli darajada ajralmasligi tola sifatini pasayishiga sabab bo‘lgan. Natijada jinning tola bo‘yicha tozalash samaradorligi kam bo‘lib, navlar bo‘yicha o‘rtacha 15-20% dan oshmagan. Tolani tozalashda chiqindining toladorligi yuqori bo‘lib, chiqindi massasiga nisbatan o‘rtacha 25-35% ni tashkil etgan.

Jinda tolani tozalash samaradorligi kam bo‘lganidan jindan keyingi 5VP rusumli tola tozalagichda tolani tozalashdan ishlab chiqarilgan toladagi nuqsondor tola va iflos aralashmalarning massaviy ulushi yuqori bo‘lib, I navli paxta tolasidan “Oliy” sinfga mansub tolaning ishlab chiqarilmaganligi o‘rganildi.

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PEDAGOGIK-DASTURIY TA'MINOTINI TAKOMILLASHTIRISH METODIKASI

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Nukus innovatsion istituti Dasturiy injinerning va iqtisodiyot kafedirasi assistenti

Annotatsiya. O'qituvchilar va talabalar duch keladigan muayyan muammolarni tushunish uchun har tomonlama ehtiyojlarni tahlil qilishdan boshlang. Bu joriy pedagogik amaliyot va dasturiy ta’minotdan foydalanishdagi kamchiliklarni aniqlash uchun so‘rovlar, suhbatlar va kuzatishlar orqali ma’lumotlarni to‘plashni o‘z ichiga oladi.

Kalit so’zlar. ERASMUS (Universitet talabalarining harakatchanligi uchun Yevropa hamjamiyatining harakat sxemasi), TEMPUS, innovatsiya.

Annotation. Begin with a comprehensive needs analysis to understand the specific challenges faced by educators and students. This involves gathering data through surveys, interviews, and observations to identify gaps in current pedagogical practices and software use.

Keywords. ERASMUS (European Community Action Scheme for mobility of University students), TEMPUS, innovation.

Kirish. Jahon miqiyosida ta'lim tizimini isloh qilish, global ta'lim jarayonlarida faol ishtirok etish, hamda innovasion yondashuv asosida talabalar o‘quv-bilish kompetentligini rivojlantirishning faol texnologiyalarni joriy etish belgilab olingan. Oliy ta'lim jarayonida kredit-modul tizimiga o‘tilishi ham bu borada muhim qadam sanaladi. Yevropa davlatlarida ta'lim tizimi Yevropa hamjamiyatining ERASMUS (European Community Action Scheme for mobility of University students) va TEMPUS kabi dasturlari asosida olib boriladi. Shunga ko‘ra, ta'lim sifatini oshirish halqaro raqobatbardoshlikni ta'minlash, ta'limda xalqaro hamkorlikni rivojlantirish negizida ta'lim jarayonini innovasion yondashuvlar asosida tashkil qilish va natijalarini amaliyotga joriy etish dolzarb vazifa hisoblanadi. Respublikamizda har tomonlama kamol topgan, yuksak kasb-hunar madaniyatiga, ijodiy, ijtimoiy faollikka ega bo‘lgan, jamiyat, davlat, oila oldida o‘z javobgarligini his etadigan kadrlarni tarbiyalash masalasiga amalga oshiriladigan islohotlarning asosiy maqsadi sifatida qaralmoqda. O‘zbekiston Fanlar akademiyasi muassasalarining jahondagi yirik ilmiy markazlar bilan to‘g‘ridan-to‘g‘ri ilmiy aloqalari tenglik va o‘zaro manfaatdorlik asosida sezilarli ravishda kengayib bormoqda. “Hayotning o‘zi va xalqning talablari

bizning oldimizga amaliy yechimini topish lozim bo‘lgan yangi va yanada murakkab vazifalarni qo‘ymoqda”. Ta'lim tizimida innovasion yondashuv asosida talabalar o‘quv-bilish kompetentligini rivojlantirishga xizmat qiluvchi yangi texnologiyalar va metodlarni ishlab chiqish tadqiqot ishining dolzarbligini nazarda tutadi.

Tadqiqot maqsadi. Oliy ta'limda bo‘lajak kasb ta'limi o‘qituvchilarining o‘quv-bilish kompetentligini innovasion yondashuv asosida rivojlantirish texnologiyasini takomillashtirishdan iborat.

Innovasion yondashuv asosida bo‘lajak kasb ta'limi o‘qituvchilari o‘quv bilish kompetentligini rivojlantirish kasbiy tayyorgarlik jarayonida talabashaxsining rivojlanishida asosiy o‘rinni egallaydi. Kasbiy faoliyatga tayyorlash jarayonida bo‘lajak kasb ta'limi o‘qituvchisi talabaga bilimga bo‘lgan motivasion va qadriyat munosabatini, mavzuga bo‘lgan ishtiyoqini yuzaga keltiraolishi kerak. Buning uchun, birinchi navbatda, bo‘lajak kasb ta'limi o‘qituvchilari kasbiy malakaga ega bo‘lishi kerak, shuningdek, o‘qitiladigan sohasidagi maxsus bilim va ko‘nikmalar, o‘z sohasida chuqur bilim va keng bilim berish, nostandart fikrlash, innovasion taktika va strategiyani egallash, ijodiy muammolarni hal qilish usullari; psixologik, pedagogik, kommunikativ va ijtimoiy-tashkiliy kompetentlik sifatlariga ega bo‘lishlari talab qilinadi. Innovasion yondashuv asosida bo‘lajak kasb ta'limi o‘qituvchilarining o‘quv-bilish kompetentligini samarali rivojlantirish muayyan tartibda pedagogik shart-sharoitlar mavjudligini taqozo etadi. Mavzuga doir adabiyotlarni o‘rganish va kasb ta'limining tashkil etilish jarayonini kuzatish natijasida quyidagi pedagogik shart-sharoitlar muhim ahamiyatga ega ekanligi belgilab olindi: huquqiy-me'yoriy ta'minot – umumiy va kasbiy fanlar uchun ajratilgan o‘quv soatlari, o‘quv dasturi, ishchi o‘quv dasturi, va barcha o‘quv-me'yoriy hujjatlar; ilmiy-pedagogik ta'minot – malakali, yetakchi professor-o‘qituvchilar, o‘z sohasini chuqur biladigan metodistlar, mas'uliyatli texnik xodimlar; metodik-texnik ta'minot – didaktik vositalar majmuasi (ma'ruza matnlari, taqdimot slaydlari, tarqatma materiallar, ish qog‘ozlari, o‘quv topshiriqlari, amaliy ko‘rsatmalar, nazorat-sinov savollari, jihoz, mexanizm, qurilma, asbobuskunalar); axborot – dasturiy ta'minot – ta'lim jarayonini avtomatlashtiruvchi vositalar (internet tarmog‘iga ulangan zamonaviy kompyuterlar) modul' platformasi, zoom drayverlari, elektron darslik mobil ilovalari, o‘quv qo‘llanma va o‘quv-uslubiy majmualar dasturlari, videomateriallar. Kasb ta'limi (qishloq xo‘jaligini mexanizasiyalashtirish) yo‘nalishi talabalari uchun kasbiy faoliyat uchun maxsus kompetensiyalar zarur bo‘lib, ular talabalarning ilmiy va ilmiy-tadqiqot, texnik-texnologik, loyihalash konstruktorlik, eksperimental-tadqiqiy, tashkiliy-boshqaruv ko‘nikmalarini shakllantiradi. Talabalarning o‘quv-bilish kompetentligini rivojlantirish uchun asta-sekin uning motivasion, kognitiv, faoliyat va kreativ-ijodiy komponentlari shakllantiriladi. Innovasion yondashuv asosida bo‘lajak kasb ta'limi o‘qituvchilarining o‘quv-bilish kompetentligini samarali shakllanishi va rivojlanishiga hissa qo‘shadigan modelni tarkibiy va mazmuniy komponentlari belgilab olindi. Ushbu modelning ishlash samaradorligi murakkab pedagogik shartlar bilan ta'minlanadi: 1) talabalarning o‘quv-bilish kompetentligini rivojlantirishga nazariy tayyorligi; 2) tabaqalashtirilgan va individuallashtirilgan ta'limni tashkil etish; 3) talabalarning o‘zaro tayyorgarligini tashkil etish; 4) talabalarni loyiha faoliyatiga jalb etish. Model' jarayon elementlarining tizimli tarkibini aks ettiradi. Kasb ta'limi

