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SO‘ZBOSHI

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

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

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05.00.00 - TEXNIKA FANLARI

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05.00.00 – ТЕХНИЧЕСКИЕ НАУКИ

"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

ENABLERS FOR SUCCESSFUL VOICE AI ADOPTION AND IMPLEMENTATION IN UZBEKISTAN

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Abstract. *Voice-based artificial intelligence (AI) technologies are transforming global healthcare systems by improving accessibility, operational efficiency, and patient outcomes. This paper investigates the adoption and performance impact of voice-based AI systems in healthcare organizations in Uzbekistan. Through mixed-method research comprising qualitative interviews and quantitative performance data from five major hospitals, we analyze how these technologies influence clinical documentation, patient interaction, and administrative efficiency. Our findings show significant improvements in documentation accuracy and workflow speed, though challenges persist in areas such as language processing and system integration. This paper contributes to the growing literature on AI in emerging markets and suggests strategic recommendations for future implementations in Uzbekistan's healthcare sector.*

Keywords: *voice-based AI, healthcare systems, mixed-method research.*

1. Introduction

The global healthcare industry is increasingly leveraging artificial intelligence (AI) to enhance service delivery, reduce errors, and improve patient satisfaction. One promising development is voice-based AI—systems that use natural language processing (NLP) and speech recognition to facilitate real-time data entry, virtual assistance, and communication. In emerging economies such as Uzbekistan, the potential for voice-based AI to alleviate healthcare inefficiencies is high but underexplored. Voice AI adoption in healthcare is a transformative trend, but it faces barriers and enablers that shape its journey. The digital health sector is eagerly exploring the potential of voice-enabled artificial intelligence to streamline public health workflows and improve patient care. However, healthcare institutions have valid concerns about privacy, integration complexity, and real-world use cases that need to be addressed for successful voice AI implementation.

This paper aims to evaluate the performance impact of voice-based AI tools in healthcare organizations in Uzbekistan, examining both benefits and implementation challenges. Our work provides insights into how these tools are influencing clinical workflows and decision-making in a Central Asian context.

2. Literature Review

voice AI adoption to become an integral component of clinical practice, it's crucial to identify the factors that facilitate its acceptance among clinicians. One key enabler is vividly portraying the perception of AI technology and its benefits, which can significantly influence the probability of its usage. When clinicians comprehend the advantages, such as the precision of medical transcription and the ease provided by medical dictation software, their intent to integrate AI medical transcription solutions into their routine can be greatly enhanced.

Another pivotal factor in the successful implementation of voice AI in the healthcare system is the performance expectancy from the patients’ perspective. By improving the functionality and responsiveness of Conversational Agents, patient engagement can see a notable boost. Trust in these systems is primarily built upon functional factors; we need to ensure that these tools are not only useful but are perceived as credible sources of quality service. The National Center for Biotechnology Information (NCBI) provides an insightful article on how Artificial Intelligence can improve patient management, emphasizing the importance of AI in healthcare.

Involving clinicians in the development process of such tools can be highly beneficial as well. Participatory design allows for a product that is closely tailored to the actual needs and routines of medical professionals. Such collaboration can minimize the perceived risk and skepticism towards voice AI adoption, as clinicians themselves help shape the tools they will use in their daily clinical practice. To truly drive the successful implementation of voice AI in the healthcare system, it’s essential to address the human factor. By engaging clinicians, demonstrating tangible benefits, and ensuring the technology aligns with their workflows, we can create an environment that embraces artificial intelligence as a valuable asset in improving patient care. (Patel, B. N.2019)

Voice-based AI, particularly in the form of digital assistants and automated transcription systems, has shown promise in developed countries. Studies by Jiang et al. (2021) and Verghese et al. (2022) demonstrate improvements in physician-patient interaction and reduced documentation burden. However, literature on AI adoption in post-Soviet and Central Asian healthcare settings remains sparse.

Uzbekistan’s healthcare system has seen reforms aimed at modernization, with a growing focus on digital transformation (World Bank, 2023). Yet, linguistic diversity, infrastructural limitations, and regulatory uncertainties challenge AI adoption. This research fills a critical gap by providing empirical data on the role of voice AI in this unique regional context.

3.Methodology

3.1 Research Design

A mixed-method approach used to design descriptive and quantitative. Descriptive research design is a scientific method which involves observing and describing the behavior of a subject or a number of subjects without influencing it in any way (Cooper and Schindler, 2014) and was therefore consistent with the objectives of this current study as the researcher had no control over the study variables (both dependent and independent)

Maxwell and Miltapalli (2008) posits that, explanatory research design is used where the study in question is intended to explain the causal relationships between variables after analysis of quantitative data objectively collected from the field and empirical testing of hypotheses.

Qualitative: In-depth interviews with 20 healthcare professionals (doctors, nurses, IT staff) from five healthcare institutions in Tashkent and Samarkand.

Quantitative: Analysis of system performance logs, administrative reports, and patient throughput data before and after AI system implementation.

3.2 Tools and Technologies Studied

Voice-based AI systems evaluated include:

Nuance Dragon Medical One (piloted in a public hospital)

Localized Uzbek-language voice recognition tools developed by UzbekTechAI

Custom hospital voice assistants for appointment scheduling and internal communications

4. Results

4.1 Operational Efficiency: Implementing voice AI solutions automates tasks, reduces healthcare costs, and assists in generating swifter patient recoveries due to real-time monitoring and more focused clinical care. Result finds

- Documentation time reduced by 35% on average across facilities
- Appointment scheduling automation increased patient processing rate by 22%
- Report generation time decreased from 6 hours to 3.5 hours on average

4.2 Staff Feedback: Real-time voice-enabled devices foster a better patient experience, improving patient care with voice AI technology and possibly enhancing compliance and outcomes.

- 85% of physicians reported improved ease in creating patient notes
- Concerns included error rates in Uzbek voice recognition (12-15%) and integration delays with existing hospital information systems

4.3 Patient Interaction

- Patients responded positively to automated appointment systems, with a 92% satisfaction rate reported via post-visit surveys
- Voice-enabled kiosks reduced registration wait times from 30 minutes to under 10 minutes

5. Discussion

Voice AI adoption is not merely about integrating new technologies into hospitals and clinics; it’s about redefining the ethos of healthcare. The implementation of artificial intelligence and speech recognition medical tools in clinical practice echoes the concerted effort to place quality care at the forefront. By imbuing our exam rooms with ambient clinical intelligence, we enhance clinical documentation and refine the physician experience. The seamless adoption of healthcare speech recognition software within the healthcare system will be a testament to our relentless quest to provide unparalleled patient experiences and improve the lives of those we serve Kocaballi, A. B. (2020).

Voice-based AI showed tangible improvements in efficiency and documentation accuracy. However, system performance varied based on the language used—Uzbek and Russian voice inputs had higher error rates compared to English-trained models. Infrastructure inconsistencies and lack of training also hindered optimal usage.

These findings underscore the need for:

- Language-optimized AI models for Uzbek and Russian
- Integration protocols for legacy systems
- Government-supported training initiatives for AI use in clinical settings

6. Conclusion

The journey through the promises and challenges of voice AI in healthcare reflects a profound shift towards more efficient and compassionate patient care. The transformative potential of technologies such as medical voice recognition stands to streamline clinical documentation and enhance the patient-physician interaction. While recognizing the barriers, the importance of strategic implementation and ethical considerations in integrating these advanced tools into healthcare practices is underscored.

Moving forward, it remains imperative to focus on the significant benefits that voice AI adoption can offer, not only in saving physicians’ time and improving patient outcomes but also in proactively shaping the future of the healthcare system. The implementation of artificial intelligence in clinical practice, when done thoughtfully and with due diligence, has the power to revolutionize the way we deliver care and improve the lives of countless individuals.

Voice-based AI presents a valuable opportunity for healthcare transformation in Uzbekistan. When properly implemented, it improves operational performance and enhances patient care. However, success hinges on resolving linguistic and technical challenges. Future

research should explore long-term impacts, cost-effectiveness, and broader adoption across rural regions.

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TYPES OF SEWING MACHINES USED IN THE PROCESSING OF FUR PRODUCTS

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https://doi.org/10.5281/zenodo.15662164

Annotatsiya. *Ushbu maqolada tabiiy mo'ynali buyumlarni ishlab chiqarishda, ularga texnologik ishlov berishda ishlatiladigan universal xamda maxsus tikuv mashinalari haqida batafsil yoritib berilgan.*
Kalit so'zlar: *mo'yna, mashina, gazlama, texnologik, avtomatik, maishiy, sanoat, charm, po'stin, poyabzal, qo'lqop, sanoat mo'ynachilik.*

Аннотация. *В данной статье подробно рассказывается об универсальных и специальных швейных машинах, применяемых при изготовлении изделий из натурального меха, их технологической обработке.*
Ключевые слова: *мех, машина, газировка, технологический, автоматический, бытовой, промышленный, кожа, шуба, обувь, перчатки, промышленный мех.*

Annotation. *This article covers in detail about special sewing machines in the universal Ham, which are used in the manufacture of natural fur products, in technological processing for them.*
Keywords: *fur, machine, gauze, technological, automatic, household, industrial, leather, coat, shoes, gloves, industrial furry.*

Fur machines are a special type of sewing equipment with which items from fur and other heavy materials are sewn. The main advantage of such machines is the ease of sewing such gaskets, which is ensured by the high productivity of machines. They are also distinguished by a smooth ride, adjustable buckle height, which is provided by automatic continuous lubrication of the details.

Fur machines will also be household and industrial machines, like other sewing equipment. They can differ in speed and productivity, variety of power supply, which should be 380 W, unlike usual for industrial furry techniques. Can also put 220W

Fur trimming machines according to their function can also be divided into several types. There are their own types of equipment for the production of items from thin, medium or thick

leather and fur. There are also special machines designed to produce soft toys, household items, etc.[1].

For sewing fur, special fur sewing machines are used, which work by running a single-threaded chainsaw. They are designed for processing various types of fur, leather and suede, and are designed for thin, medium and thick materials.

Types of fur sewing machines:

For thin materials (up to 1.3 mm): sobol, norka, khorek, gornostay and others. Aurora GP4-4 Service Center for such materials 21 and KNITISM.ru the model is suitable.

For medium materials (up to 3.5 mm): Rabbit, diamond, Fox, Beaver, nutria, etc.

For thick materials (up to 5.5 and 7 mm): bear, sheepskin, mare, opoka, marine animal skins.

Main features of fur trimming machines:

One-thread chain stitch: allows you to carefully and reliably sew fur items.

Pushing the material with gear discs: provides an even walk and prevents the material from slipping.

Automated lubrication: makes it easy to look after and maintain the machine.

Disc opening pedal: helps to make it easier to work with the Material.

Different types and models: selected depending on the thickness and type of material to be processed

Examples of fur machines:

Aurora GP4-5: suitable for thin furs.

Zoje ZJ302: suitable for leather and heavy fur.

Zoje ZJ2610-5SM: high speed machine for medium leather and fur.

Fur machines are used to sew furs, leathers, furs, soft shoes, gloves, headgear and other similar items

Fur machines require special care that ensures long-term operation. It is necessary to pay attention to the cleanliness of the equipment and clean them after the end of the sewing work.

It is also necessary to control the indicator that regulates the entry of oil and carry out detail lubrication in places where there is no automatic lubrication

In the light industry, domestic and foreign equipment is used to produce leather and fur products.

The manufacturing workshop has a variety of sewing (universal and special) machines that are used in the processing of fur products into details, which are as follows:

Sewing machine 0810-0 (when attaching natural fur details with thick skin texture);

Sewing machine 0810-1 (when attaching natural fur details with medium thickness leather texture);

Sewing machine 0810-2 (fine skin when attaching natural fur details with textured skin);

SKM-040-sewing machine (fine skin when attaching natural fur details with textured skin);

SKM-030-sewing machine (when attaching natural fur details with medium thickness leather texture);

Gp5 – 1 sewing machine (fine skin when attaching natural fur details with textured skin);

Gp5 – 2 sewing machine (when attaching natural fur details with medium thickness leather texture);

Gp5 – 3 sewing machine (when attaching natural fur details with thick skin texture)

Another of the special sewing machines is the SOMET (German) sewing machine, the operation of which is considered to be a machine that cuts and sews the edges of the fur in the preparation of fur products [2].

The main function of fur sewing machines is to operate by running a single-thread chainsaw with fur, leather and suede. Because today the choice of material is large enough and its thickness varies.

Fur machines are divided into thin - up to 1.3 mm machines. (sobol, norka, sorek), on average - up to 3.5 mm. (rabbit, Wolf, diamond, Fox, Beaver, nutria) and from thick materials up to 5.5 and 7 mm. (bear, sheepskin, mare, opoyka, sea animal skin).



Picture 1. GP4-5 Aurora industrial fur machine.

Fur machines are used to sew fur, fur, soft shoes, feathers, gloves, headgear, etc. Improved technologies provide slow walking, easy sewing and an automated lubrication system. And the disc opening pedal helps to make work easier

The GP4-5 Aurora industrial fur machine is a tabletop model with high performance, flat and quiet walking. It can be installed on an optional table, as it has a compact size. Such a model weighs 19.5 kg., with a maximum speed of 2,800 rpm.

The Model is equipped with an automated lubrication system, which increases the service life, since continuous oil is supplied to the required places with the help of a pump, and special bearings prevent oil leakage.

Aurora GP4-5 performs a single-strand chain stitch and sews skin and medium fur up to 2 mm[4].



Picture 2. Karakul skin.

For example: yenot, Karakol, almakhon, otter, Fox, seer, etc. Moving the material is carried out using gear discs. Recommended for use in large factories, ateles and at home. Description of this model: weight-19.5 kg / box-22.5 kg, speed-2800 st / min, maximum Bachya size - 3.0 mm / solid width-2.5 mm / stitching material thickness-2 mm, DB * 1 75-90 needle system / 7.5 tex / 3 cotton thread, packaging (D * Sh * V)405 * 355 * 350 mm.



Picture 3. Gear discs.

As a conclusion, we can say that being considered one of the important characteristics of their value in the preparation of fur products, an effective way to increase the productivity of production is – the choice of the right sewing machine occupies an important place.

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O‘ZBEKISTONDA RAQAMLI TEXNOLOGIYALAR VA SUN’IY INTELLEKTNING TA’LIM HAMDA BIZNES RIVOJLANISHIDAGI ROLI

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Annotatsiya. *Ushbu tadqiqot maqolasi O‘zbekistonda raqamli texnologiyalar va sun’iy intellektning ta’lim tizimi hamda biznes rivojlanishidagi rolini tahlil qiladi. Maqolada 2030 yilgacha bo‘lgan milliy AI strategiyasi doirasida amalga oshirilayotgan islohotlar, raqamli ta’lim yondashuvlari, fintech sektorining rivojlanishi va texnologik tadbirkorlik ekotizimining shakllanishi ko‘rib chiqiladi. Tadqiqot natijalari shuni ko‘rsatadiki, O‘zbekiston AI texnologiyalari bo‘yicha mintaqaviy lider bo‘lish maqsadida muhim qadamlar qo‘ymoqda. Maqolada ham ta’lim, ham biznes sohalarida raqamli transformatsiyaning imkoniyatlari va cheklovlari muhokama qilinadi.*

Kalit so‘zlar*: raqamli O‘zbekiston, sun’iy intellekt, AI strategiyasi 2030, fintech, raqamli ta’lim, IT Park, texnologik tadbirkorlik.*

Abstract. *This research article analyzes the role of digital technologies and artificial intelligence in the education system and business development in Uzbekistan. The article examines the reforms being implemented within the framework of the national AI strategy until 2030, digital education approaches, the development of the fintech sector, and the formation of a technological entrepreneurship ecosystem. The research results show that Uzbekistan is taking significant steps towards becoming a regional leader in AI technologies. The article discusses the opportunities and limitations of digital transformation in both education and business sectors.*

Keywords*: digital Uzbekistan, artificial intelligence, AI strategy 2030, fintech, digital education, IT Park, technological entrepreneurship.*

Аннотация. *Данная исследовательская статья анализирует роль цифровых технологий и искусственного интеллекта в системе образования и развитии бизнеса в Узбекистане. В статье рассматриваются реформы, проводимые в рамках национальной стратегии ИИ до 2030 года, подходы к цифровому образованию, развитие финтех-сектора и формирование экосистемы технологического предпринимательства. Результаты исследования показывают, что Узбекистан предпринимает значительные шаги к тому, чтобы стать региональным лидером в области технологий ИИ. В статье обсуждаются возможности и ограничения цифровой трансформации как в сфере образования, так и в бизнесе.*

***Ключевые слова**: цифровой Узбекистан, искусственный интеллект, стратегия ИИ 2030, финтех, цифровое образование, ИТ-парк, технологическое предпринимательство.*

Kirish

O‘zbekiston so‘nggi yillarda raqamli transformatsiya yo‘lida muhim yutuqlarga erishmoqda. 2024 yil oktyabr oyida Prezident Shavkat Mirziyoyev tomonidan tasdiqlangan 2030 yilgacha sun’iy intellekt rivojlanish strategiyasi mamlakatning texnologik kelajagini belgilovchi muhim hujjat hisoblanadi [1, 2]. Ushbu strategiya doirasida AI asosidagi dasturiy mahsulotlar va xizmatlar hajmi 1.5 milliard dollargacha etkazish va 10 ta ilmiy laboratoriya ochish rejalashtirilgan [3].

O‘zbekiston 37 million aholisi bilan Markaziy Osiyodagi eng gavjum mamlakat bo‘lib, ayniqsa aholisining 60 foizi 30 yoshdan kichik ekanligi hisobga olinsa, raqamli texnologiyalar yoshlarning salohiyatini ro‘yobga chiqarish uchun kalit vosita hisoblanadi [4]. O‘zbekiston barqaror rivojlanish maqsadlariga mos ravishda turli sohalarda, xususan sog‘liqni saqlash va ta’limda AI texnologiyalarini joriy qilmoqda [5].

Mamlakatning IT sektori tez sur’atlar bilan rivojlanmoqda. 2023 yil birinchi choragida O‘zbekiston IT sektorining umumiy daromadi 2.38 trillion so‘mni tashkil etdi, bu 2022 yilning shu davriga nisbatan deyarli to‘rt baravar ko‘p [6].

Bu tadqiqot O‘zbekiston kontekstida raqamli texnologiyalar va sun’iy intellektning ta’lim tizimi hamda biznes muhitiga ta’sirini kompleks tahlil qilishni maqsad qiladi.

Adabiyotlar Sharhi O‘zbekistonda Sun’iy Intellekt Strategiyasi O‘zbekiston AIni iqtisodiy o‘sish, ijtimoiy rivojlanish va modernizatsiyaning asosiy harakatlantiruvchisi sifatida ko‘radi va 2030 yilgacha mintaqada AI bo‘yicha yetakchi o‘rinni egallashni maqsad qiladi [7]. Hukumat AI tadqiqot markazlari tashkil etish, innovatsiyalarni rag‘batlantirish kabi bir qator tashabbuslarni amalga oshirmoqda [8].