(qishloq xo‘jaligini mexanizasiyalashtirish) yo‘nalishi talabalarining o‘quv-bilish kompetentligini rivojlantirishning nazariy ko‘rinishi vazifasini bajaradi. Innovasion yondashuv asosida bo‘lajak kasb ta'limi o‘qituvchilari o‘quv-bilish kompetentligini rivojlantirish modeli pedagogik vositalarni tashkil etadi, ular o‘rtasida turli bog‘lanishlarni o‘rnatadi, ularni qo‘llash ketma-ketligini belgilaydi.

Xulosa. Oliy ta’limda innovatsion yondashuv asosida bo’lajak kasb ta’limi o’qituvchilarining o’quv-bilish kompetentligini rivojlantirish bo’yicha olib borilgan ilmiy izlanishlar quyidagi xulosalarga kelish imkonini berdi:

1. Innovatsion yondashuv asosida bo’lajak kasb ta’limi o’qituvchilarining o’quv-bilish kompetentligini rivojlantirishning nazariy-metodologik, tashkiliy-metodik mazmunini falsafiy, pedagogik, didaktik, texnologik xususiyatlari va omillari tahliliy jihatdan aniqlandi.

2. Tadqiqot muammosiga oid asosiy tushunchalar hisoblangan “innovatsion yondashuv”, “kompetentlik”, “kompetentsiya”, “o’quv-bilish kompetentligi” tushunchalarini mualliflik mazmuni izohi ochib berildi. Innovatsion yondashuv tarkibiy komponentlari (motivatsion maqsadli, faoliyatli, kompetentli, tizimli, texnologik, kreativ) aniqlandi.

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OLIY TA’LIM TIZIMIDA INNOVATSION TEXNOLOGIYALARDAN FOYDALANISH AHAMIYATI

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Annotatsiya: Ushbu maqolada innovatsion texnologiyalar ahamiyati va ularni amaliyotga tadbiq etish**,** oliy ta’lim tizimida ta’lim texnologiyalarining o’rni va ta’limni tashkil etishda noan’anaviy usullardan foydalanish abzaliklari ko’rib chiqildi.
Kalit so’zlar: An’anaviy ta’lim, innovatsiya, innovatsion texnologiyalar, mantiqiy fikrlash, axborot.

Аннотация: В статье рассматривается значение инновационных технологий и их внедрение в практику, роль образовательных технологий в системе высшего образования и преимущества использования нетрадиционных методов в организации образования.
Ключевые слова: Традиционное образование, инновации, инновационные технологии, логическое мышление, информация.

Abstract: This article considers the importance of innovative technologies and their application in practice, the role of educational technologies in the higher education system and the advantages of using non-traditional methods in the organization of education..
Key words: traditional education, innovation, innovative technologies, reasoning and information.

Hozirgi kunda butun dunyoda ta’lim tizimining ahamiyati toboro oshib bormoqda, u nafaqat mamlakat istiqbolini rivojlantirish balki butun jamiyatni barcha sohalarda yangi bosqichga olib chiqishning muhim omillaridan biriga aylandi. Ta’lim sifati millatning madaniyatini, ma’naviyatini, aql-idrok va milliyligini, fuqorolik jamiyatining ko’rinishini va rivojlanish ko’rsatkichini belgilab beradi. Shuning uchun jamiyatda ta’lim sifatiga butun millat va xalqning buguni va ertasini belgilovchi soha sifatida qarash muhimdir.

O’zbekiston Respublikasida oliy ta’limni tizimli isloh qilishning ustuvor yo’nalishlarini belgilash, zamonaviy bilim va yuksak ma’naviy-axloqiy fazilatlarga ega, mustaqil fikrlaydigan yuqori malakali kadrlar tayyorlash sifat jihatdan yangi bosqichga ko’tarish, oliy ta’limni modernizatsiya qilish, ilg’or ta’lim texnologiyalariga asoslangan holda ijtimoiy soha va iqtisodiyot tarmoqlarini rivojlantirish maqsadida davlatimiz rahbarining 2019-yil 8-oktabrdagi farmoni bilan tasdiqlangan O’zbekiston Respublikasi oliy ta’lim tizimini 2030-yilgacha rivojlantirish Konseptsiyasi sohadagi yangi islohatlari uchun poydevor vazifasini bajarib kelmoqda.

Innovatsion ta’lim texnologiyasi – ta’lim jarayoning samaradorligini oshirish va ijtimoiy-iqtisodiy rivojlanishning hozirgi tendensiyalariga mos keladigan shart-sharoitlarni yaratish, ta’lim jarayoniga yangiliklar olib kirish va amaliyotda qo’llash, sifat jihatdan yangilangan ta’lim faoliyatini tashkil etish metodologiyasidir.

Innovatsion texnologiyalarning asosiy kontseptsiyasi ta’lim tashkilotlarini zamonaviy texnik vositalar va kompyuter tizimlari tarmog’i bilan to’yinganligini o’z ichiga qamrab oladi. Ammo amaliyot shuni ko’rsatadiki, axborot kommunikatsiya texnologiyalarining mavjudligi ta’lim jarayonining yaxshilanishi va samarali rivojlanishini taminlamaydi. Bu yerda ham inson omili ustunlik qiladi. Ta’limda

innovatsion texnologiyalar iqtisodiy o’sish manbai sifatida inson omiliga asoslangan bo’lishi kerak. O’qituvchi o’z faoliyatida innovatsion texnologiyalardan foydalanishni bilishi, dars jarayonini har doim an’anaviy emas noan’anaviy tarzda ham tashkil etishi bilishi zarur.