2024 yil oktyabrida Prezident Shavkat Mirziyoyev 2030 yilgacha sun’iy intellekt rivojlanish strategiyasini imzoladi. Hujjatga ko‘ra, ushbu muddatgacha AI sohasida 10 ta ilmiy laboratoriya ochish rejalashtirilgan [1]. Vazifa tartibga soluvchi bazani tayyorlashdan iborat [2].

Raqamli Ta’lim Tizimining Rivojlanishi O‘zbekistonda raqamli ta’lim tizimini rivojlantirish bo‘yicha keng ko‘lamli ishlar amalga oshirilmoqda. O‘zbekistonda oliy ta’limda sun’iy intellektdan foydalanish bo‘yicha o‘qituvchilarning fikrlarini o‘rganish sohasida tadqiqotlar olib borilmoqda [9]. Mamlakatda 2023 yil noyabr oyida We Digital agentligi tomonidan AI laboratoriyasi ishga tushirildi, bu raqamli kontentni yaratishda AI chatbotlaridan foydalanish imkoniyatlarini kengaytirdi [10].

Fintech va Raqamli Biznes Ekotizimi. O‘zbekiston fintech sektorida sezilarli muvaffaqiyatlarga erishmoqda. Fintech O‘zbekiston startup ekotizimining asosi bo‘lib qolmoqda va 2024 yilda 180 million dollar investitsiya jalb qildi [11]. Aholining katta qismi hali ham bank xizmatlaridan to‘liq foydalanmaganligini hisobga olsak, fintech startaplari mobil hamyonlar, raqamli to‘lov tizimlari orqali muhim bo‘shliqlarni to‘ldirmoqda [12].

O‘zbekiston 37 million aholisi bilan Markaziy Osiyodagi eng gavjum mamlakat sifatida global fintech va elektron tijorat lideri sifatida paydo bo‘lmoqda [12]. “Fintech&Banking 2024” Markaziy Osiyodagi fintech sohasidagi eng muhim yillik tadbir bo‘lishni maqsad qilmoqda [11].

IT Park va Texnologik Tadbirkorlik. IT Parkda United Soft va TASS Vision kabi kompaniyalar gullab-yashnab, yuqori sifatli vizual effektlardan tortib chakana savdogarlar uchun

AI-ga asoslangan analitikagacha hamma narsani ishlab chiqarmoqda [13]. Davlat xizmatlari ham rivojlanmoqda, biometrik identifikatsiya tizimlari joriy qilinmoqda [14].

BMT Rivojlanish Dasturi tomonidan tayyorlangan hisobot O‘zbekistonning raqamli iqtisodiyoti, startup ekotizimi va sun’iy intellektning rivojlanishi to‘g‘risida keng qamrovli tahlil beradi [5].

Metodologiya. Ushbu tadqiqot adabiyotlar tahlili va ma’lumotlar sintezi metodiga asoslangan. Tadqiqot jarayonida 2022-2025 yillar oralig‘ida nashr etilgan O‘zbekiston kontekstidagi ilmiy maqolalar, davlat hujjatlari, xalqaro tashkilotlar hisobotlari va ekspert baholaridan foydalanildi [15, 16, 17].

Ma’lumotlar yig‘ish jarayonida quyidagi mezonlar qo‘llanildi:

1. O‘zbekistonda AI va raqamli texnologiyalar rivojlanishiga doir eng so‘nggi ma’lumotlar
2. Ta’lim va biznes sohalarida raqamli transformatsiya bo‘yicha empirik ma’lumotlar
3. Milliy strategiya va davlat dasturlari hujjatlari
4. Xalqaro hamkorlik va investitsiya ko‘rsatkichlari
5. IT sektor statistik ma’lumotlari

Tadqiqot davomida 40 dan ortiq ilmiy va rasmiy manba tahlil qilindi va eng muhim natijalar ushbu maqolada jamlandi.

Natijalar va Muhokama O‘zbekistonda AI Strategiyasining Amalga Oshirilishi
Prezident Shavkat Mirziyoyev 2024 yil 14 oktyabrda O‘zbekistonda sun’iy intellekt texnologiyalarini rivojlantirishni tezlashtirish bo‘yicha qarorni tasdiqladi [1]. Ushbu strategiya 2030 yilgacha mamlakatning AI rivojlanishini yo‘naltiradigan asosiy hujjat bo‘ldi [2].

Strategiyaning asosiy yo‘nalishlari:

- AI asosidagi dasturiy mahsulotlar va xizmatlar hajmini 1.5 milliard dollargacha etkazish [3].
- YAIDXP (my.gov.uz) platformasi orqali AI yordamida ko‘rsatiladigan xizmatlar ulushini 10% gacha oshirish [6].
- 10 ta ilmiy laboratoriya ochish va tegishli texnologiyalarni qo‘llab-quvvatlash uchun tartibga soluvchi bazani rivojlantirish [7].

Ta’lim Tizimidagi Raqamli Transformatsiya

O‘zbekiston ta’lim tizimida raqamli texnologiyalarni joriy etish bo‘yicha quyidagi natijalar qayd etildi:

- **AI laboratoriyalari va tadqiqot markazlari**: 2023 yil noyabrida We Digital agentligi AI laboratoriyasini ishga tushirdi, bu kontentni yaratishda AI chatbotlarining qo‘llanilishini kengaytirdi [10].
- **O‘qituvchilarning AI ga munosabati**: O‘zbekistonda oliy ta’limda sun’iy intellektdan foydalanish bo‘yicha o‘qituvchilarning fikrini o‘rganish sohasida tadqiqotlar olib borilmoqda, bu pedagoglarning yangi texnologiyalarga tayyorgarligini baholash imkonini beradi [9].
- **Yoshlar salohiyatini rivojlantirish**: Aholisining 60 foizi 30 yoshdan kichik bo‘lgan O‘zbekistonda raqamli texnologiyalar yoshlarning katta salohiyatini ro‘yobga chiqarish uchun kalit vosita hisoblanadi [4].

Biznes Sektoridagi Raqamli Rivojlanish IT Sektor Ko‘rsatkichlari

O‘zbekiston IT sektori ajoyib natijalar ko‘rsatmoqda:

- 2023 yil birinchi choragida IT sektorining umumiy daromadi 2.38 trillion so‘mni tashkil etdi – 2022 yilning shu davriga nisbatan deyarli to‘rt baravar ko‘p [6].

- Raqamli xizmatlar eksporti 57.2 million dollargacha oshdi [13].

Fintech Sektorining Rivojlanishi

Fintech O‘zbekiston startup ekotizimining asosi bo‘lib, 2024 yilda 180 million dollar investitsiya jalb qildi [11]. Aholining katta qismi hali ham bank xizmatlaridan to‘liq foydalanmaganligini hisobga olsak, fintech startaplari mobil hamyonlar va raqamli to‘lovlar orqali muhim bo‘shliqlarni to‘ldirmoqda [12]. “Fintech&Banking 2024” Markaziy Osiyodagi fintech sohasidagi eng muhim yillik tadbir bo‘lishni maqsad qiladi, bu mintaqaviy hamkorlik va innovatsiyalar rivojlanishiga yordam beradi [11].

IT Park va Texnologik Kompaniyalar

IT Parkda United Soft va TASS Vision kabi kompaniyalar muvaffaqiyat qozonmoqda, ular yuqori sifatli vizual effektlardan tortib chakana savdogarlar uchun AI-ga asoslangan analitikagacha keng spektrdagi mahsulotlarni ishlab chiqarmoqda [13].

Cheklovlar va Qiyinchiliklar

O‘zbekistonda raqamli transformatsiya jarayonida quyidagi cheklovlar mavjud:

- **Kadrlar tayyorlash masalasi**: Raqamli ko‘nikmalar va AI texnologiyalari bo‘yicha malakali mutaxassislar yetishmasligi [18].
- **Infratuzilma rivojlanishi**: Barcha hududlarda yuqori sifatli internet va raqamli infratuzilmaning mavjud emasligi [5].
- **Moliyaviy imkoniyatlar**: Kichik va o‘rta biznes uchun zamonaviy texnologiyalarni joriy etish xarajatlari [16].
- **Raqamli savodxonlik**: Aholining katta qismida raqamli texnologiyalardan foydalanish ko‘nikmalarining past darajasi [4].

Kelajak Istiqbollari

O‘zbekistonda raqamli texnologiyalar va AI rivojlanishining kelajak istiqbollari:
2030 yilgacha strategik maqsadlar:

- AI asosidagi mahsulotlar va xizmatlar bozorini 1.5 milliard dollargacha etkazish [3].
- 10 ta ilmiy laboratoriya va hisoblash-texnik infratuzilmasini yaratish [1].
- Mintaqada AI bo‘yicha yetakchi o‘rinni egallash [8].

Innovatsion rivojlanish yo‘nalishlari:

- Sog‘liqni saqlash sohasida AI diagnostika tizimlarini joriy etish [5].
- Ta’limda shaxsiy o‘qitish platformalarini rivojlantirish [19].
- Fintech va raqamli to‘lovlar tizimini kengaytirish [11].
- Elektron tijorat va raqamli marketing sohalarini rivojlantirish [20].

Xulosalar

O‘zbekistonda raqamli texnologiyalar va sun’iy intellektning ta’lim hamda biznes rivojlanishidagi roli tobora kuchayib bormoqda. Mamlakatning 2030 yilgacha AI rivojlanish strategiyasi va IT sektor ko‘rsatkichlari O‘zbekistonning raqamli transformatsiya yo‘lida ciddiyligi va potensialini ko‘rsatadi [1].

Asosiy yutuqlar:

1. **Davlat darajasidagi yondashuv**: 2030 yilgacha AI strategiyasining qabul qilinishi va amalga oshirilishi [2].
2. **Fintech rivojlanishi**: 180 million dollar investitsiya va moliyaviy inklyuziyaning oshishi [11].
3. **Yoshlar salohiyati**: Aholining 60% i 30 yoshdan kichik bo‘lib, raqamli texnologiyalar uchun katta imkoniyat [4].

Kelajakda muvaffaqiyat quyidagi shartlarni bajarishga bog‘liq:

- Kadrlar tayyorlash tizimini yaxshilash [18].
- Raqamli infratuzilmani rivojlantirish [5].
- Xalqaro hamkorlikni kuchaytirish [8].
- Innovatsion ekotizimni qo‘llab-quvvatlash [13].

O‘zbekiston raqamli transformatsiya va AI rivojlanish yo‘lida mintaqaviy lider bo‘lish imkoniyatiga ega, ammo bu maqsadga erishish uchun tizimli yondashuv va uzoq muddatli investitsiyalar zarur [7].

Tavsiyalar

Davlat organlariga tavsiyalar:

Ta’lim siyosati:

- AI va raqamli texnologiyalar bo‘yicha o‘qituvchilar tayyorlash dasturlarini kengaytirish [9].
- Barcha ta’lim bosqichlarida raqamli savodxonlik darslarini majburiy qilish [19].
- Universitetlarda AI va data science yo‘nalishlarini kuchaytirish [17].
- Xalqaro ta’lim hamkorligi dasturlarini rivojlantirish [4].

Biznes muhitini qo‘llab-quvvatlash:

- Startaplar va texnologik kompaniyalar uchun soliq imtiyozlarini kengaytirish [13].
- Venture kapital va investitsiya fondlarini rag‘batlantirish [11].
- Raqamli eksport qo‘llab-quvvatlash dasturlarini yaratish [12].
- Kichik va o‘rta biznes uchun raqamlashtirish grantlari [16].

Ta’lim muassasalariga tavsiyalar:

Raqamli ta’lim infratuzilmasi:

- Zamonaviy kompyuter sinflarini yaratish [19].
- Yuqori tezlikdagi internet ulanishini ta’minlash [5].
- AI va VR/AR texnologiyalar uchun maxsus laboratoriyalar [10].
- Onlayn ta’lim platformalarini rivojlantirish [9].

O‘qitish metodologiyasi:

- Aralash o‘qitish (blended learning) usullarini joriy etish [19].
- Loyiha asosidagi o‘qitishni rivojlantirish [17].
- Gamifikatsiya elementlaridan foydalanish [20].
- Shaxsiy o‘qitish yondashuvlarini qo‘llash [4].

Biznes sektoriga tavsiyalar:

Raqamli transformatsiya:

- Biznes jarayonlarni avtomatlashtirishga investitsiya qilish [16].
- Xodimlarni raqamli ko‘nikmalarga o‘rgatish [18].
- Cloud texnologiyalar va AI yechimlarini joriy etish [6].
- Ma’lumotlar tahlili va business intelligence tizimlarini yaratish [13].

Innovatsiya va hamkorlik:

- Universitetlar bilan hamkorlik dasturlarini rivojlantirish [17].
- R&D bo‘limlarini yaratish va kuchaytirish [11].
- Startaplar bilan hamkorlik va akseleratsiya dasturlari [12].
- Xalqaro texnologik hamkorlikni rivojlantirish [8].

Fuqarolar uchun tavsiyalar:

Raqamli ko‘nikmalar:

- Onlayn kurslar orqali IT ko‘nikmalarini o‘rganish [4].
- Raqamli moliyaviy xizmatlardan foydalanishni o‘rganish [11].
- Kiberhavfsizlik asoslarini o‘zlashtirish [18].
- Uzluksiz o‘rganish va yangilanish madaniyatini shakllantirish [5].

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“ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS”

АНАЛИЗ И РАЗРАБОТКА ЖЕНСКОЙ КОЛЛЕКЦИИ И ИСПОЛЬЗОВАНИЕМ ХУДОЖЕСТВЕННОЙ ДЕКОРАТИВНОЙ ТЕХНИКИ «ФЛЮИД -АРТ»

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Annotatsiya. *Ushbu maqolada suyuqlik san’ati texnikasida qanday chizish kerakligi va buning uchun qanday materiallar kerakligi batafsil o‘rganiladi. Ushbu maqolada suyuqlik san’ati texnikasining turlari ko‘rib chiqiladi.*
Kalit so‘zlar: *Art terapiya, san’at, texnika, ijodiy, ranglar, aralashtirish, ranglarni qatlamlash.*

Аннотация. *В этой статье подробно изучается как рисовать в технике Флюид Арт и какие материалы для этого понадобятся. В этой статье рассмотрены виды техники Флюид-Арт.*
Ключевые слова: *Арт-терапия, искусство, техника, творческий, цветов, смешивание, наслаивание цветов, текучее искусство.*

Annotation. *This article examines in detail how to draw using the Fluid Art technique and what materials will be needed for this. This article discusses the types of Fluid Art techniques.*
Keywords: *Art therapy, art, technic, creative, colors, mixing, layering of colors, fluid Art*

Флюид Арт – это техника рисования жидким акрилом, с английского переводится как жидкое искусство. Этот вид абстрактной живописи основан на рисовании акриловой краской, которой придают жидкую текучую консистенцию. Жидкий акрил разных цветов поочередно или одновременно выливают на холст, где цвета перемешиваются и формируют абстрактный рисунок. В зависимости от выбора цветов и добавок каждый раз создаются разные уникальные эффекты.

Флюид Арт – один из наиболее популярных видов современного творчества. Эта относительно новая форма искусства берет свое начало в США и с каждым днем находит новых последователей по всему миру.

И вот причины:

Прекрасно подходит для начинающих. Для работы в технике Флюид Арт необязательно иметь навыки рисования и опыт работы с красками. Любой может заниматься этим хобби в свое удовольствие и получать результаты в виде прекрасных картин.

Не требует большого количества инструментов и материалов.

Не отнимает много времени. Чтобы нарисовать картину жидким акрилом, хватит и полчаса.

Нет границ для творчества и фантазии. Акриловая заливка – это, в первую очередь, очень творческий и занимательный процесс. Невероятно увлекательно смешивать разные акриловые краски и видеть, как вашими руками создается настоящее произведение искусства. Разнообразие техник дает огромное поле для творчества – с Флюид Арт вам точно не станет скучно.[1]

1. История и особенности техники флюид-арт.

Возникновение: техника получила широкое распространение в XXI веке как часть абстрактного и интуитивного искусства.

Принцип: краска заливается на поверхность и растекается под действием силы тяжести, воздуха или других добавок (силикон, спирт).

Результат: органичные формы, сложные цветовые переходы, мраморные и водные узоры.[2].

Арт-терапия. Флюид Арт - идеальный пример живописи в качестве медитации. Заливка, смешивание, наслаивание цветов, плавные перетекания краски естественным образом способствуют медитации. Искусство и медитация делают одно и то же: успокаивают разум и тело здоровым позитивным образом. [3]

Литературный анализ и методология.

Если дословно перевести Fluid Art на русский язык, то получится «текучее (подвижное) творчество». В этом и заключается суть техники рисования: жидкий акрил разных цветов по очереди или одновременно выливается на холст и смешивается уже на нем, образуя красивый абстрактный рисунок.

Изменяя плотность и используемые цвета, вы каждый раз получаете уникальное произведение искусства в стиле абстракции. Картины акрилом на холсте - увлекательное занятие, с которым мы предлагаем познакомиться поближе.

Разработать женскую коллекцию одежды с использованием художественной техники «флюид-арт» как средства художественного оформления и индивидуализации изделий. [4]

История появления. Первым мастером, придумавшим технику «случайного рисунка», считается Давид Альфаро Сикейрос. Под его руководством также была основана мексиканская школа живописи в 1930-х годах.

Художник проводил много экспериментов и постоянно искал новые способы выразить экспрессию. Именно так и было найдено направление рисования жидкими красками. Однако широкую популярность техника приобрела в последние годы благодаря своей доступности и выразительности. [5]

Для этой техники подходят разные виды акриловых красок, однако, насколько долго картина сохранит красивый привлекательный вид, напрямую зависит от их качества. Новичкам для первых работ хватит недорогих красок отечественного производства.

Если надо получить действительно что-то хорошее, или даже продавать картины - имеет смысл потратиться на импортные краски с более насыщенным качественным пигментом, либо воспользоваться готовыми наборами для Fluid Art. Чем дешевле краска, тем более блеклые цвета, неправильное смешивание цветов и т.п. [6]

Арт-терапевтический эффект.

Техника Flyuid-Art используется как средство арт-терапии. Процесс заливки и наблюдения за растекающимися красками способствует расслаблению, медитации и выражению эмоций. Каждая работа уникальна, что позволяет художнику полностью погрузиться в творческий процесс. [7]

Применение и развитие.

Флюид-Арт находит применение в различных сферах: от создания картин и декоративных панно до оформления предметов интерьера. Техника продолжает развиваться, привлекая как профессиональных художников, так и любителей искусства. [8].

На сегодняшний день художественная декоративная техника “Flyuid-Art” сильно распространяется среди современных художников. Но в модной индустрии мало кто знает, не говоря о применении в женскую коллекцию, и в повседневную одежду.

Современная мода активно взаимодействует с различными направлениями изобразительного искусства, создавая уникальные образы на стыке дизайна, живописи и текстильной технологии.

Одним из ярких примеров такого взаимодействия является техника флюид-арт - абстрактная живопись жидкими красками, при которой создаются текучие, спонтанные композиции. Использование этой техники в женской коллекции одежды позволяет добиться необычного визуального эффекта, индивидуальности и актуальности.

Flyuid-Art активно изучается как в художественном, так и в научном контексте. Исследования фокусируются на разработке новых художественно-декоративных приёмов, анализе взаимодействия красок и создании технологических последовательностей выполнения работ.

В данной женской коллекции техника “Flyuid Art” проявляется с использованием эпоксидной смолы. Эпоксидную смолу используют для творчества, изготовления ювелирных изделий, создания картин, часов, панно и даже наливных полов.

Изначально эпоксидная смола не имеет цвета. Добавляя в неё разные пигменты в разных цветах, можно окрашивать материал в любые цвета, от насыщенных до полупрозрачных, нежных.

С помощью эпоксидной смолы и сухоцветами создаются маленькие интересные детали в виде камушек в разных оттенках и в этой технике создается художественная декоративная техника “Flyuid-Art”

Использование техники Flyuid-art в женской коллекции открывает широкие возможности для создания эмоционально выразительной и визуально уникальной одежды.

Это сочетание современного искусства и моды подчеркивает индивидуальность каждой модели и формирует новое направление в декоративном текстильном дизайне.

Внутри каждого из нас живет художник, и техника жидкого акрила - это самый удачный способ подарить ему свободу. Акрил, разбавленный водой, в умелых руках творит чудеса.

Причудливые узоры, завораживающие сочетания цветов, неожиданные эффекты - вы получите невероятное удовольствие от процесса.

Техника интересна тем, что, хотя вы можете управлять процессом на разных стадиях, результат всегда неожиданный и неповторимо ваш. Такая живопись имеет сильный психологический эффект и помогает поближе познакомиться с самым важным человеком - собой. Это помимо красоты, которую вы получите в конце.

Применение художественной техники флюид-арт в разработке женской коллекции продемонстрировало, насколько органично и выразительно изобразительное искусство может быть адаптировано к текстильному дизайну.

Особенности этой техники - текучесть, спонтанность, сложные переходы цвета - легли в основу концепции коллекции, задавая не только визуальную эстетику, но и влияя на выбор тканей, крой и даже настроение изделий.

В ходе работы были выполнены следующие ключевые задачи:

Исследованы художественные и технологические особенности флюид-арт.

Созданы уникальные принты на основе оригинальных абстрактных композиций.

Подобраны материалы, соответствующие идее «потока» и движения.

Разработана капсульная женская коллекция, сочетающая в себе комфорт, эстетику и художественную выразительность.

Коллекция получилась актуальной, визуально цельной и глубоко концептуальной. Каждый образ не просто демонстрирует одежду, но и несёт эмоциональное содержание, транслирующее идею свободы, текучести и внутренней гармонии.

Разработка женской коллекции с использованием флюид-арт

Целевая аудитория:

Женщины 25–45 лет, ценящие индивидуальность, креативность, арт-стиль.

Бывают в разных видах силуэты и ассортимент:

Верхняя одежда: рубашки, жакеты, плащи.

Платья: свободного кроя, с асимметрией.

Юбки и брюки с элементами принтов.

Аксессуары: платки, сумки с элементами флюид-арта.

Цветовая палитра в основе на техниках флюид-арт: переходы, градиенты, насыщенные и мягкие тона. Примеры на палитры цветов бирюза, индиго, охра, лавандовый, бордо. Нужно правильно выбрать материалы для флюид-арта:

Натуральные ткани (шелк, вискоза, хлопок) — подходят для росписи и цифровой печати.

Технологии нанесения флюид-арта:

Ручная роспись: акриловые краски, медиумы, текстильные закрепители.

Цифровая печать: создание макетов и перенос на ткань.

Микс-техники: печать + вышивка / печать + ручной декор.

Разработка принтов, смотря на бумагу или ткани:

На основе экспериментов с красками на бумаге или ткани.

Оцифровка и редактирование узоров в графических редакторах.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

A STUDY ON AI-DRIVEN OPTIMIZATION OF NIGHT FLUSHING: ADVANCING SUSTAINABLE BUILDING COOLING AND THERMAL COMFORT

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Abstract. *Night flushing, a pivotal passive cooling strategy, harnesses nocturnal temperature differentials to pre-cool a building's thermal mass, significantly reducing daytime cooling loads and energy consumption. However, its traditional implementation often falls short due to the dynamic interplay of environmental conditions, building characteristics, and occupant behavior. This paper presents a comprehensive exploration of how Artificial Intelligence (AI) can revolutionize night flushing optimization, transforming it into a precise, adaptive, and highly efficient thermal management solution. By integrating real-time data from Internet of Things (IoT) sensors, advanced predictive analytics, and adaptive learning algorithms, AI systems can accurately forecast internal heat gains and external weather patterns, enabling the precise calculation of optimal ventilation timings and rates. This AI-driven approach maximizes the "coolth" stored within the building's thermal mass, leading to substantial energy savings, enhanced and consistent indoor thermal comfort, improved indoor air quality, and a reduced environmental footprint. The paper synthesizes recent advancements (May 2024 - May 2025) in AI-driven Model Predictive Control (MPC) and Reinforcement Learning (RL) for HVAC and ventilation, the foundational role of IoT and digital twins for data-driven insights, and the critical balance between energy efficiency and occupant well-being, highlighting the transformative potential of AI in creating truly sustainable and intelligent buildings.*

Keywords: *pre-cool a building's thermal mass, Artificial Intelligence, AI-driven Model Predictive Control.*

1. Introduction

The increasing global energy demand and pressing environmental concerns necessitate innovative and intelligent approaches to building energy management. Buildings are significant contributors to global energy consumption, accounting for nearly 40% of the total, which positions them as a critical sector for decarbonization efforts. Artificial Intelligence (AI) has emerged as a transformative technology, offering unprecedented capabilities for optimizing building performance, enhancing energy efficiency, and improving occupant comfort. AI represents a fundamental shift from traditional rule-based HVAC controls, which are often static and reactive, to dynamic, adaptive optimization strategies. AI systems learn from vast amounts of real-time and historical data to predict energy demand, identify inefficiencies, and refine

control strategies, leading to significant energy savings (reported outcomes range from 10-40% in , and 20.9-33.8% in) and substantial reductions in carbon footprints. This proactive capability is essential for achieving sustainability goals in the built environment[2].

Passive cooling technologies, such as night flushing (also referred to as night cooling or nocturnal ventilation), are gaining substantial attention as highly effective and energy-efficient alternatives to energy-intensive active cooling methods. These strategies strategically leverage natural temperature differentials, specifically the cooler ambient air temperatures available during nighttime hours, to pre-cool a building‘s thermal mass. This process effectively reduces the cooling loads required during the subsequent daytime occupancy periods, thereby minimizing active cooling energy consumption. Night cooling is particularly advantageous in climates characterized by significant diurnal temperature variations, where the building‘s heavyweight thermal mass can be effectively utilized to store "coolth"[8].

This approach not only reduces peak electricity demand but also contributes substantially to overall building energy savings and enhances indoor thermal comfort, aligning with broader sustainability objectives. This report aims to synthesize and present the latest advancements in AI-optimized night flushing and broader intelligent building thermal management. The focus is on cutting-edge research and significant academic initiatives published within a stringent timeframe: between May 21, 2024, and May 21, 2025. The selected references highlight the synergistic integration of advanced AI techniques with passive cooling principles, sophisticated control strategies, and enabling technologies such as the Internet of Things (IoT) and digital twins.

2. Report Objectives

This report aims to achieve the following key objectives[1,3,6]:

- **Synthesize Latest Advancements:** To provide a comprehensive overview and synthesis of the most recent advancements in AI-optimized night flushing and intelligent building thermal management, focusing on research published between May 21, 2024, and May 21, 2025.
- **Explore AI Control Paradigms:** To examine the transformative role of advanced AI control techniques, specifically Model Predictive Control (MPC) and Reinforcement Learning (RL), in enabling dynamic and adaptive optimization of HVAC and ventilation systems for natural cooling.
- **Highlight Enabling Technologies:** To illustrate the foundational importance of the Internet of Things (IoT) and digital twin technology in facilitating real-time data collection, predictive insights, and virtual simulation for enhanced building performance.
- **Analyze Thermal Mass Utilization:** To detail how AI-driven strategies enhance the effective utilization of building thermal mass and integrate with other passive cooling elements, such as smart windows, for holistic thermal management.
- **Address Holistic Performance:** To discuss the critical balance achieved by AI in simultaneously optimizing energy efficiency, ensuring superior occupant thermal comfort, and improving indoor air quality within smart building environments.

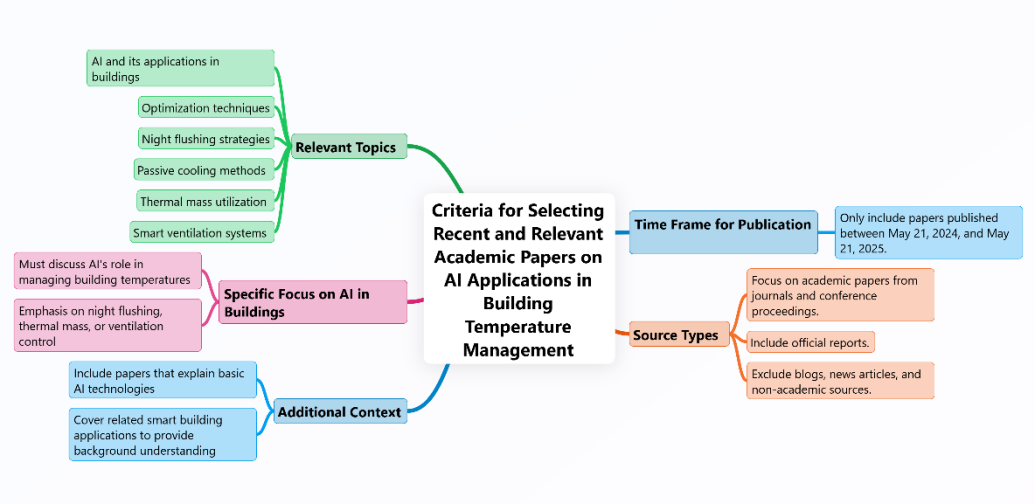
3. Methodology for Reference Selection

The selection process for the references in this report adhered to rigorous criteria to ensure the inclusion of only the most advanced and directly relevant publications within the specified timeframe.

The criteria for "advanced" references prioritized peer-reviewed journal articles, reputable conference proceedings, and authoritative technical reports that present novel methodologies, empirical studies, comprehensive reviews, or significant academic initiatives[11,9].

General industry blogs, commercial product announcements, or broad news articles were generally excluded. However, in instances where academic papers were limited within the strict timeframe, and the content demonstrated substantial technical depth or represented a foundational academic development directly relevant to the core topic, a select few were considered and carefully contextualized within the report.

Figure 1: Flow Chart For the Recent and Relevant Academic Papers on AI Applications in Building Temperature Management



Strict adherence to the May 21, 2024 - May 21, 2025 publication window was a paramount constraint. Each potential reference was meticulously checked for its official publication date to ensure strict compliance with this critical temporal requirement. Only publications falling precisely within this one-year window were included, ensuring that the presented insights represent the most current state-of-the-art in the field.

The focus on direct relevance to AI, optimization, night flushing, passive cooling, thermal mass, and smart ventilation guided the entire selection process. References were chosen based on their explicit discussion of AI/Machine Learning (ML) applications in building thermal management. Particular emphasis was placed on studies that directly investigated AI’s role in enhancing night flushing, optimizing thermal mass utilization, or improving natural and hybrid ventilation strategies. Supporting references detailing foundational AI techniques (e.g., Reinforcement Learning, Model Predictive Control), enabling technologies (e.g., IoT, Digital Twins), or broader AI applications in HVAC optimization were also included to provide a holistic view of the technological ecosystem supporting AI-optimized night flushing[6,13,19].

4. Key Advancements in AI-Optimized Building Thermal Management

This section explores the overarching trends and significant breakthroughs identified in the latest research, providing a thematic framework for understanding the selected references.

4.1. Emergence of Reinforcement Learning (RL) and Model Predictive Control (MPC) for Dynamic HVAC/Ventilation

The domain of building energy management undergoes a profound transformation, moving rapidly from static, reactive control paradigms to proactive, predictive strategies. At the forefront of this evolution are advanced control techniques such as Model Predictive Control

(MPC) and Reinforcement Learning (RL). MPC optimizes HVAC system operations by leveraging predictive models of future conditions, including forecasted weather, anticipated occupancy patterns, and dynamic electricity pricing, with the objective of minimizing energy costs while rigorously maintaining indoor thermal comfort boundaries. RL, in contrast, represents a data-driven strategy where an intelligent agent learns optimal control policies through iterative trial-and-error interactions with the building environment. This makes RL particularly well-suited for handling the inherent dynamism and complexity of building systems and for optimizing long-term performance objectives.

Recent literature showcases the practical application of these advanced controls. For instance, MPC is highlighted for its ability to "coordinate the operations of various resources (HVAC, Solar PVs, batteries) and take into account grid conditions, weather, and occupancy," leading to "significant peak demand reduction (20-30%) and load shifting (10-15%) in field deployment". Critically, it explicitly mentions MPC’s ability to "pre-cool the space" to smooth peak demand, a function directly analogous to AI-optimized night flushing. Further demonstrating ML’s power in predictive control for cooling, a study details an "easy-to-apply cooling load prediction model based on the XG Boost method, combined with thermodynamic principles" for ice-storage systems, which achieved a "significant electricity saving rate of 41.9%". Another innovative approach combines radial basis function neural networks (RBFNN) with MPC techniques to enhance HVAC energy efficiency, reporting an approximate "15% reduction in energy consumption" [10,18,17].

In the realm of RL, studies emphasize RL-based HVAC control as "a promising technology for reducing building energy consumption while maintaining indoor thermal comfort". These works specifically note RL’s strength in handling "multi-step decision-making and optimize long-term rewards," which is crucial for the extended optimization horizons typical of night flushing. A novel integrated framework couples RL with urban climate models, acknowledging the intricate feedback loops between building energy systems and the surrounding urban environment. This highlights a move towards a more holistic and environmentally aware optimization. Additionally, a systematic review of "RL-based control strategies applied in BEMS frameworks integrating RES technologies" further solidifies RL’s pivotal role in dynamic energy management under conditions of uncertainty and real-time constraints.

A fundamental paradigm shift is evident in building management, moving from reactive responses to proactive, predictive control strategies. Traditional HVAC systems often operate on fixed schedules or simple reactive feedback loops, meaning they only respond *after* a condition deviates from a setpoint. This inherent reactivity can lead to energy waste or delayed comfort provision. AI-driven MPC and RL, however, are fundamentally predictive. They leverage historical data, real-time sensor inputs, and external forecasts (e.g., weather, occupancy) to anticipate future conditions and proactively adjust building systems *before* discomfort arises or energy is wasted. This proactive capability is foundational for maximizing the benefits of strategies like night flushing. Instead of simply turning on fans at a set time, AI can precisely determine the optimal timing, duration, and intensity of nocturnal ventilation based on predicted daytime cooling loads, external temperature profiles, and even anticipated peak electricity prices. This leads to significantly greater energy savings and enhanced comfort compared to conventional methods [3,7,17].

The application of these advanced controls extends beyond individual building efficiency, impacting broader energy systems. MPC for "grid-interactive" buildings and RL for "optimizing renewable energy utilization" illustrate how AI-optimized night flushing and thermal management are becoming integral components of smart grids and broader energy ecosystems. By strategically shifting cooling loads to off-peak hours (night flushing) or leveraging periods of high renewable energy generation, these AI-driven strategies contribute significantly to grid stability, reduce peak demand, and enhance the integration of intermittent renewable sources into the energy mix. This moves beyond mere energy savings to systemic energy resilience and decarbonization, demonstrating how individual building optimizations can have a cascading positive effect on regional and national energy infrastructures.

Furthermore, a traditional barrier to the widespread adoption of advanced building controls has been their perceived high initial cost and technical complexity. However, recent developments address this by highlighting the emergence of "low-cost MPC technologies that don’t require extensive instrumentation or manual modeling" and solutions that can be "implemented without additional sensors other than WiFi-enabled thermostats". This signifies a crucial move towards democratizing access to these sophisticated technologies.

The development of more accessible and scalable MPC/RL solutions means that AI-optimized night flushing is no longer exclusively confined to large, highly instrumented commercial buildings with dedicated control specialists. It can now be practically deployed in small and medium commercial buildings (SMCBs) and potentially even integrated into advanced residential systems, significantly expanding its potential impact on overall energy efficiency and sustainability across a much wider segment of the built environment.

Table 2: Comparison of Traditional vs. AI-Driven HVAC Control

Feature	Traditional Control	AI-Driven Control
Control Logic	Rule-based (fixed schedules, setpoints, simple feedback loops)	Learns from data, dynamic decision-making, predictive
Adaptability	Static, reactive (responds *after* deviation)	Continuously refines strategy, proactively adjusts (anticipates future conditions)
Data Usage	Limited, typically current conditions (e.g., thermostat, CO2 sensor)	Multiple data streams simultaneously (indoor temps, humidity, occupancy, weather forecasts, energy prices)
Optimization Goal	Fixed setpoints, basic energy saving (e.g., night setbacks)	Dynamic optimization for comfort, energy, cost, long-term rewards; pre-cool spaces, smooth peak demand
Maintenance	Reactive (based on breakdowns)	Predictive (anticipates and fixes issues before breakdowns)

4.2. Leveraging IoT and Digital Twins for Real-Time Data and Predictive Insights

The Internet of Things (IoT) serves as the foundational "nervous system" of smart buildings, enabling the ubiquitous collection of vast amounts of real-time operational data. This data encompasses critical parameters such as temperature, humidity, occupancy levels, indoor air quality metrics (e.g., CO2), and detailed equipment performance indicators. This rich data stream is then fed into sophisticated AI algorithms for comprehensive analysis, facilitating capabilities

such as predictive maintenance, dynamic system adjustments, and the identification of subtle inefficiencies. Digital twins, which are virtual replicas of physical assets or systems, are continuously updated with this real-time IoT data. They provide an exceptionally powerful platform for simulating various scenarios, anticipating future changes, and optimizing building operations in a virtual environment before any physical implementation, thereby de-risking and accelerating deployment.