Innovatsion texnologiyalar asosida mantiqiy fikrlash oliy ta’lim tizimini rivojlantirishning eng muhim omillaridan hisoblanadi. Ular ta’lim jarayonida ma’lum o’zgarishlarga, ta’lim mazmuni, sifati boyishiga va samarali tashkil etilishiga sabab bo’ladigan turli tashabbus va yangiliklarning yaxlit tizimida namoyon bo’ladi. Oliy ta’lim tizimi o’qituvchilarining faoliyati ko’p qirrali bo’lib, ular bir vaqtning o’zida boshqaruvchi, muloqat qiluvchi, yo’naltiruvchi, tashkil etuvchi va baholovchi ro’llarini amalga oshirishlari zarur.

Ta’lim sohasida innovatsion texnologiyalar doimiy ravishda rivojlanib, soni ortib bormoqda. Ular ichida noan’anaviy ta’lim texnologiyasining ro’li alohida ahamiyatga ega. Noan’anaviy ta’lim texnologiyalari egallangan bilim, ko’nikma va malakalarning talabalar tomonidan yaxshi o’zlashtirilishiga zamin yaratadi. Ushbu texnologiya ta’lim sohasida bilimlarni kengaytirsih, egallash va tarqatish xarakterini o’zgartiradi, o’rganilayotgan fanlarning mazmunini optimatlashtirish va kengaytirish, uni yangilash, samaraliroq o’qitish usullarini qo’llash, har bir kishi uchun ta’lim olish imkoniyatini sezilarli darajada kengaytirish imkoni beradi.

Ta’lim texnologiyasi axborotlarni o’zlashtirish, ulardan amalda foydalanish, ulardagi yangi ma’no mazmunlarni hamda axborotlar orasidagi turli bog’liqliklarni ochish orqali yangi axborotlar yaratishga o’rgatish jarayonidan iborat. Aniq ilmiy loyihalashtirilgan, samarali natijani kafolotlovchi, takrorlana oluvchi, ma’lum vaqt va shart-sharoitlarda tashkil etiluvchi pedagogik harakatlar tizimidir.(2)

Ta’lim texnologiyasida quyidagi xodisalarni bir-biridan farqlashga ehtiyoj tug’iladi:

1. ta’limni didaktik loyihalash
2. loyihani amalga oshirish
3. ta’limning joriy va oraliq natijasiga ko’ra didaktik loyihaga o’zgartirishlar kiritish
4. ta’limni takrorlash
5. yakuniy nazorat

Bu xodisalarning birinchisi va ikkinchisi an’anaviy ta’lim tajribasida ham uchraydi. Ta’lim texnologiyasining an’anaviy ta’lim tizimidan farqi shundaki ta’lim natijasi va uning yuqori darajada bo’lishi o’qituvchi va talabalarning diqqat markazida bo’ladi. Ya’ni o’qituvchi berilgan bilim, ko’nikma va malakalarning natijasini doimiy ravishda tekshirib, talabalarni erishgan yutuqlari haqida habardor qilib turadi. Talabalar bu jarayonda o’z muvaffaqiyat va kamchiliklarini anglab, birinchisini yanada ko’paytirishga, ikkinchisini bartaraf etishga intiladi. Bu jarayon talabalarga o’z ustida yanada ko’proq ishlash imkoniyatini beradi. Dars jarayonida ta’lim texnologiyasining samarasi uni to’g’ri qo’llay olishga bog’liq.

Hozirgi kunda ta’lim sohasida talalabalar mustaqil ta’limiga e’tibor ko’proq qaratilyapdi, chunki talaba o’qituvchidan eshitgandan ko’ra o’zi izlanib, adabiyotlarni tahlil qilganda yanada chuqurroq bilimga ega bo’ladi. Mustaqil ta’limda ham talabalarga topshiriqlar noodatiy tarzda berilsa ham qiziqarli ham mazmunli

bo’lishiga imkon beradi. Har qanday holatda ta’lim texnologiyalaridan to’g’ri foydalana olish o’qituvchining pedagogik mahoratiga bog’liq. Talabalarga mustaqil ta’lim topshiriqlarini topshirish vaqtida innovatsion texnologiyalardan foydalanishga sharoitlar yaratilishi kerak.

Pedagogik yo’nalishdagi barcha innovatsiyalar jamiyat ijtimoiy-iqtisodiy rivojlanishining hozirgi bosqichiga aniq mos kelishiga asoslanadi. Hozirgi kunda ular talabalarning mustaqilligini rivojlantirishga, qobiliyatlarini rivojlantirish va shakllantirishga, o’quv materilallarini mexanik ravishda emas, balki ongli ravishda o’zlashtirishga qaratilishi kerak.

Xulosa o’rnida shuni ta’kidlash joizki, bugungi kun innovatsion texnologiyalarni ilm-fan va ta’lim sohasida muvaffaqiyatli qo’llanilsa, yangi yosh avlod ana shu jahon tajriybasi asosida yangi bilimlarni olib ulg’aysa, davlatimizning ertagi istiqboli, kelajagi yorqin bo’lishiga ishonchimiz komil.

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BO‘LAJAK O‘QITUVCHILARNI TAYYORLASHDA PEDAGOGIK INNOVATSIYALARDAN FOYDALANISH

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Annotatsiya. Ushbu maqolada bo‘lajak pedagoglarni tayyorlashda ilg‘or pedagogik texnologiyalardan foydalanish, uning ahamiyati, pedagog shaxsi egallashi lozim bo‘lgan malaka va talablar haqida hamda bu ko‘nikmalarni shakllantirishda innovatsion pedagogikaning o‘rni va ahamiyati haqida ma’lumot berilgan.

Kalit so‘zlar: pedagog, innovatsiya, pedagogik texnologiya, malaka, innovatsion pedagogika.

Abstract. This article provides information on the use of advanced pedagogical technologies in the training of future pedagogues, its importance, the qualifications and requirements that a pedagogue should acquire, and the role and importance of innovative pedagogy in the formation of these skills.

Key words: pedagogue, innovation, pedagogical technology, competence, innovative pedagogy.

Xalqimizning kelajagi, mustaqil O`zbekistonning istiqboli ko`p jihatdan o`qituvchiga, uning saviyasiga, tayyorgarligi, fidoiyligiga, yosh avlodni o`qitish va tarbiyalash ishiga bo`lgan munosabatiga bog`liq. O`qituvchilik sharafli, lekin juda murakkab kasbdir.

Boshlang‘ich ta`lim umumta`lim maktablarining bosh bo‘g‘ini bo‘lgani sababli ana shu jarayonda o‘quvchi shaxsining mukammal rivojlanib borishiga ko‘proq e`tibor berish lozim. Boshlang‘ich sinf o‘qituvchilarining mas`uliyatlari cheksizdir. Ular maktab ostonasiga endigina qadam qo‘ygan o‘quvchilarni maktab hayotiga ko‘niktirib, zamonaviy bilim olishlariga yo‘l ochib beradilar. Bolalarning o‘qishga munosabatlari, aqliy salohiyatlari ana shu davrda shakllanadi. Bu ham boshlang‘ich sinf o‘qituvchilarining vazifasi mas`uliyatli ekanligini ko‘rsatadi.