Evidence from recent studies underscores the transformative potential of this integration. One analysis explicitly states that "IoT applications for building energy management, enhanced by artificial intelligence (AI), have the potential to transform how energy is consumed, monitored, and optimized," quantifying these benefits with "20.9–33.8% overall energy savings" and achieving "95% prediction accuracy in energy forecasting". Digital twin advancements are described as evolving into "dynamic, adaptive, and predictive models, driven by advancements in AI, IoT, and real-time data" by 2025. Furthermore, IoT sensor networks are highlighted as monitoring a wide array of parameters, enabling smart buildings to "intelligently pre-cool or pre-heat spaces based on predicted occupancy, external temperature trends, and even individual preference data". The integration of AI-powered building management systems with advanced IoT is identified as a key feature for smart buildings, enabling capabilities from "predictive HVAC control to smart lighting that adapts to natural daylight".

The effectiveness of advanced AI models like RL and MPC is fundamentally dependent on high-quality, real-time, and diverse data. The sheer volume and variety of data collected by IoT sensors (temperature, humidity, CO2, occupancy, equipment performance) allow AI models to achieve unprecedented levels of precision in understanding building dynamics. This capability transcends traditional zone-level control, enabling potentially hyper-localized adjustments. For AI-optimized night flushing, this means the system can account for subtle micro-climates within different areas of a building, highly specific occupancy patterns in individual rooms or zones, and even integrate individual thermal preferences. This granular data empowers the AI to fine-tune ventilation rates and timing with extreme precision, ensuring optimal pre-cooling of the building‘s thermal mass while simultaneously maintaining superior occupant comfort and indoor air quality, leading to maximized energy savings without compromising human well-being [20].

Digital twins, powered by AI and continuously fed real-time IoT data, offer the unique capability for simulating different scenarios and outcomes and conducting scenario planning to test strategies before real-world implementation. This transforms building management from a reactive problem-solving approach to a proactive strategy of risk mitigation and optimized deployment. Before physically implementing a new AI-driven night flushing strategy in a building, a digital twin can simulate its anticipated performance under a wide array of predicted conditions. These conditions can include various future weather patterns, fluctuating occupancy loads, and even scenarios involving equipment degradation. This virtual testing significantly reduces the risk of unintended consequences (e.g., over-cooling, occupant discomfort, or unexpected energy waste) and allows for iterative refinement of the AI model and its control parameters in a safe, virtual environment, accelerating the deployment process and ensuring robust, reliable performance in the physical building.

Moreover, the integration of AI-driven analytics with IoT data enables "predictive maintenance to fix issues before breakdowns". This means the AI can anticipate potential equipment failures, such as a fan within the night flushing ventilation system, that could compromise its effectiveness. By predicting potential failures, maintenance activities can be

scheduled proactively during non-critical periods, ensuring that the night flushing ventilation system is consistently operating at its peak efficiency. This minimizes unexpected downtime, extends the operational lifespan of critical equipment, and guarantees the continuous, optimal performance of the AI-optimized night flushing strategy, thereby contributing significantly to overall building resilience and reducing long-term operational costs.

Table 3: Key Benefits of AI-Optimized Smart Buildings

Benefit Area	Description	Quantified Impact (if available)
Energy Savings	AI optimizes HVAC and lighting usage, reduces waste by dynamically adjusting systems based on real-time needs.	20.9–33.8% overall energy savings ; 10-40% savings for natural ventilation ; 15-25% savings ; up to 40% reduction in energy consumption (data centers, principles apply)
Occupant Comfort & Well-being	Maintains optimal temperature, air quality, and lighting based on occupancy data and individual preferences.	Boosts cognitive performance by 8-11%, reduces sick days
Predictive Maintenance	Proactively predicts equipment failures and schedules maintenance before issues arise, reducing costly downtime.	Reduces costly downtime, extends equipment lifespan
Improved Indoor Air Quality (IAQ)	Dynamically adjusts ventilation rates to ensure optimal fresh air exchange and pollutant control.	Maintains CO2 concentrations below 1000 ppm
Grid Interaction & Resilience	Buildings act as active participants in the energy ecosystem, shifting cooling loads to off-peak hours.	Peak demand reduction (20-30%), load shifting (10-15%)

4.3. Enhanced Utilization of Building Thermal Mass Through AI-Driven Strategies

Thermal mass, defined as the inherent ability of building materials to absorb, store, and release thermal energy, is a cornerstone principle of passive cooling, particularly crucial for the effectiveness of night flushing. AI significantly enhances the utilization of thermal mass by precisely controlling ventilation strategies to optimally "charge" the building‘s mass with cool night air. Beyond traditional ventilation, the emergence of smart windows equipped with thermochromic coatings represents an innovative development in building envelope technology. While not always directly AI-controlled in the provided material, these dynamic elements can be readily integrated into AI-driven systems to holistically manage solar heat gain and further complement thermal mass strategies.

Recent research explicitly details that "Night cooling... utilizes the naturally cooler nighttime temperatures to pre-cool indoor spaces... as the process effectively exploits the difference between the outdoor and indoor temperatures to cool the thermal mass of the building". It further notes that "optimized ventilation rates... coupled with extended operation

durations, considerably improve the performance of night cooling strategies". A comprehensive review outlines "Emerging Passive Cooling Technologies," including advanced materials like phase change materials (PCMs) and radiative cooling. While these technologies are not inherently AI-driven, they represent components whose performance and integration can be significantly optimized through AI-based control strategies, thereby augmenting the overall thermal mass effect. Furthermore, studies highlight the application of Machine Learning (ML) for predicting ventilation rates in passive cooling buildings and optimizing key features to enhance natural cooling, which inherently involves the strategic management and utilization of the building‘s thermal mass. The concept of buildings "storing excess energy in batteries or thermal mass" as a component of their active participation in the broader energy ecosystem is also discussed[13,16,17].

While traditional night flushing might operate on a fixed schedule, AI’s predictive capabilities allow for a far more sophisticated and dynamic approach to "charging" the thermal mass. AI can adjust the duration and intensity of night ventilation based on predicted daytime temperatures, solar radiation forecasts, anticipated occupancy levels, and even real-time electricity pricing. This enables a significantly more intelligent and efficient utilization of the building‘s inherent thermal storage capacity. This adaptive approach prevents energy waste from over-ventilation or insufficient cooling from under-ventilation, making night flushing a more reliable and effective strategy across diverse climatic conditions and fluctuating operational demands.

The research indicates that various passive cooling technologies, including radiative cooling , smart windows , and the fundamental role of thermal mass , are being developed. While these elements are often studied in isolation, AI’s core strength lies in its ability to integrate diverse data streams and orchestrate multiple control points. AI can orchestrate the complex interplay between night flushing (optimizing thermal mass charging), dynamic shading systems (as mentioned in , kinetic shading), and smart windows to achieve a truly holistic and highly effective passive cooling strategy. For example, AI could determine that on a particular day, maximizing night flushing is sufficient, or that a combined approach with smart window adjustments is necessary, or even when to activate supplementary radiative cooling elements. This multi-layered optimization maximizes overall energy savings and occupant comfort.

A broader concept emerging from the literature is the participation of buildings in the energy ecosystem by "storing excess energy in batteries or thermal mass" and even serving as "distributed energy resources for the surrounding community during peak demand". This elevates thermal mass from a static, passive building element to an active, dynamic participant in grid management strategies. AI-optimized night flushing can be seamlessly integrated into broader grid-interactive building strategies. By strategically pre-cooling the thermal mass during off-peak hours (e.g., when renewable energy generation is high or electricity prices are low), the building can significantly reduce its demand for grid electricity during critical peak cooling periods. This not only yields direct energy cost savings for the building owner but also contributes to overall grid stability and reduces the reliance on fossil fuel-based peak power generation, thereby aligning with wider decarbonization goals and promoting a more resilient energy infrastructure[18,12].

4.4. Focus on Balancing Energy Efficiency with Occupant Comfort and Indoor Air Quality (IAQ)

Modern building management places a critical emphasis on achieving a delicate and dynamic balance between minimizing energy consumption and ensuring optimal indoor environmental quality (IEQ). IEQ encompasses crucial factors such as thermal comfort and indoor air quality. AI is uniquely positioned to achieve this complex balance by dynamically adjusting building systems based on real-time data and predictive models of occupancy and various environmental conditions.

Recent studies underscore this dual objective. For instance, AI "optimizes buildings' systems – heating, cooling and ventilation – in real time. Not only does it react to situations, it also predicts and constantly learns, which enables the prevention of energy waste without having to lower indoor air quality". Smart ventilation systems, leveraging AI and IoT, are highlighted for their ability to "enhance energy efficiency and occupant comfort" by dynamically adjusting ventilation rates using real-time data, weather forecasts, and occupant preferences. Furthermore, occupancy-based predictive AI-driven ventilation control explicitly aims for energy savings while rigorously "maintaining CO2 concentrations below 1000 ppm," directly linking energy efficiency with IAQ. Research also explores "Machine learning-based prediction of thermal comfort," emphasizing ML models' ability to "capture the complex relationships between environmental, personal, and operational factors". The importance of thermal comfort during night hours is highlighted by studies on "explainable artificial intelligence to predict sleep interruptions from indoor environmental conditions". The broader benefits of optimized indoor environments are also noted, including boosting cognitive performance by 8-11% and reducing sick days[4,5,17].

The evolution towards adaptive and human-centric comfort models is a notable development. Traditional thermal comfort models, such as Predicted Mean Vote (PMV), are often static and may not fully capture the dynamic and adaptive nature of human comfort in real-world building environments. The research emphasizes the growing adoption of "adaptive comfort models" and the consideration of "sleep-specific conditions". This signifies a crucial shift towards AI systems that not only maintain a fixed setpoint but also understand and adapt to human physiological and behavioral responses to their immediate environment. For night flushing, this means AI can learn occupant preferences and typical adaptive behaviors (e.g., the tendency to open windows in mixed-mode buildings) to optimize pre-cooling strategies. The AI will aim for a comfort *range* that allows for natural adaptation and minimizes energy consumption without causing discomfort, especially during transitional periods or for specific night-time comfort needs.

Proactive Indoor Air Quality (IAQ) management is another critical aspect. The seamless integration of AI with real-time occupancy prediction and CO2 monitoring enables dynamic and proactive adjustments to ventilation rates. The increased ventilation requirements prompted by public health concerns like COVID-19 underscore the critical need for intelligent and dynamic IAQ management, moving beyond fixed schedules. AI-optimized night flushing can be designed not only for thermal pre-cooling but also for "air flushing" to significantly improve indoor air quality before occupants arrive. By accurately predicting occupancy levels and potential CO2 build-up, the AI can ensure sufficient fresh air exchange during the unoccupied night hours. This contributes to a healthier indoor environment, potentially reducing the need for intensive mechanical ventilation during occupied daytime hours, thus saving energy while prioritizing occupant health.

The inherent tension between maximizing energy savings and ensuring occupant comfort is a complex multi-objective optimization problem that AI is uniquely suited to solve. Reinforcement Learning, for instance, is specifically designed to "maximize long-term rewards," which can be defined as a weighted combination of energy consumption, thermal comfort, and even IAQ metrics. AI-optimized night flushing is evolving beyond merely maximizing energy savings. It is now focused on finding the *optimal balance* that satisfies both energy efficiency goals and occupant well-being. The AI can dynamically adjust its strategy based on real-time feedback, learned preferences, and predictive models, ensuring that the building is pre-cooled effectively while simultaneously maintaining an indoor environment conducive to productivity, health, and comfort, especially during the crucial night-time thermal recovery period and subsequent daytime occupancy.

5. Conclusion

The latest research published between May 2024 and May 2025 unequivocally demonstrates a robust and accelerating trend towards the integration of advanced AI techniques with building thermal management, particularly for strategies like night flushing. A dominant theme is the fundamental shift from reactive, rule-based systems to proactive, predictive, and adaptive control, primarily driven by sophisticated AI algorithms such as Model Predictive Control (MPC) and Reinforcement Learning (RL). These methods are increasingly capable of handling complex, multi-variate optimization problems, integrating diverse data streams from IoT sensors to achieve unprecedented precision in energy savings and comfort maintenance.

A significant contribution from the recent literature is the growing emphasis on the synergistic integration of AI with various passive cooling elements. This includes the strategic utilization of building thermal mass, intelligent management of natural and hybrid ventilation, and the dynamic control of building envelope components like smart windows. This holistic approach maximizes the potential of passive strategies, significantly reducing reliance on energy-intensive active systems and contributing to overall building decarbonization.

1. Furthermore, the research highlights a strong human-centric focus in AI-driven building management.
2. AI models are increasingly incorporating adaptive comfort principles, precise occupancy prediction, and even nuanced considerations for night-time comfort needs and sleep quality.
3. This ensures that energy efficiency gains are achieved without compromising occupant well-being or indoor air quality, reflecting a mature understanding that truly smart buildings must prioritize both environmental performance and human experience.
4. Looking ahead, several implications for future research and practical applications of AI in building thermal management are apparent.
5. Future research will likely delve deeper into explainable AI (XAI) for building systems , addressing the "black-box" challenge and fostering greater trust and adoption among building operators.
6. The demonstrated scalability and reduced complexity of advanced control systems suggest a wider deployment of AI-optimized night flushing beyond large commercial buildings, extending to small-to-medium enterprises and potentially residential sectors.

Practical applications will see greater integration of buildings with the broader energy grid, with AI-optimized thermal mass acting as a flexible energy storage asset for demand response and renewable energy utilization. Overcoming existing barriers such as high initial

costs, technical skill gaps, and data security will be crucial for widespread implementation. This will necessitate continued innovation in user-friendly interfaces, robust cybersecurity frameworks, and the development of standardized protocols.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

ADVANCED CONSTRUCTION TECHNOLOGIES IN THE MODERN CONSTRUCTION INDUSTRY: A COMPREHENSIVE REVIEW

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Abstract. *This research article provides a comprehensive review of advanced construction technologies (ACTs) and their transformative impact on the global construction industry. It synthesizes insights from current literature to delineate key innovations such as Building Information Modeling (BIM), Artificial Intelligence (AI), Robotics, 3D Printing, Modular Construction, Internet of Things (IoT), Extended Reality (XR), Digital Twins, Blockchain, Wearable Technologies, and Sustainable Construction Materials. The report details their diverse applications across the construction lifecycle, highlighting significant benefits including enhanced efficiency, improved safety, cost reduction, and advancements in sustainability. Crucially, it also addresses the multifaceted challenges impeding widespread adoption, such as high implementation costs, skill gaps, data interoperability issues, and regulatory lags. The article concludes by emphasizing the interconnected nature of these technologies as components of a broader digital transformation, offering strategic recommendations for stakeholders to foster greater integration and maximize benefits, while identifying critical areas for future research.*

Keywords: *Building Information Modeling (BIM), Artificial Intelligence (AI), Robotics, 3D Printing, Modular Construction, Internet of Things (IoT), Extended Reality (XR), Digital Twins, Blockchain, Wearable Technologies, Sustainable Construction, Digital Transformation, Innovation.*

1. Introduction

The construction industry, a significant contributor to global GDP (13.8% in 2020, $84.5 trillion), has historically faced inefficiencies, with productivity growth at only 15% between 1948 and 1981, leading to escalating costs and diminished competitiveness. Beyond economic concerns, the sector grapples with severe safety issues, evidenced by over 1,000 fatal incidents in the US in 2022, and a substantial environmental footprint, accounting for 40% of global greenhouse gas emissions. These challenges necessitate transformative change.

The rapid evolution of digital technologies offers unprecedented opportunities to enhance construction efficiency, marking a "digital transformation" or "Construction 4.0". This shift involves industrializing production, integrating cyber-physical systems, and deploying advanced digital tools to address inefficiencies and foster resilience.

This article comprehensively reviews advanced construction technologies (ACTs) revolutionizing the industry. It analyzes their principles, applications, benefits, and challenges, covering BIM, AI, Robotics, 3D Printing, Modular Construction, IoT, XR, Digital Twins, Blockchain, Wearable Technologies, and Sustainable Construction Materials. The review also explores digital transformation, safety, sustainability, and workforce implications, providing a holistic understanding of the industry’s technological evolution.

2. Methodology

This research employs a systematic literature review, synthesizing academic papers and industry reports to analyze advanced construction technologies (ACTs). The review comprehensively examined provided research material to identify key technologies, their definitions, applications, benefits, challenges, and future trends. Sources included *ITcon*, *Elsevier*, *MDPI*, and *Springer* publications. The empirical basis was understood by noting methodologies like structured surveys, mixed-methods, extensive literature reviews, experimentation, and abduction. This diverse approach captures both quantifiable impacts and qualitative perceptions, crucial for understanding technology integration.

Relevant data points for each technology were systematically extracted and categorized, focusing on definitions, use cases, advantages (e.g., efficiency, cost savings, safety, sustainability), and disadvantages (e.g., high costs, skill gaps, regulatory issues). Specific methods and metrics, such as survey frequency or material performance analysis, were noted.

A qualitative synthesis integrated diverse findings, identifying themes and implications. This involved analyzing connections between technologies, like BIM as a data platform for AI and IoT, and the dual impact of automation on labor. The synthesis aimed to provide interpretive commentary on the industry’s trajectory, noting a recurring gap between theoretical frameworks/awareness and practical implementation due to barriers like budget and training. This highlights the importance of addressing practical limitations for widespread ACT integration.

3. Advanced Construction Technologies: Key Innovations and Their Impact

The modern construction industry is undergoing a significant transformation driven by a suite of advanced technologies. These innovations are reshaping traditional practices, enhancing efficiency, improving safety, and fostering greater sustainability across the entire project lifecycle.

Building Information Modeling (BIM)

Definition and Core Principles: Building Information Modeling (BIM) is a holistic process for creating and managing built asset information, foundational to digital transformation in the AECO industry. It involves intelligent 3D models integrating physical and functional data, serving as a "single source of truth" for consistent information access. Key principles include data-rich models, standardization (IFC, openBIM), cross-disciplinary collaboration, and comprehensive lifecycle data management. BIM models extend to 4D (time), 5D (cost), 6D (sustainability), and 7D (facility management).

Key Applications: BIM is applied across the entire project lifecycle: design, construction, operations, and maintenance.

- **Design Phase:** Enables visualization and simulation, aiding clash detection and improving design coordination and change management. Supports parametric design, ensuring consistency and reducing errors.

- **Construction Phase:** Streamlines design and documentation, allowing rapid updates, improved scheduling, and enhanced communication. Assists in constructability exploration and cost management.
- **Operational & Maintenance Phases:** Supports decision-making with data and visual analyses for material/system selection. Integrates sensors for real-time monitoring of energy, equipment, and air quality.