Yaxshi o'qituvchi bo`lish uchun pedagogik nazariyani egallashning o`zigina etarli emas. Chunki pedagogik nazariyada bolalarni o`qitish va tarbiyalash haqida umumiy qonun-qoidalar, umumlashtirilgan usuliy g`oyalar bayon etiladi. O`quvchilarning yosh individual xususiyatlarini e'tiborga olish ta'kidlanadi. Maktab hayoti, amaliy pedagogik jarayon esa juda xilma-xildir. Pedagogik nazariyaga mos kelmaydigan vaziyatlar uchrab turadi. Bu esa o`qituvchidan keng bilimdonlikni, puxta amaliy tayyorgarlik, yuksak pedagogik mahorat va ijodkorlikni talab etadi.Shuning uchun ham mustaqil O`zbekistonda ta`lim muassasalarida faoliyat yurituvchi, ta`lim beruvchi pedagog o`qituvchi;

— pedagogik faoliyatga qobiliyatli, ijodkor, ishbilarmon;

— milliy madaniyat va umuminsoniy qadriyatlarni, dunyoviy bilimlarni mukammal egallagan, diniy ilmlardan ham xabardor, ma'naviy barkamol;

— O`zbekistonning mustaqil davlat sifatida taraqqiy etishiga ishonadigan, vatanparvarlik burchini to`g`ri anglagan, e'tiqodli fuqaro;

— o`qituvchilik kasbini va bolalarni yaxshi ko`radigan, har bir o`quvchisi ulg`ayib yaxshi odam bo`lishiga chin qo`ngildan ishonadigan, ularning shaxs sifatida rivojlanib, inson sifatida kamol topishiga ko`maklashadigan;

— erkin va ijodiy fikrlay oladigan, talabchan, adolatli, odobli bo`lmog`i darkor.

Tadqiqot maqsadi:

Ta’lim samaradorligini ta’minlashda pedagog chuqur pedagogik psixologik tayyorgarlik, har bir o`quvchining o‘ziga xos jihatlari haqida aniq ma’lumotga ega bo‘lishi hamda shaxsiy reja tuzishda quyidagi talablarga qat’iy rioya qilishi talab etiladi: − vujudga keladigan pedagogik muammolarni bashorat qila olishi; buning uchun bo‘lajak pedagog-tarbiyachi pedagogik jarayonda vujudga keladigan muammolarni oldindan ko‘ra bilish va uni bartaraf etish layoqatiga ega bo‘lishi lozim.

− vujudga keladigan muammolarni bartaraf etish metodlarini o‘zlashtirishi;

− vujudga kelgan muammolarni bartaraf etishning eng qulay usullarini tanlay va qo‘llay olishi;

− o`quvchilarga pedagogik ta’sir ko‘rsatish, ularni qo‘llab quvvatlash mahoratiga ega bo‘lishi;

− har bir o`quvchiga individual yondasha olishi;

− o`quvchilar bilan ommaviy tadbirlarni tashkil eta olish ko‘nikmasini egallashi;

− o`quvchilarni kitobxonlik, kitob sevarlikka unday olishi kabilar.

Bo‘lajak pedagog kasbiy mahorati bolalarni maktab ta’limiga samarali tayyorlash imkonini beradi. Pedagog-tarbiyachilarning faoliyatini pedagogik, psixologik, tashkiliy-metodik jihatdan o‘rganish natijalari o`quvchilarning o‘quv faoliyati samaradorligini oshirishda pedagog-tarbiyachining shaxsiy sifatlari va uning kasbiy tayyorgarligi katta ahamiyat kasb etadi. Shunga ko‘ra, oliy ta`lim muassasalarida talim jarayonida ilg`or innovatsion pedagogik texnologiyalarni qo`llash, yangi pedagogik texnologiyalar bilan tanishtirish, ularni qo`llash ko`nikmalarini shakllantirish, talabalarning pedagogik amaliyot davrida bo‘lajak pedagog-tarbiyachining maktabda amalga oshiradigan ishlari ularda kasbiy mahoratni shakllantirishda muhim ahamiyat kasb etadi. Bu borada biz pedagogikaning innovatsion pedagogika sohasidagi yutuqlarga murojaat qilamiz.

«Innovatsion pedagogika» Garbiy Yevropa va AQShda XX asrning 60- yillarida paydo bo`ldi H.Barnet, Dj.Basset, D.Gamilton, N.Gross, R.Karlson, M.Mayez, A.Heyvlok, D.Chen, R.Edem ishlarida innovatsion jarayonlarni boshqarish, talimdagi o`zgarishlarni tashkil etish, innovatsiyaning «hayoti va faoliyati» uchun zarur bo`lgan shart - sharoitlar masalalari tahlil qilingan

Innovatsiya (inglizcha innovation) – yangilik kiritish, yangilikdir. Innovatsiyaning amaliyotga kiritilishi innovatsion jarayonlarda amalga oshiriladi. Innovatsion jarayon deb – innovatsion o’zgarishlarga tayyorgarlik ko’rish va uni amalga oshirish jarayoniga aytiladi. Innovatsion jarayon – bu pedagogik yangiliklar, bu yangiliklarning pedagogik hamjamiyat tomonidan o’zlashtirilishi va ulardan ilmiy asosda amaliyotda samarali foydalanishning o’zgarib boruvchi yaxlitligidir.

Novatsiya va innovatsiya ortasidagi farqlar. Novatsiya:

1. Amaldagi nazariya doirasida qollaniladi;
2. Ko’lam va vaqt boyicha chegaralanadi;
3. Metodlar yangilanadi;
4. Natija avvalgi tizimni takomillashtiradi.

Innovatsiya:

1. Tizimli, yaxliy va davomli boladi;
2. Malum amaliyotda yangi faoliyat tizimini loyihalaydi;
3. Subektlarning faoliyati tola yangilanadi;
4. Yangi texnologiyalar yaratiladi;
5. Faoliyatda yangi sifat natijalariga erishiladi;
6. Amaliyotning ozi ham yangilanadi

«Innovatsiya» tushunchasi birinchi marta XIX asrda madaniyatshunoslar organishlarida bir madaniyat elementini boshqasiga joriy qilish manosini bildirgan. Uning bu manosi hozirgacha etnografiyada saqlanib qolgan.

XX asr boshlarida yangi bilim soha- yangiliklarni kiritish, qollash yuzaga keldi. U mahsulot ishlab chiqarish sohasida texnik yangiliklarni kiritish qonuniyatlarini o’rgana boshladi. Yangiliklarni kiritish haqidagi fan – innovatika firmalarning yangi reja, xizmatlarni ishlab chiqish va tatbiq etish faoliyatiga talablarni keskin oshib borishi aks ettirilgan holda paydo boldi. 30 yillarda AQSHda Firma innovatsion siyosati, Innovatsion jarayon atamalari peydo boldi. Pedagogik innovatsion jarayonlarni G’arbda 50 yillar oxirlaridan boshlab bizning mamlakatimizda keyingi

10 yillikdan boshlab olimlar maxsus organa boshladilar. Innovatsion talim tushunchasi birinchi bor 1979-yilda Rim klubida qo'llanilgan.

Pedagogik innovatsiyalarni hayotga tadbiq etishning tashkiliy asoslari:

- yangi g'oyalar izlash bosqichi;
- yangiliklar yuzaga keltirish bosqichi ;
- yangiliklar kiritishni amalga oshirish ;
- yangiliklarni mustahkamlash ;

Innovatsion texnologiyalarning barcha jarayonlarini quyidagilarga ajratish mumkin:

- ko'zlangan yangilikni kiritishdan maqsad umumiy va uning alohida bosqichlari muvaffoqiyatlarini tahlil qilish
- yangilikning o'zidagi va uni tatbiq etishni tashkil etishdagi kamchiliklarni aniqlash, ularni bartaraf qilish
- yangilikni boshqalar bilan taqqoslash, ulardan eng samaradorini tanlab olish, uning muhimligi va tayyor bolganligini aniqlash
- yangilikni tatbiq etish foydaliligi darajasini tekshirish
- yangilik tatbiq etiladigan tashkilot innovatsion qudratiga baho berish
- yangiliklarni tadbiq etishni tashxis qilish yollarini tahlil etish quyidagi asosiy vazifalarni belgilashga imkon beradi:

Boshlangich talim o'qituvchisining innovatsion faoliyati quyidagilar bilan belgilanadi:

- ✓ yangilikni qollashga tayyorgarligi
- ✓ novatorlik darajasi
- ✓ kommunikativ qobiliyatning rivojlanganligi
- ✓ pedagogik yangiliklarni qabul qilishi
- ✓ ijodkorligi

Interfaol metodlar - bu jamoa bo`lib fikrlash deb yuritiladi, yani pedagogik tasir etish usullari bo`lib, talim mazmunining tarkibiy qismi hisoblanadi. Bu metodlarning o`ziga xosligi shundaki, ular faqat pedagog va o`quvchi-talabalarning birgalikda faoliyat ko`rsatishi orqali amalga oshiriladi. A.I.Prigojin, B.V.Sazonov, V.S.Tolstoy, A.G.Kruglikov innovatsion jarayonlarni o'rganganlar. Interfaol talimning mazmuni axborot kommunikatsion texnologiyalardan foydalanib o'qituvchilar tomonidan mustaqil ravishda yoki o'qituvchi raxbarligida bilim, ko'nikma, malakalarini shakllantirish.

Hozirgi kunda talim jarayonida interfaol metodlar, innovatsion texnologiyalar, pedagogik va axborot texnologiyalarini o`quv jarayonida qo`llashga bo`lgan qiziqish, e'tibor kundan-kunga kuchayib bormoqda, bunday bo`lishining sabablaridan biri, shu vaqtgacha ananaviy talimda o`quvchi-talabalarni faqat tayyor bilimlarni egallashga o`rgatilgan bo`lsa, zamonaviy texnologiyalar ularni egallayotgan bilimlarini o`zlari qidirib topishlariga, mustaqil o`rganib, tahlil qilishlariga, hatto xulosalarni ham o`zlari keltirib chiqarishlariga o`rgatadi.

O'qituvchi tomonidan har bir darsni yaxlit holatda ko`ra bilish va uni tasavvur etish uchun bo`lajak dars jarayonini loyihalashtirib olish kerak.

O‘qitishning talim olish jarayonida interfaol talimga asoslanishi bir qarashda juda oddiy, sodda va hatto bolalar ongida tasavvur uyg‘otadi. Biroq bunday ta’lim kutilgan natijani beravermaydi.

Talim jarayonida didaktik o`yinli texnologiyalar didaktik o`yinli dars shaklida qo`llaniladi. Ushbu darslarda talabalarning bilim olish jarayoni o`yin faoliyati orqali uygunlashtiriladi. Shu sababli talabalarning talim olish faoliyati o`yin faoliyati bilan uygunlashgan darslar didaktik o`yinli darslar deb ataladi

Yuqoridagi fikrlardan shunday xulosa shuki malakali, yuqori kasbiy kompetensiyaga ega bo`lajak pedagoglar o‘z pedagogik faoliyatidagi sosiy omillar ish tajribasi, didaktik vositalar (axborot, tarqatma materiallar korgazmali rasmlar, dars jihozlari) o‘quvchi va o‘quvchilar guruhining o‘zaro hamkorlikka erisha olish ko‘nikmalariga ega bo‘lishlari lozimdir. Bundan tashqari pedagoglarga qo‘yiladigan talablar qatoriga kasb doirasida tayanch pedagogik psixologik bilimlar, metodik malaka, o‘quvchi va o‘quvchilar guruhi ortasidagi munosabatlarning ishonch va hurmatga asoslanishi, tashkilotchilik qobiliyati muhim o`rin tutadi. O‘quvchilarning darsga psixologik tayyorgarliklari, o‘quvchilarning muayyan darajada hayotiy tajribalarga egaliklari, o'quvchilarning o‘qituvchi tomonidan qo‘yiladigan talablarga bo‘ysunishi haqida, o‘quvchilarning o‘zlashtirish darajasi yuqoriligi, o‘quvchilarning tengdoshlari va o‘qituvchi bilan xamkorlik qilishga moyilliklari, o‘quvchilarning darsga nisbatan mas’uliyatli yondashishlari, burchini anglashi to‘grisida tushunchaga ega bo‘lishlari lozim.

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QORAQALPOG‘ISTON RESPUBLIKASIDA TADBIRKORLIK FAOLIYATINI RIVOJLANTIRISH YO‘NALISHLARI

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Annotasiya. Ushbu maqolada mamlakatimizda tadbirkorlik faoliyatini rivojlantirishga qaratilgan chora tadbirlar yo‘ritib berilgan. Xususan,

Qoraqalpog‘iston Respublikasida tadbirkorlarga yaratilgan imkoniyatlar tahlil qilinib chiqildi.

Kalit so‘zlar. tadbirkorlik faoliyati, imtiyozlar, reformalar, biznesni yuritish sharoitlari.

Abstract. This article describes measures aimed at the development of entrepreneurship in our country. In particular, the opportunities created for entrepreneurs in the Republic of Karakalpakstan were analyzed.

Key words. Business activities, benefits, reforms, business conditions.

Kirish. Hozirgi kunda mamlakatimizda olib borilayotgan islohatlarning natijasini barcha aholi qatlamlarining hayotidagi ijobiy o‘zgarishlardan ko‘rishimiz mumkin. Masalan, tadbirkorlik faoliyatini boshlash va rivojlantirishdagi barcha to‘siqlar bartaraf etilmoqda va tadbirkorlar o’z biznesini rivojlantirish uchun yangi imkoniyatlarga ega bo’lmoqda, fermer xo’jaliklari, klasterlar yetishtirilgan hosilning egasiga aylanmoqda.

O’zbekiston hukumati tomonidan respublika taraqqiyotida, aholi farovonligini yuksaltirishda hal qiluvchi rol o’ynaydigan tadbirkorlar va mulkdorlar huquqlari har tomonlama qo’llab-quvvatlanmoqda.