Significant Benefits: BIM offers substantial advantages:

- **Efficiency & Productivity:** Streamlines processes, reduces rework, optimizes resources, and enhances efficiency. Digital transformation with BIM can yield up to 15% productivity gains.
- **Cost Reduction & ROI:** Improves profitability, reduces costs, lowers tender risk, minimizes variations, and cuts material/labor waste. 75% of BIM adopters reported positive ROI.
- **Collaboration & Communication:** Enhances collaboration and project visualization through real-time information sharing.
- **Safety:** Aids in hazard identification and on-site logistics planning, offering visual risk analysis.
- **Lifecycle Management:** Provides an integrated approach for design, construction, and facility management throughout an asset’s lifespan.

Associated Challenges: BIM adoption faces hurdles:

- Initial barriers include training and software access.
- Low BIM adoption in some regions hinders integration with other methods like modular construction.
- High software costs and a shortage of skilled personnel are significant barriers.

Artificial Intelligence (AI) & Machine Learning (ML)

Definition and Core Principles: Artificial Intelligence (AI) develops algorithms to autonomously solve problems, mimicking human cognitive functions like learning and decision-making. Machine Learning (ML), a key AI subfield, focuses on pattern recognition and forecasting from complex datasets. AI systems process vast data, identify patterns, and offer predictive solutions, differing from traditional rule-based systems.

Key Applications: AI transforms all construction phases: planning, design, on-site management, and safety.

- **Design & Planning:** AI facilitates design generation, optimizes building designs, conducts feasibility studies, and automates planning/scheduling. It predicts project growth and optimizes resource allocation.
- **Risk Management & Safety:** Predicts safety risks, identifies hazards, and enhances monitoring, including multimodal AI for fall risks, PPE usage, and material storage. Provides real-time feedback and guides workers to safety.
- **Operational Efficiency:** Automates tasks like bricklaying, welding, and material handling. Optimizes resource allocation, scheduling, and timeline prediction. Manages risk and improves information access.
- **Quality & Compliance:** Advances quality management to automated assurance. Flags document conflicts and monitors regulatory compliance.
- **Supply Chain Management:** Optimizes supply chains by automating material takeoff, assisting supplier identification, and predicting delays.

Significant Benefits: AI/ML offers transformative advantages:

- **Efficiency & Productivity:** Optimizes processes, automates tasks, enhances decision-making, and improves operational efficiency. Productivity gains of 50-60% could generate substantial profits.
- **Safety & Risk Management:** Predicts safety risks and enhances monitoring, reducing incidents.
- **Cost Savings:** Optimizes resource allocation and identifies waste, leading to cost reductions.
- **Data Management & Analytics:** Processes large data volumes, identifies patterns, and offers predictive solutions, providing data-driven insights.

Associated Challenges: AI adoption faces hurdles:

- **High Costs:** Substantial initial implementation costs.
- **Data Issues:** Scarcity, poor quality, and limitations in data collection impede effectiveness.
- **Workforce Readiness:** Lack of training, technical skills, and organizational resistance.
- **Ethical & Social Concerns:** Raises questions about job displacement, transparency, fairness, and accountability.
- **Limitations:** Current AI tools may not capture every nuance or error until extensively evaluated; lack critical thinking for complex situations.

Robotics & Automation

Definition and Core Principles: Construction robotics deploys systems for manual, repetitive, dangerous, or strenuous tasks. Automation broadly includes robots and advanced programs to streamline processes. These technologies enhance efficiency, precision, and safety by reducing human intervention.

Types and Key Applications: Robotic and automation solutions are diverse:

- **Off-Site Prefabrication Systems:** Produce components or entire buildings in controlled environments for on-site assembly.
- **On-Site Automated Robotic Systems:** Perform tasks like material handling, bricklaying, welding, concrete pouring, utility excavation, roadwork, and drywall finishing directly on sites.
- **Drones and Autonomous Vehicles:** Used for site monitoring, surveying, and progress tracking. Drones map and survey safely; autonomous vehicles transport materials.
- **Wearable Robotic Exoskeletons:** Assist human workers with heavy lifting and reduce fatigue, bridging human effort and mechanical efficiency.
- **Demolition Robots:** Employed in hazardous environments for precise, controlled demolition, reducing worker exposure.

Significant Benefits: Robotics and automation offer substantial advantages:

- **Efficiency & Productivity:** Operate with greater speed and precision, boosting productivity and shortening project timelines by continuous operation.
- **Cost Reduction:** Decrease reliance on manual labor, leading to substantial labor cost reductions.
- **Enhanced Safety:** Minimize accident risks by removing human workers from dangerous or strenuous tasks and hazardous environments.
- **Quality Improvement:** Reduce human error and ensure consistent execution, improving work quality.

- **Customization:** Robotic 3D printing facilitates complex architectural designs.

Associated Challenges: Widespread adoption faces hurdles:

- **Initial Outlay:** Considerable investment required for technology implementation.
- **Integration with Human Workers:** Requires careful attention to safety guidelines (e.g., safety-rated stops, force limiting) and managing energy transfer to prevent injuries.
- **Workforce Transformation:** Raises concerns about job displacement and necessitates investment in training and upskilling for new roles.
- **Unstructured Environment:** Adapting technology to diverse, unstructured construction sites remains a hurdle.
- **Regulatory & Safety Standards:** Urgent need for specific guidelines and adaptation of existing standards for safe integration.

3D Printing / Additive Manufacturing

Definition and Core Principles: 3D printing, or additive manufacturing, builds 3D objects layer-by-layer from a digital file, typically using cementitious, polymer, or metal components. Key techniques include D-shape, Contour Crafting, shotcrete 3D printing, and concrete printing. The process involves a nozzle on a gantry or robotic arm, with a unique concrete mix designed for quick hardening and proper layer adhesion.

Key Applications: Used for manufacturing individual parts, components, and large-scale objects like bridges, houses, and skyscrapers. Specific applications include pedestrian bridges, in-situ repair in dangerous areas, rapid construction of disaster relief shelters, military bunkers, and fabrication of complex metal frames and structural/non-structural elements.

Significant Benefits: Offers numerous advantages over traditional methods:

- **Speed & Reduced Construction Time:** Enables significantly quicker construction, potentially building houses in days or weeks.
- **Cost Efficiency:** Reduces labor expenses and material waste, optimizing material use and cutting overall wasted spend.
- **Sustainability:** Contributes to environmental sustainability by reducing waste, promoting efficient resource utilization, and enabling sustainable materials like recycled plastics.
- **Customization & Design Complexity:** Facilitates highly complex architectural designs and unique structures challenging with standard techniques.
- **Worker Safety:** Safer than traditional construction, reducing risky operations and injuries associated with concrete formwork.

Associated Challenges: Faces significant hurdles:

- **Material Limitations:** Uncertainty regarding optimal concrete mixes, insufficient printing materials (especially for load-bearing components), and limitations in incorporating traditional reinforcements like rebar.
- **High Initial Costs:** Excessive initial investment for 3D printing services, including printers and specialized materials.
- **Scalability & Customization:** Restricted capacity for high-rise buildings and, at times, lower customization than traditional methods.
- **Regulatory Concerns:** Absence of clear norms and guidelines creates ambiguity and slows adoption.
- **Public Perception:** Skepticism about quality, safety, and durability leads to lack of interest and investment.

- **Skilled Labor Shortage:** Scarcity of trained personnel hinders development and implementation.

Modular Construction

Definition and Core Principles: Modular construction involves off-site production of components or entire buildings, which are then transported for on-site assembly. It often integrates Design for Manufacture and Assembly (DfMA) principles, emphasizing ease of manufacturing and efficient assembly.

Key Applications: Increasingly used for residential housing (e.g., affordable housing) and institutional infrastructure, often combined with digital technologies for efficiency and sustainability.

Significant Benefits: Offers numerous advantages over traditional methods:

- **Speed & Predictable Timelines:** Significantly reduces project lead times and accelerates the building process.
- **Cost Optimization:** Leads to reduced overall construction expenses through streamlined processes and minimized waste.
- **Efficiency & Quality:** Controlled off-site manufacturing allows for better quality control and increased efficiency.
- **Sustainability:** Inherently meets sustainability requirements by minimizing material waste and employing ecological methods.
- **Worker Safety:** Off-site manufacturing in a safe, controlled environment enhances worker safety.
- **Immunity to External Conditions:** Production is unaffected by adverse weather or site accessibility.

Associated Challenges: Faces several challenges impeding broader adoption:

- **Risks Across Lifecycle:** Potential for disproportionate damage from fire/flooding if combustible elements are used. Risks in procurement (e.g., contract forms), design (e.g., skilled DfMA designers, standards gaps), manufacture (e.g., damage), transportation (e.g., damage), site installation (e.g., misalignment), and occupancy (e.g., limited performance evaluation).
- **Initial Investment:** Substantial capital investment often required for manufacturing facilities.
- **Logistics & Transportation:** Costly cross-border transport; challenges in geographically vast countries with dispersed populations.
- **Regulatory & Standardization:** Lack of adequate regulatory guidance and common standards creates uncertainty.
- **Workforce:** Shortage of skilled DfMA designers.
- **Market Demand & Perception:** Lack of awareness and industry resistance to innovation; critics argue standardization leads to perceived lack of unique design.

Internet of Things (IoT)

Definition and Core Principles: IoT in construction connects devices, machinery, and personnel for real-time data exchange and remote monitoring across sites. It integrates IT with industrial production, creating a network of physical objects with sensors and software for internet data exchange.

Key Applications: IoT offers versatile applications revolutionizing site operations and project management:

- **Real-time Monitoring & Control:** Monitors equipment health, site conditions, energy consumption, and material properties (e.g., concrete curing) for quality and timeline adherence.
- **Resource Management:** Optimizes equipment usage, streamlines fleet management (tracking, fuel, routes), enhances tool/equipment monitoring (GPS for theft, predictive maintenance), and improves inventory.
- **Safety & Security:** Secures sites via surveillance cameras, motion sensors, and connected access control. Wearable devices monitor workers’ health and location, issuing alerts for fatigue or accidents.
- **Predictive Maintenance:** Provides continuous data for advanced predictive maintenance, proactively identifying and addressing equipment issues.

Significant Benefits: IoT integration yields substantial advantages:

- **Efficiency & Productivity:** Streamlines operations, automates workflows, optimizes equipment, and enhances precision, leading to significant productivity gains.
- **Cost Reduction:** Lowers operational costs through optimized resource planning, reduced waste, and minimized errors.
- **Enhanced Safety:** Provides advanced tools to protect workers and secure sites via real-time monitoring and immediate alerts.
- **Sustainability:** Advances sustainable practices by tracking energy consumption, optimizing fleet routing, and managing waste.
- **Real-time Decision Making:** Project managers gain remote access to site conditions, equipment performance, and progress, enabling informed decisions from any location.

Associated Challenges: IoT implementation faces hurdles:

- **Data Management:** Concerns regarding data security and privacy.
- **Integration & Interoperability:** Challenges in seamlessly integrating IoT devices and platforms with existing systems.
- **Scalability & Flexibility:** Ensuring systems handle large data volumes and adapt to varying project needs and dynamic site conditions.
- **High Costs:** Substantial initial cost of adopting and deploying IoT infrastructure.

Extended Reality (XR): Virtual Reality (VR), Augmented Reality (AR), Mixed Reality (MR)

Definition and Core Principles: Extended Reality (XR) is an umbrella term for immersive technologies: Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR). These create immersive digital experiences blending or simulating real and virtual environments.

- **Virtual Reality (VR):** Completely immerses the user in a simulated digital world.
- **Augmented Reality (AR):** Overlays computer-generated objects onto the user’s physical environment.
- **Mixed Reality (MR):** A hybrid of VR and AR, allowing digital and real-world objects to coexist and interact in real time, with users aware of physical surroundings.

Key Applications: XR offers innovative applications across design and construction:

- **Design Visualization & Iteration:** VR allows immersive 3D model exploration for clients, facilitating instant feedback and streamlining revisions.
- **Collaboration:** MR enables multiple participants to interact with 3D holograms in shared physical spaces, improving communication and teamwork.

- **Training & Simulation:** VR creates realistic project simulations for workers to practice tasks safely, reducing real-world accidents.
- **On-Site Guidance & Progress Monitoring:** AR glasses project digital information (e.g., maps, guides) into the worker’s view. MR tracks and documents project progress by identifying user location and capturing images.
- **Remote Assistance & Maintenance:** MR enables remote guidance for on-site workers. Post-construction, MR overlays maintenance data onto physical installations for quick issue diagnosis.

Significant Benefits: XR adoption offers compelling advantages:

- **Improved Visualization & Understanding:** Enhances understanding of spatial relationships and project details, leading to better decision-making.
- **Enhanced Collaboration:** Supercharges collaboration through shared immersive experiences and real-time communication.
- **Reduced Errors & Rework:** Identifies issues early, leading to fewer errors, reduced waste, cost savings, and avoided delays.
- **Increased Safety:** Virtual practice in hazardous scenarios improves safety awareness and reduces accidents.
- **Productivity Boost:** Provides immediate access to vital information and simplifies data collection, boosting worker productivity.

Associated Challenges: XR faces implementation hurdles:

- **High Implementation Costs:** Significant initial investment for hardware, software, and customized digital content.
- **Standards & Interoperability:** Challenges in establishing common standards and seamless data exchange between platforms and existing software.
- **Skills Shortage:** Lack of skilled personnel proficient in developing and utilizing XR applications.

Digital Twins

Definition and Core Principles: A Digital Twin (DT) is a real-time virtual model of a physical asset, process, or product, enabling proactive failure detection, maintenance optimization, and downtime reduction. DTs integrate AI, IoT, immersive technologies, and cloud services to create comprehensive digital representations. The core concept is interconnecting the physical world with its digital model for accurate lifecycle information.

Key Applications: Digital Twins support the entire construction project lifecycle: design, construction, operation, maintenance, demolition, and restoration.

- **Predictive Maintenance:** Revolutionizes maintenance by enabling real-time monitoring and analysis to predict potential issues.
- **Design & Optimization:** Enhances design precision through simulation and optimization, predicting execution effectiveness and reducing costs.
- **Real-time Monitoring & Control:** Continuously synchronizes data from physical assets, providing comprehensive information for real-time monitoring, control, and visualization.
- **Operational & Facility Management:** Supports decision-making by offering data and visual analyses for material/system selection and asset management throughout their lifespan.

Significant Benefits: DT implementation offers substantial advantages:

- **Efficiency & Cost Reduction:** Enhances productivity, minimizes waste, and cuts costs. Shortens time-to-market by allowing virtual process evaluation.
- **Optimization:** Optimizes production workflows, supply chain management, and quality control through a holistic project view and data-driven adjustments.
- **Proactive Management:** Enables proactive failure detection and mitigation, improving operational efficiency and reducing disruptions.
- **Comprehensive Information:** Provides a complete lifecycle view of products and processes, offering rich data for continuous improvement.

Associated Challenges: DTs face implementation challenges:

- **Data Quality & Integration:** Hurdles include poor data quality, inability to harmonize diverse data types, and insufficient data security.
- **Complexity:** Construction industry faces challenges in building comprehensive DTs due to architectural characteristics and dynamic sites; much research is framework-focused, not practical implementation.
- **Technical Manpower:** Requires specialized technical manpower and significant workforce training investment.
- **Full-Scale Automation:** Achieving fully automated DT systems, especially integrated with sustainability goals, requires further R&D.

Blockchain

Definition and Core Principles: Blockchain is a decentralized, distributed ledger that chronologically and publicly records transactions across a network. Each transaction is securely stored on an immutable data block, resistant to tampering via cryptographic verification. This ensures transparency, immutability, and enhanced security. It also facilitates smart contracts—self-executing programs that automate agreement terms without intermediaries.

Key Applications: Blockchain enhances various construction project aspects:

- **Supply Chain Management:** Tracks materials, verifies authenticity, and enhances visibility, ensuring genuine provenance.
- **Smart Contracts:** Automates contract execution, payment processing, and dispute resolution, reducing errors and speeding transactions.
- **Project Management:** Provides a single source of truth, enhancing collaboration, tracking progress with real-time updates, and managing risks via transparent records.
- **Quality Control:** Ensures compliance with standards and regulations by providing clear, unchangeable records of activities, reducing non-compliance risks.
- **Asset Management:** Securely tracks equipment, materials, and assets with transparent records of movement and usage, easing inventory management and reducing loss/theft.

Significant Benefits: Blockchain adoption offers compelling benefits:

- **Increased Transparency & Accountability:** Creates a single, trusted, visible record for all stakeholders, promoting honesty and clarity.
- **Improved Efficiency:** Simplifies workflows, reduces paperwork, boosts coordination, and automates tasks.
- **Reduced Fraud & Corruption:** Immutable nature prevents data tampering, enhancing confidence and reducing fraud.
- **Enhanced Data Security:** Uses encryption to secure data, making unauthorized access/alteration exceptionally difficult.

Associated Challenges: Blockchain implementation faces hurdles:

- **Scalability:** Managing large data volumes and transactions effectively is a concern for construction projects.
- **Interoperability:** Ensuring smooth collaboration between different blockchain platforms and existing software is a key hurdle.
- **High Development Costs:** Significant costs associated with developing and implementing tailored blockchain solutions.
- **Regulatory Challenges & User Adoption:** Regulatory uncertainty and challenges in gaining widespread user acceptance.

Wearable Technologies

Definition and Core Principles: Wearable technologies in construction are devices worn by workers (e.g., smart helmets, vests, exoskeletons, smartwatches), equipped with sensors and communication capabilities. They enable real-time monitoring, data collection, and interaction to enhance safety, productivity, and worker well-being.

Key Applications: Wearable technology has extensive applications:

- **Safety Monitoring:** Tracks worker movements and surroundings, detecting hazards (e.g., fall risks), monitoring PPE usage, and alerting for fatigue or accidents. Prevents musculoskeletal disorders and assesses physical workload.
- **Health Monitoring:** Provides continuous monitoring of vital signs, posture, stress, mental exhaustion, and sleep quality for proactive health management.
- **Productivity & Guidance:** AR glasses project digital information (e.g., maps, guides) into the worker’s view. Exoskeletons augment strength and reduce fatigue, boosting productivity.
- **Location Tracking & Resource Management:** GPS-enabled wearables provide accurate location for employees and equipment, aiding efficient resource management.
- **Communication & Collaboration:** Wearable communication equipment enables real-time communication among teams, allowing information sharing and updates without work interruption.

Significant Benefits: Primary driver is substantial improvement in safety and injury prevention.

- **Enhanced Safety & Injury Prevention:** Real-time monitoring of conditions, health, and risks significantly reduces accidents and enhances worker well-being.
- **Increased Productivity:** Boosts worker productivity by providing immediate access to vital information, streamlining tasks, and reducing physical strain.
- **Real-time Data Collection & Analysis:** Collects massive data on worker behaviors and worksite circumstances, invaluable for decision-making and process improvement.
- **Improved Communication:** Facilitates effective real-time communication and collaboration among construction teams.

Associated Challenges: Wearable technologies face hurdles:

- **Cost:** High initial investment for purchasing and implementing.
- **Data Security & Privacy:** Significant concerns regarding security and privacy of sensitive worker data.
- **User Acceptance:** Workers’ willingness to adopt and consistently use devices can be a barrier.
- **Industry Infancy:** Application in construction is still early, needing further development and standardization.

Sustainable Construction Materials

Definition and Core Principles: Sustainable construction materials (SCMs) minimize negative environmental impact throughout their lifecycle, from extraction to disposal. They aim to reduce carbon emissions, conserve resources, and promote a healthier environment while maintaining durability and functionality. Selection is critical for environmental and regulatory objectives, aligning with environmental, economic, and social sustainability pillars.

Key Examples: Diverse SCMs include:

- **Recycled Materials:** Recycled concrete and reclaimed wood reduce demand for virgin resources and divert waste.
- **Bio-based Composites:** Bamboo and mycelium composites are gaining traction; mycelium-based blocks show exceptional performance.
- **Cross-Laminated Timber (CLT):** Lightweight alternative to concrete and steel for roofs, floors, walls, and ceilings.
- **Smart Materials:** Possess adaptive properties responding to environmental changes, contributing to building performance.

Key Applications: SCMs are crucial for green infrastructure, enhancing urban resilience and environmental conservation.

- Utilized in structural frameworks, roofs, floors, walls, and ceilings, contributing to building performance and sustainability.
- Directly reduce demand for virgin resources and divert waste, aligning with circular economy principles.

Significant Benefits: SCM integration offers compelling advantages:

- **Environmental Impact Reduction:** Significantly reduces carbon emissions, resource consumption, and waste. Mycelium-based blocks show highest CO2 reduction.
- **Energy Efficiency:** Materials like permeable pavements and green roofs improve energy efficiency.
- **Circular Economy Alignment:** Use of recycled and bio-based materials aligns with circular economy principles.
- **Economic Advantages:** Some innovative materials, like mycelium-based blocks, achieve high cost reduction. CLT is less energy-consuming than traditional materials.
- **Resilience:** Contributes to enhancing urban resilience and ecological balance.

Associated Challenges: SCMs face challenges:

- **Cost & Availability:** Initial cost and consistent availability can be higher than traditional alternatives.
- **Regulatory Standards:** Need for standardized guidelines and clear regulatory frameworks.
- **Scalability:** Future research needed to explore scalability for larger infrastructure projects.
- **Research Gaps:** Areas like full potential of material circularity in deconstruction and detailed scientific studies in certain regions remain.

Data Analytics / Big Data

Definition and Core Principles: Data analytics and Big Data in construction systematically identify patterns, trends, and linkages in vast data to gain insights, forecast behavior, and support decision-making. It leverages all raw business data to uncover insights and predict future project/operation states.

Key Applications: Data analytics enhances various aspects of construction management:

- **Risk Management & Safety:** Monitors sites for risks, alerts teams to hazards, and predicts project overruns (budget, delays). Helps understand accident root causes for proactive prevention.
- **Predictive Analytics:** Effective for predictive maintenance (machines signal service needs) and improving reporting, financial forecasting, and business projections.
- **Project Planning & Optimization:** Accurately estimates job costs, aids in developing realistic timeframes/schedules, optimizes resource allocation, and refines operational processes. Contributes to planning efficient, sustainable buildings.
- **Supply Chain Optimization:** Tracks inventory, predicts reordering, and optimizes material delivery routes.
- **Quality Control:** Evaluates quality management data (inspections, testing, defects) in real-time for rapid identification and correction of quality-compromising patterns.
- **Performance Monitoring & Benchmarking:** Assesses performance data to identify improvements and evaluate operational changes.
- **Environmental Impact Assessment:** Utilized to assess and reduce environmental impact, aligning with sustainability goals.

Significant Benefits: Data analytics and Big Data yield substantial advantages:

- **Improved Decision-Making:** Provides data-driven insights for project managers, enabling informed, proactive decisions.
- **Cost Reduction:** Identifies issues early, cuts wasted spend, minimizes errors, and boosts productivity, protecting the financial bottom line.
- **Efficiency & Productivity:** Streamlines processes and significantly improves operational efficiency, leading to measurable gains.
- **Proactive Problem Solving:** Predicts project budget/delay risks, allowing timely intervention to prevent escalation.

Associated Challenges: Data analytics faces hurdles:

- **Poor Data Management:** Difficulties in organizing and standardizing data collection procedures.
- **Data Quality & Scarcity:** Challenges related to data scarcity and ensuring consistent data quality.
- **Contextual End-User Enablement:** Ensuring end-users effectively interpret and utilize data insights.
- **Identifying Digital Friction:** Difficulties in identifying inefficiencies within digital workflows.

Table 1: Summary of Advanced Construction Technologies

Technology	Primary Application Areas	Key Benefits (Concise)	Key Challenges (Concise)
Building Information Modeling (BIM)	Design,Planning, Construction,Operations, Lifecycle Management	Efficiency,Cost Reduction,Collaboration, Safety, Lifecycle Data	High Cost, Skill Gap, Interoperability, Training Access
Artificial Intelligence (AI) &Machine Learning (ML)	Design,Planning,Risk Management,Safety, Operations, Supply Chain	Efficiency,Safety,Cost Savings,DataAnalysis,Prediction	High Cost,DataScarcity/Quality,Workforce Readiness, Ethics

Robotics & Automation	Off-site Prefabrication, On-site Tasks, Surveying, Demolition, Material Handling	Speed, Labor Cost Reduction, Safety, Efficiency, Quality	High Initial Outlay, Human-Robot Integration, Skill Gap, Unstructured Env.
3D Printing / Additive Manufacturing	Component Fabrication, Structural Elements, Housing, Repair	Speed, Cost Efficiency, Sustainability, Customization, Safety	Material Limitations, High Initial Cost, Regulatory, Public Perception
Modular Construction	Off-site Fabrication, Housing, Infrastructure	Speed, Cost Optimization, Efficiency, Sustainability, Safety	Lifecycle Risks, High Investment, Logistics, Regulatory Lag
Internet of Things (IoT)	Real-time Monitoring, Resource Management, Safety, Predictive Maintenance	Efficiency, Cost Reduction, Safety, Sustainability, Real-time Data	Data Security/Privacy, Integration, Scalability, High Cost
Extended Reality (XR) (VR, AR, MR)	Design Visualization, Collaboration, Training, On-site Guidance, Remote Assistance	Visualization, Collaboration, Error Reduction, Safety Training, Productivity	High Implementation Costs, Standards, Skill Shortage
Digital Twins	Lifecycle Optimization, Predictive Maintenance, Real-time Control	Efficiency, Cost Reduction, Proactive Management, Comprehensive Info	Data Quality/Integration, Complexity, Manpower, Full Automation
Blockchain	Supply Chain, Smart Contracts, Project Management, Quality Control, Asset Management	Transparency, Efficiency, Fraud Reduction, Security	Scalability, Interoperability, Development Cost, Regulatory
Wearable Technologies	Safety Monitoring, Health Monitoring, Productivity, Communication, Location Tracking	Safety, Productivity, Real-time Data, Communication	High Cost, Data Security/Privacy, User Acceptance, Industry Infancy
Sustainable Construction Materials	Green Infrastructure, Structural Elements, Building Envelopes	Environmental Impact Reduction, Energy Efficiency, Circular Economy, Economic	Cost/Availability, Regulatory Standards, Scalability, Research Gaps
Data Analytics / Big Data	Risk Assessment, Predictive Maintenance, Planning, Supply Chain, Quality Control	Decision-Making, Cost Reduction, Efficiency, Proactive Problem Solving	Poor Data Management, Data Quality, User Enablement

4. Cross-Cutting Themes and Industry-Wide Implications

The adoption of advanced construction technologies (ACTs) in the modern construction industry is not merely a collection of isolated advancements but rather a manifestation of several overarching, interconnected themes that are fundamentally reshaping the sector. Understanding these cross-cutting implications is crucial for a holistic appreciation of the industry’s evolution.

The Paradigm Shift: Digital Transformation and Industry 4.0

The pervasive integration of ACTs signifies a profound "digital transformation" leading to "smart construction". This shift re-evaluates how projects are designed, managed, and delivered, leveraging cyber-physical systems, advanced digital tools, and data-driven approaches to industrialize production. Its significance lies in overcoming historical inefficiencies, low productivity, high pollution, and energy consumption. This systemic change requires strategic integration of technology with process optimization and organizational culture, with success depending on the industry’s adaptability.

Synergistic Effects and Interoperability

Individual ACTs achieve full potential when integrated, demonstrating a powerful synergistic effect. Building Information Modeling (BIM) serves as a foundational data platform, enhancing Digital Twins, IoT devices, and AI applications. BIM’s data-rich models provide information for accurate virtual replicas and advanced AI analytics.

AI and Machine Learning (ML) amplify other technologies: enhancing robotics by enabling learning and adaptation, improving drones for predictive analysis and site monitoring, and transforming IoT data into actionable insights. Extended Reality (XR) technologies often leverage BIM models for visualization and integrate with AI for training simulations.

However, this synergy relies on robust data interoperability and common standards. Without seamless data flow, the potential for amplified benefits is limited. Addressing data integration challenges is paramount to unlocking ACTs’ full potential.

Workforce Transformation, Skill Gaps, and Ethical Considerations

Widespread ACT adoption necessitates significant workforce transformation. Despite high awareness, a persistent challenge is the lack of adequate training and technical skills, leading to a critical "readiness of the workforce" issue. The human element is crucial for successful implementation.

Automation and robotics, while efficient and safe, raise concerns about job displacement for manual laborers, creating an "ambivalent situation" where productivity gains must balance societal impacts. This shift also creates new roles requiring specialized skills in operating and managing advanced technologies. The industry must proactively invest in reskilling and upskilling programs.

Ethical considerations are prominent, including transparency, fairness, and accountability in AI-driven decision-making. Extensive data collection by IoT and wearables raises concerns about data privacy and security. Addressing these ethical dimensions and balancing technological advancement with human welfare is critical.

Addressing Sustainability and Resilience

Advanced Construction Technologies are instrumental in addressing sustainability challenges. The construction industry’s 40% contribution to global greenhouse gas emissions underscores this urgency. ACTs enable significant progress in reducing carbon footprints, minimizing waste, and promoting renewable energy.

Materials like mycelium-based blocks exemplify this shift, showing highest reductions in CO2 emissions and costs. Modular construction also contributes to sustainability through reduced waste and enhanced energy efficiency. This extensive linkage suggests environmental responsibility is becoming a core value and competitive advantage. The drive towards "climate-neutral built environments" and "zero-emission buildings" indicates sustainable practices are integral to construction projects’ business case. ACTs are essential enablers for the industry to meet climate goals and contribute to a resilient, environmentally responsible built environment.

5. Conclusion

Advanced Construction Technologies are fundamentally reshaping the global construction industry towards a digitally transformed, more efficient, safer, and sustainable future. Key innovations like BIM, AI, Robotics, 3D Printing, IoT, XR, Digital Twins, Blockchain, Wearable Technologies, Sustainable Construction Materials, and Data Analytics deliver substantial benefits: productivity gains, cost reductions, enhanced safety, improved quality, and robust environmental stewardship. The synergistic interplay, especially with BIM as a central data platform and AI/IoT enabling advanced analytics, amplifies their impacts.

Despite this potential, widespread adoption faces persistent challenges: high initial costs, significant workforce skill gaps, complex data interoperability and quality issues, and lagging regulatory frameworks/standardization. Ethical concerns, such as job displacement and data privacy/security, also demand proactive management.

The future of construction is digital, automated, and data-driven, with trends pointing to wider adoption and continuous development of integrated systems. To maximize ACT benefits, several strategic recommendations are proposed:

For Industry Stakeholders:

- **Strategic Investment:** Prioritize investments in technologies with demonstrated ROI and long-term benefits, acknowledging initial capital outlays.
- **Holistic Digital Transformation:** Adopt comprehensive plans integrating technology with process optimization and organizational change for systemic improvements.
- **Workforce Development:** Invest heavily in continuous training and reskilling to address skill gaps and prepare for new roles.
- **Data Governance:** Establish robust data management strategies prioritizing quality, security, and interoperability for reliable data-driven decisions.

For Policymakers and Regulators:

- **Standardization:** Accelerate development of common standards and clear regulatory guidelines for emerging technologies (e.g., 3D printing, modular construction, robotics) to foster certainty and uptake.
- **Research & Development Support:** Provide sustained funding and incentives for ACT R&D, especially addressing limitations like material science for 3D printing, full-scale Digital Twin automation, and sustainable material scalability.
- **Collaborative Ecosystems:** Encourage partnerships between academia, tech developers, and construction firms to facilitate knowledge exchange, pilot projects, and best practices, bridging research and practical implementation.

By proactively addressing these challenges and implementing strategic recommendations, the construction industry can fully harness the transformative power of advanced technologies, paving the way for a more efficient, safer, sustainable, and resilient built environment for future generations.

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08.00.00 – ECONOMIC SCIENCES

* * *

08.00.00 - IQTISODIYOT FANLARI

* * *

08.00.00 – ЭКОНОМИЧЕСКИЕ НАУКИ

"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

OLIY TA'LIM MUASSASALARI BOSHQARUVIDA IQTISODIY INTEGRATSIYANING ZAMONAVIY MEXANIZM, USUL VA TAMOYILLARINI QO'LLASH

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Annotatsiya. *Maqolada nodavlat oliy ta'lim muassasalarini boshqarish tizimida iqtisodiy integratsiya mexanizmalari, usullarini qo'llash imkoniyatlari va istiqbollari ko'rib chiqiladi. Bugungi kunda iqtisod bilan integratsiyalashgan ta'lim klasterlarini shakllantirish, o'zaro hamkorlik va transchegaraviy sheriklikning tarmoq shakllaridan foydalanish alohida e'tibor kasb etadi. Globallashuv va raqamli transformatsiya sharoitida OTMlar samaradorligini oshirish bo'yicha asosiy muammolar aniqlanib, yechimlar taklif etilmoqda.*
Kalit so'zlar: *iqtisodiy integratsiya, oliy ta'lim, universitet boshqaruvi, ta'lim klasterlari, transchegaraviy hamkorlik, raqamlashtirish.*

Abstract. *The article considers the possibilities and prospects for the application of economic integration mechanisms and methods in the management system of non-state higher education institutions. Today, the formation of educational clusters integrated with the economy, the use of network forms of interaction and cross-border partnership are of particular interest. The main problems of increasing the efficiency of higher education institutions in the context of globalization and digital transformation are identified and solutions are proposed.*
Keywords: *economic integration, higher education, university management, educational clusters, cross-border cooperation, digitalization.*

Аннотация. *В статье рассматриваются возможности и перспективы применения механизмов и методов экономической интеграции в системе управления негосударственными высшими учебными заведениями. Сегодня особый интерес представляет формирование интегрированных с экономикой образовательных кластеров, использование сетевых форм взаимодействия и трансграничного партнерства. Выявлены основные проблемы повышения эффективности деятельности высших учебных заведений в условиях глобализации и цифровой трансформации и предложены пути их решения.*
Ключевые слова: *экономическая интеграция, высшее образование, управление университетами, образовательные кластеры, трансграничное сотрудничество, цифровизация.*

Kirish

Ta’lim sohasidagi zamonaviy muammolar oliy ta’lim muassasalaridan nafaqat o‘zgaruvchan sharoitlarga moslashishni, balki boshqaruvga innovatsion yondashuvlarni faol tatbiq etishni ham talab qiladi. Iqtisodiy integratsiya turli tashkilotlarning resurslari va sa’y-harakatlarini birlashtirish jarayoni sifatida universitetlarning raqobatbardoshligini oshirishning samarali vositasiga aylanishi mumkin. Ushbu maqolada oliy ta’lim muassasalarini boshqarishda iqtisodiy integratsiya imkoniyatlari muhokama qilinadi.

1. Iqtisodiy integratsiyaning nazariy asoslari

Iqtisodiy integratsiya iqtisodiy tizimlarning alohida tarmoqlar yoki hududlar doirasida yaqinlashishi va birlashishini nazarda tutadi. Oliy ta’lim sharoitida bu quyidagilarda namoyon bo‘ladi:

- mavjud ta’lim resurslarini birlashtirish;
- fan dasturlarni birgalikda amalga oshirish;
- iqtisodiyotning fanga zaruriyatidan kelib chiqib-birgalika ilmiy, amaliy loyixalar amalga oshirish;
- soha va tarmoq universitetlari o‘rtasida o‘zaro ta’sirning sinergik ta’siri;
- Iqtisodiyot tarmoqlari, biznes, davlat va mahalliy boshqaruv organlari bilan hamkorlik.

2. Universitetlarni boshqarishda integratsiya usullari

2.1. Ta’lim klasterlari

Universitetlar, ilmiy-tadqiqot institutlari, innovatsiya markazlari, korxonalar maqsadlarini birlashtiruvchi klasterlar tuzish:

- iqtisodiyotga universitetlar tomonidan tavsiya etilgan texnologiyalar va bilimlarni tadbiq etish;
- O‘zaro hamkorlik va sinov natijalariga ko‘ra ilmiy-amaliy hamkorlik samaradorligini oshirish;
- talabalar, professorlar, doktorantlar amaliyoti, ishlab chiqarishning bir qismini talabalar mehnatiga yo‘naltirish orqali resurslarni muvozanatli taqsimlash.

2.2. O‘zaro ta’sirning tarmoq shakllari

universitetlar (shu jumladan xalqaro) o‘rtasidagi tarmoq o‘zaro ta’siri quyidagilarga yordam beradi:

- qo‘shma ta’lim dasturlarini amalga oshirish;
- akademik harakatchanlik;
- boshqaruvning ilg‘or tajribalari bilan almashish.

2.3. Raqamlashtirish integratsiya vositasi sifatida

Universitetlarni boshqarishda raqamli platformalar va katta ma’lumotlardan foydalanish quyidagilarga yordam beradi:

- qaror qabul qilishning shaffofligi;
- fan, tarmoq va soha resurslarni samarali taqsimlash;
- ma’muriy jarayonlarni avtomatlashtirish, boshqaruvga yangi uslularini tadbiq etish.

3. Oliy ta’limda integratsiyani boshqarish tamoyillari

- O‘zaro manfaat prinsipi: sheriklik o‘zaro manfaatli bo‘lishi kerak.
- Subsidiarlik printsipi: har bir tuzilma o‘z vakolatlari doirasidagi funktsiyalarni bajaradi.
- Moslashuvchanlik printsipi: integratsiya modellari o‘zgaruvchan sharoitlarga moslashadi.

• Barqarorlik tamoyili: boshqaruv uzoq muddatli samaradorlik va innovatsion barqarorlikni ta’minlashi kerak.