O’zbekiston Respublikasi Prezidentining 2022-yil 28-yanvardagi “2022–2026-yillarga mo’ljallangan Yangi O’zbekistonning taraqqiyot strategiyasi” to’g’risidagi PF–60-son Farmoniga asosan [1], 2026-yilga qadar aholi bandligini ta’minlash, yoshlar va ishsiz fuqarolarni davlat hisobidan talab qilinadigan kasblarga o’qitish, oilaviy tadbirkorlikni rivojlantirish, aholining ijtimoiy himoyaga muhtoj qatlamini manzilli qo’llab-quvvatlash orqali kambag’allikni 2 barobarga qisqartirish rejalashtirilgan [2; 192-197 bb.].

Yurtimizda tadbirkorlikni rivojnaltirishga qaratilgan katta e’tiborni davlatimiz Prezidenti Shavkat Mirziyoev tarafidan har yili avgust oyida Tadbirkorlar kuni arafasida Prezidentning tadbirkorlar bilan ochiq muloqot shaklida masalalarni birgalikda yechish maqsadida o‘tkaziladigan uchrashuvining an’anaga aylanganligidan ham ko‘rish mumkin.

Tadqiqot maqsadi. Qoraqalpog‘iston Respublikasida kichik biznes va tadbirkorlik sub’ektlari faoliyatini rivojlantirishga qaratilgan imtiyozlar va chora-tadbirlarni chuqur tahlil qilish.

Tadqiqotni tashkil qilish uslublari. Tadqiqotning uslubiy asosi bo‘lib kichik biznes va tadbirkorlik tushunchasining mohiyatini ochib berish va tahlil qilish hisoblanadi. Tahlil jarayonida taqqoslash, statistik usullardan foydalanildi.

Tadqiqot natijalari va muhokamasi. Mamlakatimiz Prezidenti Shavkat Mirziyoyev 2021-yildan boshlab 20-avgust kunini Tadbirkorlar kuni etib belgilagan va uni har yili keng nishonlashni taklif qilgan. O‘sha yili prezidentning tadbirkorlar bilan o‘tkazgan ilk ochiq muloqotida o‘n mingga yaqin tadbirkor ishtirok etgandi. 2022-yilda prezident qarori bilan “Faol tadbirkor” ko‘krak nishoni ta’sis etildi va o‘sha yili 71 nafar tadbirkorga ushbu ko‘krak nishoni topshirildi. 2023-yilda bunday ko‘krak nishoni 126 nafar tadbirkorga berildi. Shuningdek, O‘zbekiston iqtisodiy

qudrati va aholi farovonligini yuksaltirishda namuna ko‘rsatayotgan 44 nafar fuqaro davlat mukofotlari bilan taqdirlanib, ularga unvon, orden va medallar topshirildi.

Shu an’anani davom ettirish maqsadida 2024-yili 20 avgust kuni Nukus shahrida O‘zbekiston prezidentining tadbirkorlar bilan muloqoti bo‘lib o‘tdi.

Prezident Shavkat Mirziyoyev Qoraqalpog‘iston Respublikasiga tashrifini sanoat salohiyati bilan tanishishdan boshladi. Birinchi navbatta 2017-yilda ishga tushgan “Nukus Elestroapparat” qo‘shma korxonasining faoliyati bilan tanishib chiqdi. Unda elektr energiyasi tarmog‘i uchun kuchlanish qurilmalari ishlab chiqariladi. Joriy yil iyunda bu yerda 10 million dollardan ziyod mablag‘ evaziga quyosh panellarini yasash loyihasi ishga tushirildi. Uskunalar Koreya Respublikasidan keltirib o‘rnatildi. Ishlab chiqarish jarayoni 100 foiz avtomatlashtirilgan. Loyihaning yillik quvvati 273 ming dona.

Oxirgi 7 yilda Qoraqalpog‘iston Respublikasida 17 trillion 800 milliard so‘mlik 6 ming 784 ta loyiha amalga oshirilgan. Ularning natijasida 56 mingta ish o‘rni yaratilgan. Shu davrda 2 milliard 815 million dollarlik eksport qilingan. Bu yil respublikada umumiy qiymati 874 million dollarlik 470 ta loyiha amalga oshirilmoqda.

Bu izchil davom ettirilib, Qoraqalpog‘istonda xorijiy investor va mahalliy tadbirkorlar tomonidan umumiy qiymati 9,5 milliard dollarlik 124 ta loyiha shakllantirilgan. Shundan qariyb 1 milliard 800 million dollarlik 10 tasi davlatimiz rahbariga taqdimot qilindi.

Loyihalarga Xitoy, Saudiya Arabistoni, Germaniya, Rossiya, Ispaniya kabi mamlakatlar kompaniyalari investitsiya kiritmoqda. Ular energetika, issiqlik ta’minoti, tog‘-kon va kimyo sanoati, qurilish materiallari, xizmat ko‘rsatish va boshqa tarmoqlarni qamrab olgan.

Masalan, Saudiya Arabistoni bilan hamkorlikda Nukus shahrida markazlashgan issiqlik ta’minoti tizimini yaxshilash, Ispaniya investitsiyasi ishtirokida Qorao‘zak tumanida quyosh va shamol elektr stansiyalari qurish, germaniyalik investorlar tomonidan Nukus tumanida misni qayta ishlash va kabellar ishlab chiqarish loyihalari rejalashtirilgan.

Mazkur 124 ta loyiha natijasida 20 mingdan ortiq aholi ish bilan ta’minlanadi.

20-avgust kuni Nukus shahrida O‘zbekiston Respublikasi Prezidentining tadbirkorlar bilan navbatdagi ochiq muloqoti bo‘lib o‘tdi.

Qoraqalpog’iston tumanlari hokimlari va iqtisodiy kompleks yil yakunigacha 121 ming aholini band qilishi muhimligi ta’kidlandi.

Buning uchun tadbirkorlarning kredit va aylanma mablag’ bilan bog’liq masalasini tez-tez hal qilish, mahallalar ixtisoslashuvidan kelib chiqib, 9 mingta mikro va kichik loyihani ishga tushirish, kichik va o’rta biznesni qo’llab-quvvatlashga 636 milliard so’m yo’naltiriladi.

Shularni hisobiga yil yakunigacha Qoraqalpog’istonda kambag’allik darajasi hozirgi 13,6 foizdan 8,5 foizga tushishi hisob-kitob qilinmoqda.

Davlat dasturlari doirasida yo’l, suv, ijtimoiy ob’ektlar qurilishi va mahalla infratuzilmasiga 11 trillion so’m ajratildi. Xususan, bog’cha qamrovi 28 foizdan 84 foizga oshdi. Yangi 21 ta maktab qurildi, yana 243 tasi to’liq ta’mirlandi.

Ilk marta 700 o’ringa mo’ljallangan 17 qavatli IT-park qurildi. “Bir million dasturchi” loyihasi doirasida ikki yil ichida 40 mingga yaqin qoraqalpog’istonlik yoshlar o’qitildi.