4. Amaliy holatlar va tajriba

1-misol: Yevropa Ittifoqi Universitetlar Alyansi (EUA)

Qo‘shma ta’lim traektoriyalarini, tadqiqot loyihalarini, umumiy kampuslarni amalga oshirish.

2-misol: AQSH universitetlari konsorsiumlari

O‘zbekistonda ilm fanni 2030 yilgacha rivojlantirish kontseptsiyasi doirasida davlat OTMlarining birlashtirilishi.

5. Muammolar va to‘siqlar:

• integratsiya jarayonlarini byurokratlashtirish;

• ishtirokchilarda motivatsiyaning yo‘qligi;

• resurslarning tengsizligi;

• transchegaraviy hamkorlikdagi huquqiy to‘siqlar.

Xulosa

Iqtisodiy integratsiya universitet boshqaruvi sohasida istiqbolli yo‘nalish hisoblanadi. Ta’lim klasterlarini shakllantirish, raqamli vositalarni joriy etish va barqaror o‘zaro hamkorlikni ta’minlashga malakali yondashuv asosida oliy ta’lim muassasalari jahon ta’lim makonida o‘z samaradorligi, raqobatbardoshligi va barqarorligini sezilarli darajada oshirish imkoniyatiga ega bo‘ladi.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

ТУРИСТИЧЕСКИЙ ПОТОК В КИТАЕ И СТРАНАХ ЦЕНТРАЛЬНОЙ АЗИИ: КОМПАРАТИВНЫЙ АНАЛИЗ И ПЕРСПЕКТИВЫ РАЗВИТИЯ ВЗАИМНОГО ТУРИЗМА

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Аннотация. *Оценка масштабов развития туристической отрасли в Китае и странах Центральной Азии (Казахстан, Узбекистан, Кыргызстан, Таджикистан, Туркменистан) на основе сравнительно-аналитического подхода и системно-структурного анализа с привлечением международных статистических данных (в частности, UN World Tourism Organization — UNWTO). Исследование позволило выявить ключевые различия, общие тренды, проблемные зоны и лучшие практики, а также выработать рекомендаций по повышению конкурентоспособности туристических направлений региона.*

Ключевые слова: *туристические потоки, взаимный туризм, тренды, мировые практики, перспективы, UNWTO, Китай, Центральная Азия.*

Аннотация. *Хитой ва Марказий Осиё мамлакатларида (Қозоғистон, Ўзбекистон, Қирғизистон, Тожикистон, Туркманистон) туризм индустриясининг ривожланиш кўламини қиёсий таҳлилий ёндашув ва халқаро статистик маълумотларни (хусусан, БМТ Жаҳон сайёҳлик ташкилоти – ЙУНВТО) жалб қилган ҳолда тизимли таркибий таҳлил қилиш асосида баҳолаш. Тадқиқот асосий фарқларни, умумий тенденцияларни, муаммоли йўналишларни ва илғор тажрибаларни аниқлаш, шунингдек, минтақадаги туристик йўналишларнинг рақобатбардошлигини ошириш бўйича тавсиялар ишлаб чиқиш имконини берди.*

Калит сўзлар*: туристик оқимлар, ўзаро туризм, тенденциялар, жаҳон амалиёти, истиқболлар, ЙУНВТО, Хитой, Марказий Осиё.*

Annotation. *Assessment of the scale of development of the tourism industry in China and Central Asian countries (Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan) based on a comparative analytical approach and systemic structural analysis with the involvement of international statistical data (in particular, UN World Tourism Organization - UNWTO). The study allowed to identify key differences, common trends, problem areas and best practices, as well as to develop recommendations for increasing the competitiveness of tourist destinations in the region.*

Keywords: *tourist flows, mutual tourism, trends, world practices, prospects, UNWTO, China, Central Asia.*

Введение.

Развитие туристических связей между странами Центральной Азии и Китаем приобретает всё большее значение в контексте укрепления регионального сотрудничества. На **первом саммите "Китай – Центральная Азия"**, прошедшем в **мае 2023 года в Сиане**, главы государств подтвердили стремление развивать взаимный туризм и договорились активизировать сотрудничество в этой сфере. В **Сианьской декларации** особое внимание было уделено **упрощению визовых режимов, модернизации инфраструктуры** контрольно-пропускных пунктов **(КПП) и поддержке культурных обменов**, что напрямую влияет на туристический сектор.

Как результат вышеуказанного саммита и последующих договорённостей:

- Китай и **Казахстан** подписали соглашение о взаимном **безвизовом режиме**, вступившее в силу с ноября 2023 года.
- Позднее, аналогичные соглашения были достигнуты с **Узбекистаном** (вступает в силу 1 июня 2025 года). Это **снимает ключевые барьеры для туристов**, делает поездки проще и способствует росту туристического обмена.

Июнь 2025 года ознаменован проведением **второго саммита "Китай – Центральная Азия"** в Казахстане, где **одна из центральных тем - развитие туризма**. Ожидается *подписание дополнительных соглашений по* **совместным туристическим маршрутам, цифровизации визовых процедур**, а также *запуск проектов* по **развитию инфраструктуры** и **продвижению совместных туров** в рамках «Шёлкового пути».

Китай является крупнейшим источником выездного туризма в мире - согласно последнему отчету ООН по туризму (май 2025 г.), **Китай вновь занял первое место в мире по расходам на выездной туризм** — $250,6 млрд в 2024 г. Освоение даже малой доли этого рынка **Китая — одного из крупнейших источников выездного туризма в мире — стратегически важно для стран ЦА**. Развитие туризма становится не только культурной, но и **экономической стратегией**: увеличиваются потоки туристов, растёт спрос на транспорт, отельные услуги, культурные мероприятия. Туризм также дополняет инициативу «Один пояс — один путь», усиливая человеческие связи.

Таким образом, последовательные политические шаги, подписание безвизовых соглашений, экономическая выгода и культурная близость делают туризм одной из **стратегических сфер сотрудничества** между Китаем и странами Центральной Азии. Регулярное включение этой темы в повестку саммитов «Китай – Центральная Азия» подтверждает её высокую приоритетность.

Активизация межрегионального сотрудничества в сфере туризма между Китаем и странами Центральной Азии опирается на ряд **ключевых факторов** и принятых **административных мер**:

- Центральная Азия и Китай исторически связаны *Шёлковым путём*, **растет интерес к культурному и историческому наследию региона**, а совместное продвижение маршрутов наследия (в том числе **объектов ЮНЕСКО** в Узбекистане, Казахстане и КНР) стало важным направлением сотрудничества в сфере туризма.

- **поддержка на уровне правительств** - *двусторонние соглашения и реализация совместных проектов* в рамках стратегических инициатив, в том числе программы **"Один пояс, один путь"**, направленной на возрождение исторического Шелкового пути,

форматов **Шанхайской организации сотрудничества (ШОС)** и **«Китай + Центральная Азия» (C+C5)**.

- **развитие транспортной инфраструктуры и логистики**, включая прямые авиарейсы крупных городов Центральной Азии с Китаем, модернизацию железных дорог, автодорог и логистических центров). В 2024 году **количество еженедельных прямых авиарейсов** между Китаем и странами Центральной Азии значительно увеличилось, пассажирские перевозки из Китая в Центральную Азию **выросли на 233%** за год.
- **либерализация визового режима:** упрощение визовых процедур и въезда для иностранных туристических групп, в декабре 2024 г. Китай объявил о **существенном смягчении своей политики безвизового транзита** для 54 стран, увеличив разрешенный срок пребывания до 10 дней. С марта 2021 г. Узбекистан предоставил *безвизовый въезд до 10 дней* для граждан Китая (*до 30 дней* с июня 2025 г.), *внедрил электронную систему оформления виз (e-visa),* доступную для граждан *более 50 стран*, включая США.
- **активное внедрение цифровых сервисов** для **туристических услуг** (в т.ч. онлайн-бронирования и использование **цифровых туров**) и развитие туристической инфраструктуры.

Методические подходы: использование методов в рамках *системно-структурного анализа и сравнительно-аналитического подхода* позволяют оценить масштаб отставания или прогресса по отдельным направлениям. **Системно-структурный анализ туристической сферы Китая и стран Центральной Азии (ЦА)** на основе данных индекса туристической конкурентоспособности (WEF TTDI 2024) используется для выявления внутренних связей и *компонентов туристической сферы.* Методологически анализ базируется на декомпозиции туристической системы на ключевые подсистемы: ***инфраструктуа, логистика и транспортная доступность, институциональная база, кадровый потенциал, технологическая зрелость (****уровень цифровизации), безопасность и комфорт пребывания****, маркетинг дестинаций и ресурсная и т. д.* **Сравнительно-аналитический методический подход (*Компаративный анализ, benchmarking)*** предполагает сравнение туристического потока и показателей развития туризма в Китае и странах Центральной Азии друг с другом внутри региона и их сопоставление с лучшими мировыми практиками по данным *UN World Turism Organisation (**UNWTO**).*

При анализе статистических данных UNWTO используются официальные показатели: количество международных и внутренних туристов, доходы от туризма, уровень занятости в отрасли, средняя продолжительность пребывания, степень развития гостиничной инфраструктуры, инвестиции в туризм, индексы конкурентоспособности.

Анализ динамики туристического потока в Китае и странах Центральной Азии

Развитие **туристической отрасли** в **Центральной Азии и Китае** признано международным сообществом как успешное. Однако если доходы от индустрии достигли в Китае $500 млрд. то доходы от туризма в странах Центральной Азии пока не превышают $2–3 млрд на страну. Общая динамика развития туризма в регионе характеризуется положительными трендами.

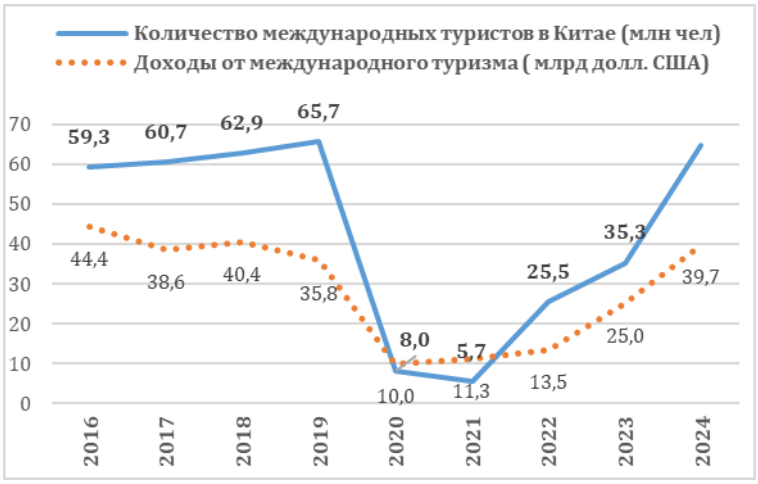
В Китае наблюдается положительная тенденция во въездном туризме, однако **поток** 2024 г. **все еще ниже допандемического уровня.** Число поездок иностранных

граждан составило **64,9 млн**, **увеличившись на 82,9%**. Из них **20,1 млн** въехали в Китай **без визы**, увеличившись на 112,3%.

С другой стороны, выросло количество туристов **в Китай из стран Центральной Азии**. **Китай посетили 18,3 тыс узбекистанцев,** что составило **0,3% от** общего числа **туристов** выехавших **из Узбекистана** в 2024 г. **(6,2 млн).** (*Для сравнения:* наибольший поток был отмечен **в Кыргызскую Республику** – 2,88 млн человек, **Таджикистан** – 1,19 млн, **Казахстан** – 956,5 тыс.

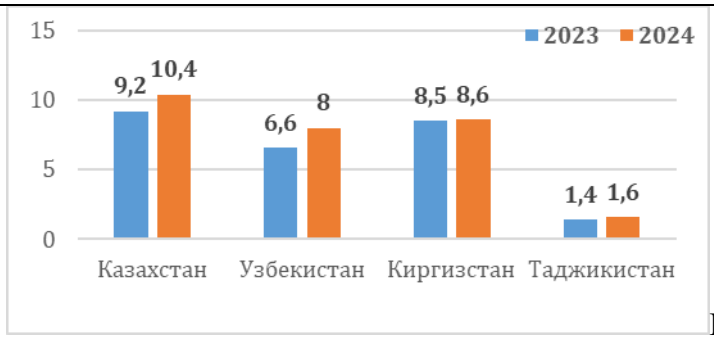
Страны Центральной Азии в целом *закрепили позитивный тренд развития туризма*. Общее **число туристов в Центральной Азии выросло** за 2024 год **на 11%** и достигло **более 28 млн** чел. **Узбекистан** показал самый **значительный рост въездного туризма** среди стран Центральной Азии – на 20,1%. На рис 2. видно, что **Казахстан** принял – **10,43 млн** иностранцев[1], **Кыргызстан – 8,6 млн**, **Узбекистан – 8,0 млн** иностранных гостей[2], **Таджикистан** – около **1,6 млн**[3].

Рис.1. Иностранные туристы и доходы от международного туризма в Китае в 2016-2024 гг.



Источник: Всемирная туристская организация ООН **https://www.unwto.org/tourism-data/un-tourism-tourism-dashboard**

Рис. 2. Иностранные туристы в странах Центральной Азии в 2023г. и 2024 г. (млн чел)



Источник : Национальные комитеты статистик стран Центральной Азии

Туристический поток *в страны Центральной Азии* **из Китая** также *значительно увеличился*. В 2024 году *Казахстан* посетили **655 тыс.** китайских туристов **(+78%** к 2023 г., по сравнению с 18 тыс в 2022 г.)[4], *Узбекистан* посетили **74,3 тыс.** туристов из Китая (+ **75%** в 2024 году), что составляет **0,9% от общего числа туристов** в Узбекистан. Большинство путешественников из Китая в Узбекистан приезжали **в целях** отдыха и туризма (57,1 тыс.

[1] Бюро национальной статистики Республики Казахстан
[2] Национальный комитет по статистике Республики Узбекистан
[3] Агентство по статистике при Президенте Республики Таджикистан
[4] по данным Комитета индустрии туризма Министерства туризма и спорта РК

человек), значительная часть приезжала в связи с деловыми командировками (11,3 тыс), а меньше всего в целях обучения (794) и медицинского обслуживания (3). Стабильный рост при низкой базе числа туристов из Китая наблюдается в ***Кыргызстане*** *и* ***Таджикистане***.

Системно-структурный анализ позволил выявить внутренние характеристики развития туристической сферы в Китае и странах Центральной Азии по ряду компонентов: инфраструктура, институциональная база, кадровый потенциал, уровень цифровизации, безопасность, маркетинг дестинаций, транспортная доступность и т. д. (Табл.1). Китай уверенно входит в **топ-10 стран мира** по туристическому развитию согласно индексу TTDI 2024, продемонстрировав устойчивый рост по показателям инфраструктуры, цифровой готовности и туристических ресурсов. Основным сдерживающим фактором остаётся **международная открытость**, ограниченная визовыми режимами и геополитическими обстоятельствами, что отражается на уровне въездного туризма.

Индекс конкурентоспособности туристической отрасли в **странах Центральной Азии** колеблется между 70 и 100 местами (по версии WEF), среди главных ограничений: *слаборазвитая инфраструктура* (в особенности за пределами столиц), отсутствие централизованной маркетинговой стратегии, ограниченная цифровизация туристических сервисов, визовые и логистические барьеры, фрагментарное институциональное управление туризмом.

Табл.1. Системно-структурный анализ регионов

Компонент	***Китай***	***Страны Центральной Азии (в целом)***
Транспортная доступность	Высокая: крупные хабы (Пекин, Шанхай, Гуанчжоу)	Ограничена, особенно международные рейсы
Инфраструктура	Современная, масштабная, хорошо интегрирована	Нехватка отелей среднего уровня, инфраструктура развита слабо
Цифровизация туризма	Высокая: онлайн-платформы, AI-гиды, суперприложения	Разрозненные сервисы, низкая интеграция цифровых решений
Маркетинг и брендинг	Активный, фокус на внутренних и международных туристах	Слабая узнаваемость брендов стран
Культурный/исторический потенциал	Огромный (Шелковый путь, храмы, города)	Очень высокий, особенно в Узбекистане и Казахстане
Политика и инвестиции	Централизованная стратегия, крупные вложения	Фрагментарные инициативы, нехватка координации и инвестиций

Источник: составлено автором на основе данных индекса туристической конкурентоспособности (WEF TTDI 2024)

Согласно Индексу развития туризма и путешествий (Travel & Tourism Development Index, TTDI) Всемирного экономического форума, **Казахстан** — лидер в регионе, занимает 52 место, с хорошими показателями по безопасности, инфраструктуре и

ресурсам. Центральная Азия выигрывает **по цене и доступности**, но этот фактор не компенсирует остальных слабых зон. **Узбекистан** активно прогрессирует (78 место), особенно по культурным активам и доступности цен. **Кыргызстан и Таджикистан** отстают по инфраструктуре, цифровой готовности и открытости, но обладают высоким потенциалом природного туризма. Все страны региона выигрывают по **ценовой конкурентоспособности**, но проигрывают по **интеграции в глобальные турпотоки**. **Франция и ОАЭ** остаются эталонами в соответствующих категориях: культурное лидерство (Франция), безопасность и цифровизация (ОАЭ).

Узбекистан в 2024 году занял 78-е место среди 119 стран, поднявшись на 16 позиций по сравнению с предыдущим рейтингом. Это **наибольшее улучшение среди всех стран в регионе Центральной Азии**. Эксперты связывают успех страны с активным развитием туристической инфраструктуры, внедрением **цифровых сервисов** для **туристических услуг** (в т.ч. онлайн-бронирования и использование **цифровых туров**), **упрощением визовых процедур** и популяризацией историко-культурного наследия. В 2024 году Узбекистан был признан **одним из самых желанных новых туристических направлений**, что отражает его растущую привлекательность для международных путешественников.

Табл.1. Benchmarking: сопоставление с лучшими мировыми практиками

Критерий	Китай	Среднее по ЦА	Франция (эталон)	ОАЭ (эталон)
Кол-во туристов	65 млн	2–5 млн	100 млн	17 млн
Доходы от туризма, млрд долл.	500 млрд	1–3 млрд	70 млрд	52 млрд
Место в TTDI 2024	Топ-10	52–102	Топ-3	Топ-5
Доля туризма в ВВП%	11–12%	2–5%	8%	12%

Китай — вошёл в топ-10 TTDI 2024, прирост по цифровизации и общей инфраструктуре составляет около +1 % в ранге. На фоне Китая и стран эталонов (Франция, ОАЭ) Центральная Азия отстаёт по всем ключевым показателям. Однако важно подчеркнуть, что отставание не является структурно необратимым — большая часть ограничений носит институциональный и управленческий характер.