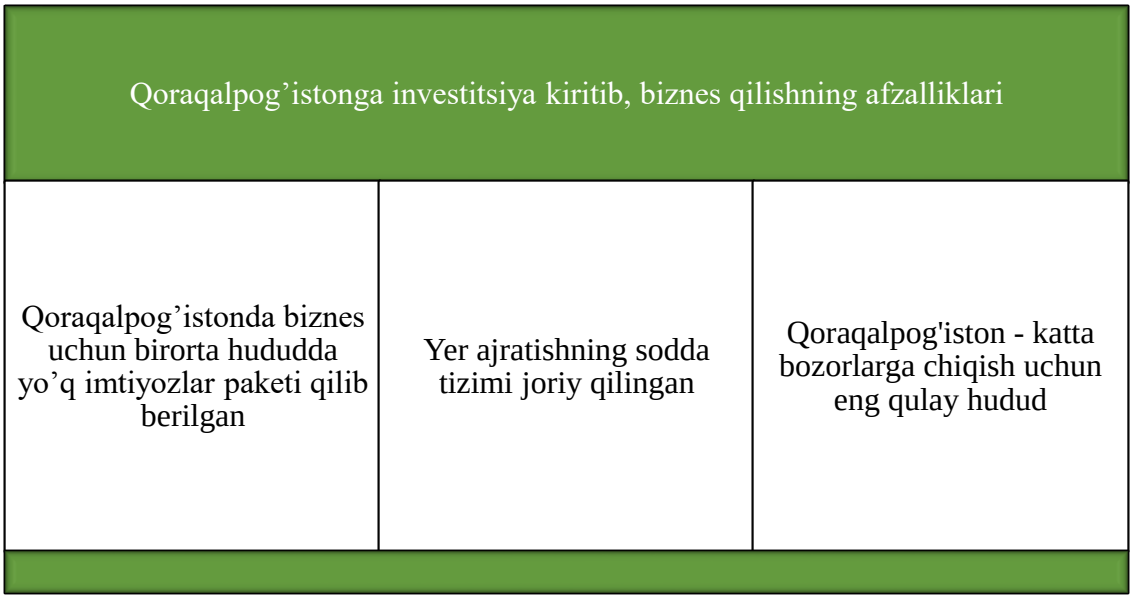
Qoraqalpog’istonda Mahallalarni qo’llab-quvvatlash jamg’armasi tashkil qilinib, 452 ta mahallaning har biriga 500 million so’mdan ajratildi.

Osiyo taraqqiyoti bankidan jalb qilingan 274 million dollar hisobidan “Buxoro – Nukus – Beynov” yo’nalishidagi 240 kilometr magistral yo’l yaqin kunlarda ishga tushishirilmoqda.

Orolbo’yidagi iqlim sharoitini yaxshilash bo’yicha ham juda katta dastur boshlangan. So’nggi yetti yilda Orol dengizining qurigan tubida 1,9 million gektarda o’rmonzorlar barpo etildi. Natijada, hududning o’rmon bilan qoplanish darajasi 19 foizdan 35 foizga yetdi.

Ekotizimni yaxshilash, sho’rlangan, suvsiz muhitda yangi nav va urug’larni yaratish uchun Orolbo’yi xalqaro innovatsiya markazi tashkil etildi.

Yaqinda tasdiqlangan qishloq xo’jaligini iqlimga moslashtirish dasturiga ko’ra, Orolbo’yida iqlim o’zgarishi oqibatini yumshatishga 80 million dollar beriladi.



1-rasm. Qoraqalpog‘iston Respublikasida tadbirkorlik faoliyatini yuritish afzalliklari.

Qayd etilganidek, Qoraqalpog’istonga investitsiya kiritib, biznes qilishning boshqa hududlarga nisbatan 3 ta ustunligi bor.

Birinchisi – Qoraqalpog’istonda biznes uchun birorta hududda yo’q imtiyozlar paketi qilib berilgan. Jumladan, so’nggi besh yilda alohida farmon va qarorlar bilan imtiyoz va yengilliklar berildi.

Ushbu imtiyozlar hisobiga o’tgan davrda tadbirkorlar ixtiyorida 2 trillion so’mdan ziyod mablag’ qoldi.

Bundan tashqari, 50 milliard so’mdan yuqori loyihalarga infratuzilma qilib berishni ham davlat o’z zimmasiga olgan.

Ta‘kidlash lozimki, Qoraqalpog‘iston Respublikasining tadbirkorlik subyektlari uchun 50dan ortiq imtiyozlar belgilangan. Shular qatoridan, foyda solig‘i, aylanmadan olinadigan soliq, mol-mulk solig‘i va yer solig‘i 2028-yil 1-yanvarga qadar 50 foizga kamaytirilgan.

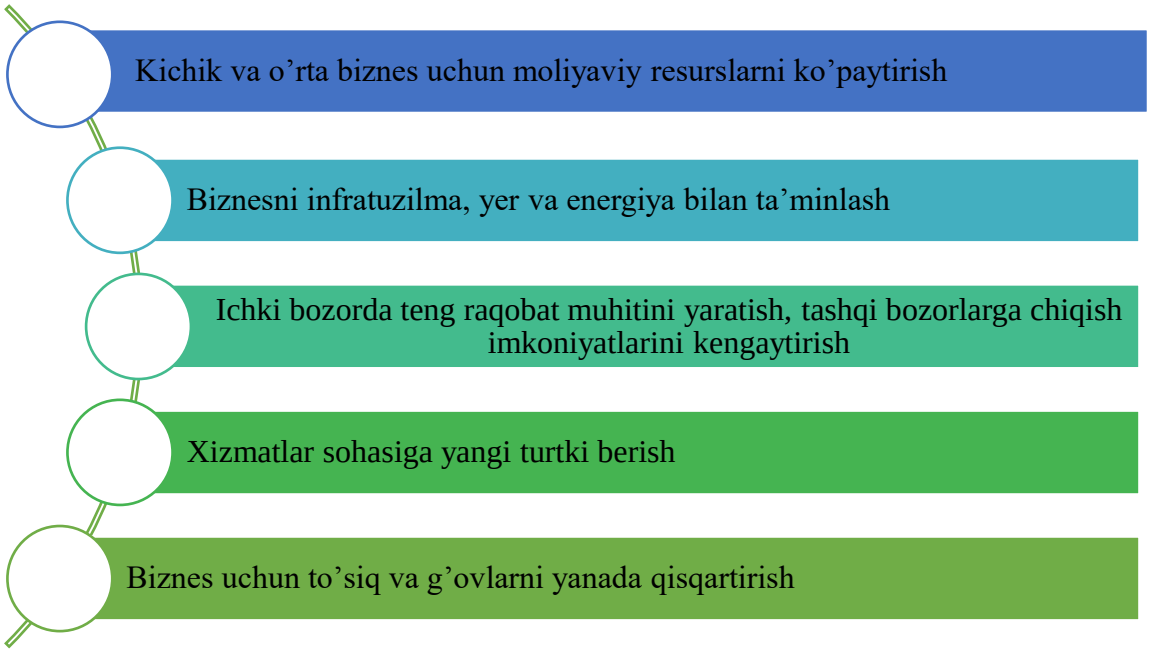
Bundan tashqari, tadbirkorlik faoliyatini amalga oshirayotgan yuridik shaxslar uchun ijtimoiy soliq stavkasi 1 foiz miqdorida belgilangan, yakka tartibdagi tadbirkorlar tomonidan to‘lanadigan ijtimoiy soliq esa shaharlar hududida faoliyatni amalga oshirayotgan shaxslar uchun 12 baravarga, tumanlar darajasida 6 baravarga kamaytirilgan hamda yiliga bazaviy hisoblash miqdorining 1 baravari miqdorida belgilangan.

Qoraqalpog’istonning ikkinchi ustunligi – yer ajratishning sodda tizimi joriy qilingan.

Nukus shahrida 1 million dollar, qolgan tumanlarda 300 ming dollar investitsiya kiritish sharti bilan Vazirlar Kengashi qarori asosida yer uchastkalari to’g’ridan-to’g’ri berilmoqda.

Uchinchisi. Qoraqalpog’iston – bu Yangi O’zbekistonning darvozasi. Chunki katta bozorlarga chiqish uchun eng qulay hudud aynan Qoraqalpog’iston.

Prezident tadbirkorlik uchun qo’shimcha sharoitlar yaratish bo’yicha muhim yangi tashabbuslarni ilgari surdi (1-rasm).



2-rasm. Tadbirkorlik faoliyatini rivojlantirishda qo’shimcha sharoitlar yaratish bo’yicha yangi beshta tashabbus.

Birinchi yo’nalish – kichik va o’rta biznes uchun moliyaviy resurslarni ko’paytirish.

Masalan, 100 million so’mgacha mikrokredit bor-yo’g’i 9 foiz tadbirkorlarning ehtiyoji uchun yetarli ekanligi ma’lum bo’ldi. Shu bois, mikrokreditlar miqdori 3 karra oshirilib, 300 million so’mga yetkaziladi. Bunda kreditning 100 million so’mgacha bo’lgan qismiga garov talab qilinmaydi.

Bu maqsadga bir yilda 10 trillion so’m beriladi.

Davlat banklari bergan kreditning 92 trillion so’mi yoki 30 foizi 10 ta yirik davlat korxonasiga to’g’ri keladi. Endi davlat jalb qilgan mablag’larni yirik korxonalarga berish amaliyotidan bosqichma-bosqich voz kechiladi.

Bunday mablag’larni berish ikki yil ichida kamida 40 foizga qisqaradi. Banklar buning hisobidan kamida 30 trillion so’mni xususiy biznesga yo’naltiradi.

Ikkinchi yo’nalish – biznesni infratuzilma, yer va energiya bilan ta’minlash.

Endilikda tadbirkor auktsiondan yer sotib olganda unga qo’shilgan qiymat solig’i hisoblash bekor qilinadi.

Toshkent shahri va viloyat markazlarida sotilgan yer bo’yicha xarid summasini uch yilgacha, qolgan hududlarda besh yilgacha, 4 va 5-toifa tumanlar uchun esa o’n yilgacha bo’lib-bo’lib to’lashga ruxsat beriladi. Endi tadbirkorlar darhol to’lov qilaman desa, 20 foizgacha chegirma beriladi.

Endi, elektr va gaz iste’moli limitdan 20 foizgacha oshib ketsa ham bazaviy tarif saqlanib qoladi. Agar iste’mol 20 foizdan o’tib ketsa, oshgan qismiga to’lov 20 foiz qimmatlashadi.

Tadbirkorlik reytingida “yuqori”, “o’rta” toifadagi korxonalarga elektr uchun oldindan to’lovni bir oyda ikkiga bo’lib to’lashga ruxsat beriladi.

Uchinchi yo’nalish – ichki bozorda teng raqobat muhitini yaratish, tashqi bozorlarga chiqish imkoniyatlarini kengaytirish.

Bundan buyon, hech kimda alohida huquq bo’lmasligi, xoh davlat strategik korxonasi bo’lsin, xoh xususiy korxona yoki xorijiy investor bo’lsin, iqtisodiyotda barcha teng sharoitda ishlaydi.

To’rtinchi yo’nalish – xizmatlar sohasiga yangi turtki berish.

O’zbekistonda band aholining 52 foizi xizmatlar sohasida ishlayapti. Ishlab turgan korxonalarning 68 foizi ham xizmatlar sohasiga to’g’ri keladi.

Lekin, sohada band bo’lganlarning atigi 4 foizi yuqori qo’shilgan qiymat beradigan yo’nalishda faoliyat yuritayapti. Shu bois, xizmatlarda, avvalo, IT sohasini rivojlantirishga alohida e’tibor qaratiladi.

Beshinchi yo’nalish – biznes uchun to’siq va g’ovlarni yanada qisqartirish.

1 noyabrga qadar aholining hayoti va sog’lig’iga haqiqiy xavf soluvchi mezonlar reestri ishlab chiqiladi.

Reestrda yo’q mezon bo’yicha tadbirkor faoliyatini to’xtatgan mansabdor javobgarlikka tortiladi [3].

Tadqiqot natijalaridan xulosa qilishimiz mumkin davlat ham kichik va o‘rta biznesni rivojlantirishdan bevosita manfaatdor. Chunki kichik va o‘rta korxonalar yangi ish o‘rinlarini tashkil etadi, raqobatni kuchaytiradi, ularda harakatchanlik, moslashuvchanlik, innovatsion yondashuvchanlik, noan’anaviy echimlar va yangi usullarni doimiy ravishda izlash kabi xususiyatlar mavjud.

Xulosa. Xulosa qilib shuni aytish kerakki, ko‘plab rivojlanayotgan mamlakatlar uchun kichik biznes va tadbirkorlik bu milliy iqtisodiyotning bir qismi, shuning uchun kichik biznes va tadbirkorlikni rivojlantirishda Davlat tomonidan qo‘llab-quvvatlashning barqaror tizimi zarur. Kichik biznes va tadbirkorlikni rag‘batlantirishning samarali moliyaviy vositalari va mexanizmlarini amalga oshirish nafaqat mamlakatimiz iqtisodiyotida uning rolini oshirishga, balki mamlakatimizda ijtimoiy rivojlanishning innovatsion modeliga o‘tishga ham hissa qo‘shadi [4].

Taklif. O'zbekiston Respublikasi prezidentining "Faktoring xizmatlari bozorini jadal rivojlantirish chora-tadbirlari tog'risida"gi 12.08.2024 yil PF-109 sonli farmoniga asosan kichik biznes va tadbirkorlik sub'ektlarini moliyaviy ta'minlovchi faktoring xizmatlari haqida talaba yo'shlar orasida keng targ'ibot ishlarini olib borish lozim. Bu ishlar davra suhbatlari yo'ki qisqa muddatli treyning kurslari shaklida o'tgazish maqsadga muvoffiqdir. Natiyjada bo'lajak tadbirkor yo'shlarning zamonaviy moliyaviy savodxonligini oshirish ko'zda tutiladi.

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