Перспективные направления развития взаимного туризма

Взаимный туризм в Центральной Азии с Китаем обладает значительным потенциалом. В частности, освоение даже малой доли этого рынка **Китая — одного из крупнейших источников выездного туризма в мире** (до пандемии — более **150 млн** поездок в год)— **стратегически важно для стран ЦА**. Отчет о развитии выездной индустрии туризма в Китае за 2024 год[5] показал, что *более **61%** пользователей хотят отправиться в большое путешествие* в течение следующих двух лет и *66% из них уже начали копить* на поездку своей мечты.

С учетом либерализации визовых режимов и экономического роста, **к 2030 г. взаимный туристический поток между Китаем и странами Центральной Азии может**

[5] Fastdata: China’s Outbound Tourism Industry Development Report 2024

превысить 2–3 миллиона человек в год, при *условии активной координации на межправительственном уровне и участия частного сектора*.

Тем не менее, развитие отрасли в регионе признается международным сообществом как замедленное. **Потенциальные точки роста и рекомендации по повышению потенциала развития взаимного туризма:**

1. **Создание регионального туристического альянса ЦА–Китай** в целях *координации партнерских связей в области цифровых решений* (создание *мультиязычных цифровых* платформ и региональных приложений бронирования и туристической информации Silk Road), создание и продвижение ***общего бренда «Visit Silk Road»*** и *совместного инфлюенс-маркетинга*, разработка и внедрение общих цифровых решений для сбора статистики туризма, проведение регулярных исследований анализа потребительских предпочтений, **разработки *совместных стандартов качества* туристических сервисов *и*** гармонизация международных стандартов квалификации в сфере туризма.

2. **Продвижение трансграничных туристических маршрутов** (в т.ч. бренда "Шелковый путь"), ***содействие по цене путешествию по нескольким странам Шелкового пути*** посредством общих инициатив, таких как ***пропуск “Шелковый путь”,*** создание *совместных туристических программ по принципу* **“Один тур-весь регион”,** *совместных отельных проектов, туристических кластеров на границе* (например, Хоргос, Ош–Кашгар), улучшение мультимодальной транспортной доступности и эффективности пограничных процедур. Китайские туристы проявляют интерес к *трансграничным историческим маршрутам* (Самарканд, Бухара, Шымкент, Тараз, Ош, Кашгар).

3. **Региональная рамочная программа секторных инвестиций в совместные объекты туризма** китайских и региональных компаний, включая *цифровую трансформацию,* логистику (аэропорты, дороги и железные дороги), *снижение стоимости авиаперелётов*, в *отельный бизнес*, в том числе ***качественных*** гостиниц, зон отдыха и кластеров, ***особенно в регионах.***

4. **Развитие** базовой **транспортной и туристической инфраструктуры:** интегрирование транспортных маршрутов, запуск скоростного железнодорожного сообщения (скоростных поездов), расширение *прямых авиарейсов* (Узбекистан, Казахстан, Кыргызстан — крупные города КНР), развитие *инфраструктуры сухопутных пунктов пропуска* (Хоргос, Кашгар и др.), и улучшение качества транспортных услуг.

5. **Упрощение визовых процедур:** проработка идеи ***единого визового режима для туристов в ЦА и Китай*** (разработка единой многосторонней визы Шелкового пути ***SilkRoadVisa*** для стран «Китай + ЦА» (“C+C5”)), что существенно упростит путешествия по странам региона.[6] До настоящего времени эта инициатива остаётся не реализована на практике. **В 2018 г. Казахстан и Узбекистан подписали соглашение о взаимном признании визовых режимов**, направленное на развитие туризма в рамках проекта «Шёлковый путь». Таким образом, несмотря на активные обсуждения и поддержку идеи единой визы «Шёлкового пути» на различных форумах и встречах, конкретных шагов по её внедрению пока не предпринято.

[6] См. доклад Азиатского банка развития (АБР) **Стратегия Центральноазиатского регионального экономического сотрудничества (ЦАРЭС) в области туризма до 2030 года” ("CAREC Tourism Strategy 2030")** .

6. **Безвизовые режимы:** введение **взаимного безвизового режима Узбекистан–Китай** с июня 2025 г.; С 1 июня 2025 года вступит в силу подписанное 1 декабря 2024 г. межправительственное Соглашения **о взаимной отмене виз** между Узбекистаном и Китаем *на срок до 30 дней* за каждое отдельное пребывание и на общий период не более 90 дней в течение любого 180-дневного периода.

Опыт Казахстана демонстрирует **значительное увеличение числа китайских туристов** *после введения аналогичного* соглашения о взаимной отмене виз (14-дневного безвизового режима для граждан Китая в июле 2022 года и взаимного безвизового режима с 10 ноября 2023 г.) между Казахстаном и Китаем, **число китайских туристов в Казахстане увеличилось в 12 раз за год — с 18 тыс.** в 2022 г. **до 217 тыс.** в 2023 г. (**В 2024 г.** число туристов из Китая составило **655 тыс**).

После подписания соглашения об отмене виз между Китаем и Узбекистаном в начале декабря 2024 года **поисковые запросы по теме «туризм в Узбекистан» выросли на 97 процентов** к предыдущему месяцу. Информация различных туристических агентств и онлайн-платформ свидетельствует о том, что **безвизовые страны** для граждан Китая входят в число лучших дестинаций (мест) для туризма в 2025 году, что позволяет совершать **спонтанные поездки.**

С учетом этих инициатив, **Узбекистан** ставит перед собой цель постепенно **увеличить количество туристов из Китая до 1 миллиона** в ближайшие несколько лет. [7]

7. **Совместные инициативы** масштабного продвижения стран. Например, в 2025 г. Узбекистан **проводит Год туризма Узбекистана в Китае**, организовав *специальные репортажи в китайских СМИ* и ряд *культурных и экономических* мероприятий и презентаций для привлечения китайских туристов.

8. **Расширение интереса к молодежному туризму, образовательному туризму (**Программы обмена, летние школы, межвузовские форумы, молодежный ШОС-туризм), повышение популярности у молодёжи и блогеров — **этнотуризм, гастрономия, фестивали**. Готовность к выездным поездкам китайцев особенно очевидна *для молодого поколения*: *71,5% пользователей, родившихся в 1990-х гг, заявили что заинтересованы в поездках* в течение года.

9. **Диверсификация туристических продуктов и маршрутов** в целях **повышения вовлеченности местных сообществ и преодоления сезонности туризма**: создание новых маршрутов и разработка новых туров (гастрономические, этно, паломнические), развитие новых видов туризма (медицинского, спортивного, зимнего, приключенческого, делового туризма развитие направлений MICE.), продвижение мероприятий вне высокого сезона. **Высоким является спрос китайских туристов на уникальные** природные и культурные ландшафты (Иссык-Куль, Фергана, Чарын). **Институт международных исследований Китайской академии туризма** утверждает, что китайские туристы все больше просят больше впечатлений, таких как приготовление местных фирменных блюд, посещение местных домов и испытание уникальных видов транспорта

10. **Улучшение туристической навигации:** разработать мобильные приложения и аудиогиды, внедрить QR-коды с ***мультиязычным*** описанием объектов (в особенности для развития медицинского туризма).

[7] Согласно заявлению председателя Государственного комитета по развитию туризма Узбекистана Умида Шадиева, озвученному на бизнес-форуме в Самарканде 18 июня 2024 года.

11. **Повышение экологической устойчивости:** внедрение практик устойчивого туризма, развитие экотуризма и контроль сохранения природных и культурных ресурсов.

Заключение. Китай уже стал одним из мировых лидеров туризма, в том числе за счёт стратегии «inbound + outbound», высокой цифровизации и мощного брендинга. **Центральная Азия** имеет значительный неиспользованный потенциал, особенно в сфере культурно-исторического и природного туризма. Разрыв с передовыми странами велик, но **при координации усилий и применении мировых практик регион может стать новым "экзотическим" центром туризма** Евразии.

ЦИФРОВЫЕ КАНАЛЫ И МЕТОДЫ ПРОДВИЖЕНИЯ ТУРИСТСКИХ УСЛУГ НА ОСНОВЕ ЦИФРОВЫХ МАРКЕТИНГОВЫХ СТРАТЕГИЙ

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Аннотация. *В статье рассматривается актуальность использования цифровых каналов и методов продвижения туристских услуг на основе цифровых маркетинговых стратегий. Изучаются подходы в цифровом маркетинге способные существенно увеличить приток туристов, создать новый клиентские базы. Рассматриваются методы и инструменты цифрового маркетинга, применяемые в современных реалиях, опыт их применение в зарубежных странах.*
Ключевые слова: *маркетинговые стратегии, диджитал маркетинг, электронная коммерция, промо, интернет-коммуникации, UGC-контент.*

Annotatsiya. *Maqolada raqamli kanallardan foydalanishning dolzarbligi va raqamli marketing strategiyalari asosida sayyohlik xizmatlarini ilgari surish usullari muhokama qilinadi. Sayyohlar oqimini sezilarli darajada oshirishi va yangi mijozlar bazasini yaratishi mumkin bo'lgan raqamli marketing yondashuvlari o'rganilmoqda. Zamonaviy voqelikda qo'llaniladigan raqamli marketing usullari va vositalari, ularni xorijiy mamlakatlarda qo'llash tajribasi ko'rib chiqiladi.*
Kalit so'zlar: *marketing strategiyalari, raqamli marketing, dasturiy marketing, elektron tijorat, reklama, Internet aloqalari, UGC-kontent.*

Abstract. *The article discusses the relevance of using digital channels and methods of promoting tourism services based on digital marketing strategies. Digital marketing approaches that can significantly increase the influx of tourists and create a new customer base are studied. Digital marketing methods and tools used in modern realities and the experience of their use in foreign countries are considered.*
Keywords: *marketing strategies, digital marketing, programmatic marketing, e-commerce, promo, internet communications, UGC-content.*

Введение

Активная и повсеместная цифровизация всех сфер современного общества, посредством цифровых каналов и средств связи давно подчеркивают и подтверждают

огромную мощность данных инструментов, которые могут быть эффективно использованы в социальных, экономической и любых других целях. Сейчас практически все компании любой отрасли и сферы деятельности располагают определенными онлайн активами, которые они используют для продвижения бизнеса, которые зачастую являются их визитной карточкой на просторах интернета. В данной статье рассматриваются цифровые каналы и методы продвижения в аспекте их использования для развития сферы комплексных туристских услуг.

Научная методология

Последние годы появляются немало исследований, посвященных изучению цифрового маркетинга в сфере туризма, специалисты все чаще и больше углубляются в эту тему, по мере развития информационных технологий и изменения рынка туристических услуг. Однозначно, ученые стран Средней Азии, а также всего мира, заинтересованы в выведении туристического потока на принципиально новый уровень, в чем им поможет цифровой маркетинг. Такие ученые как Тамаева А.М. и Хираджигаджиева М.М. в своих работах рассматривают маркетинг, как важнейший инструмент продвижения товаров и услуг во всех областях, производящих эти услуги и продукты производства, перешел в наиболее совершенную форму: цифровой маркетинг. Развитие цифрового маркетинга влияет на все сферы экономики страны, что было отмечено в ряде работ исследователей [5]. Также, работа исследователя Озиминой Л.А, рассматривает разнообразие способов и инструментов продвижения, применяемых в рамках различных цифровых каналов, довольно обширно. Это позволяет разрабатывать многочисленные стратегии продвижения практически любых продуктов, используя различные комбинации этих инструментов. На сегодня можно выделить несколько основных каналов, используемых продавцами: поисковые системы, партнерские web-ресурсы, сайты-агрегаторы, социальные сети, видео-хостинги, рекламные сети и мобильные каналы продвижения. В рамках каждого методы существуют платные и бесплатные инструменты [4].

Целесообразность использования того или иного канала продвижения в первую определяется
тем, насколько плотно там сосредоточена целевая аудитория продавца, что, в свою очередь, будет определять методы продвижения продукта.

Рассматривая перспективы функционирования организаций сферы туристических услуг, можно отметить, что компании, желающие удержаться на данном рынке и преуспеть, будут вынуждены перестраивать свои технологии работы с клиентами и переходить с традиционных форм маркетинга на цифровой. И как выяснилось в результате исследований, крупнейшее вложение в рынок цифрового маркетинга среди тюркских стран постсоветского пространства продемонстрировали Узбекистан и Казахстан.

Целесообразность использования цифрового маркетинга, или диджитал маркетинга, как его еще принято называть, совершенно очевидна. Во время тотальной конкуренции на мировом потребительском рынке и необходимости внедрения наиболее совершенных методов и систем предложения продуктов воспроизводства в нашу жизнедеятельность, эти методы должны быть свежими и эффективными, они должны давать возможность потребителю оценить качество востребованных товаров и услуг еще на моменте первичного знакомства с ними. Велики перспективы и возможности

инструментов, создаваемых цифровой экономикой, во всех сферах производства, но особенно это касается сферы туризма

На сегодняшний день ряд авторов придерживаются мнения, что в современных условиях высокой конкуренции на международном рынке туристских услуг определяющим фактором обеспечения эффективного развития туристских услуг и экскурсионных услуг в Узбекистане - выступают нововведения и цифровизация в продвижении. Однако большинство исследователей рассматривают их применение исключительно в области использования информационных технологий для туристской отрасли, что является ошибочным. Рынок цифрового маркетинга направлен на прямую коммуникацию с потребителем посредством СЕО и контекстной рекламы, таргетинга и других медиаканалов.

Анализ и результаты

Исследование основ применения цифровых технологий в сфере услуг представляется актуальным в связи с возросшим в современном обществе спросом на упрощенные и быстрые способы получения различных услуг и соотносится с государственной политикой, предполагающей развитие и поддержку цифровой экономики. В условиях информатизации общества Интернет и другие цифровые каналы становятся стимулом к появлению цифрового маркетинга, который меняет формы и методы маркетинговой деятельности в сфере услуг. К основным технологиям относятся следующие:

SEM – маркетинговая деятельность с помощью поисковых машин; – маркетинг – продвижение продукта (услуги), в том числе процесс от создания до продажи и получения прибыли;

Big Data – исследование массивов данных больших объемов; – SMM – социальный медиамаркетинг;

Web-аналитика – аналитическая деятельность в сфере цифрового анализа;

SMO – оптимизация для маркетинга социальных сетей;

E-mail маркетинг – текстовые сообщения рекламного характера, которые переданы по электронной почте; – контекстная реклама Google Adwords, Yandex Direct;

Мобильный маркетинг – деятельность с использованием мобильных устройств;

Ремаркетинг – многократный показ пересмотренной ранее интернет-рекламы [1].

Краткая характеристика существующих технологий цифрового маркетинга показывает, что данный вид маркетинга использует новейшие инструменты работы с рынком. Используя возможности цифровых технологий, организации могут получать данные от потенциальных потребителей, это может использоваться ими для сегментирования покупателей и емкости различных сегментов рынка, что может стать решающим аргументом организации при разработке новых продуктов. Как показывает практика, на современном этапе более 80% всех продаж туристических услуг реализуются через электронную коммерцию и используют компьютерные системы резервирования CRS (Computer Reservations System), которые создали предпосылки для развития глобальных систем бронирования, обеспечивают быстрое и удобное бронирование билетов на 188 транспорт, резервирование мест в гостинице, прокат автомобилей, обмен валют, заказ билетов на спортивные и культурные мероприятия. Крупнейшими мировыми распределительными системами на международном рынке туристических услуг являются AMADEUS, Worldspan, Galileo, Sabre. Это позволило увеличить уровень сервисных услуг

за счет уменьшения времени обслуживания клиентов, увеличения объемов и разнообразия предлагаемых услуг, а также появилась возможность обеспечения оптимизации загрузки авиалайнеров, реализации стратегии гибкого ценообразования и применения новых управленческих решений. Важную роль в туристическом бизнесе играют социальные сети, поэтому необходимо постоянно осуществлять их анализ, чтобы понять влияние межфирменного взаимодействия среди туристических организаций. Социальные сети являются отдельными структурами, позволяющими операторам малых фирм построить уровень доверия, необходимый для их участия в разработке местного туристического продукта. Это средства, которые используются пользователями для мобилизации отношений и обратной связи друг с другом.

Сегодня невозможно представить жизнь без цифровых технологий. Турист постоянно формирует свое путешествие, используя множество сервисов бронирования, поиска и покупки услуг. Сфера туризма является разносторонней и затрагивает почти все стороны бизнеса. Ежедневно сотни стартеров трудятся над созданием новой ниши в сфере туризма для получения прибыли. Цифровые технологии повлияли не только на новые способы продвижения услуг на рынке, но и изменили сами услуги. Например, уже не является новинкой с помощью мобильных технологий без общения с работниками отеля вселяться, выселяться, делать заказы в номер и многое другое. Прослеживается тенденция перехода клиентов туристического бизнеса в интернет-пространство. Характерными признаками современных цифровых технологий в области сферы туристических услуг являются следующие: – консолидация информационных ресурсов; – интеллектуализация функций; – визуализация интерфейсной среды; – мобилизация информационно-технологического сопровождения; – персонализация удовлетворения информационных потребностей. Данные методы продвижения являются очень востребованными на данный момент, так как являются относительного недорогими и иногда даже бесплатными способами.

Системы интернет-поиска. Данная технология продвижения является одной из самых известных в комплексе сравнения с другими технологиями. В этом способе основным элементом продвижения выступает веб-сайт организации. Любая официальная и проверенная организация, в частности, сферы туристических услуг, обязательно имеет свой персональный сайт и поддерживает статус.

Партнерские веб-ресурсы – отдельные коммерческие сайты, которые принадлежат не продавцу услуг, а сторонней организации или физическому лицу. На этих ресурсах можно размещать свою рекламу в различном ее представлении, например, видеорекламу, баннер, текстовое объявление, всплывающее окно.

Сайт-агрегатор – такой сайт, в котором собираются данные со всех возможных источников. Содержание и смысл всего сайта в основном посвящен одной конкретной тематике, основывается на определенных словах и фразах в поисковом запросе. Сайт-агрегатор почти всегда имеет свой персональный поиск, который помогает пользователям Интернета найти свой нужный запрос или продукт. Социальные сети – сайты, контент на которых полностью составляется уникальным пользователем в виде фотографий, персональных текстов, видеороликов на своей специальной странице в рамках конкретной социальной сети.

Видеохостинг – онлайн-платформа, которая дает возможность загружать, хранить и редактировать видео с помощью специальных графических и технических инструментов

платформы всем пользователям сети «Интернет». В сфере туризма визуальное представление продукта сильно влияет на успех продаж, поэтому удачное видео, прорекламированное на популярном видеохостинге, будет огромным преимуществом в развитии компании и продаже ее услуг. Рекламные сети представляют собой специальные платформы, которые считаются посредником между продавцом и пользователем или сообществом в какой-то социальной сети, где пользователь хочет рекламировать продукты продавца за вознаграждение или на бартерной основе. Основной принцип такой рекламы держится на количестве показов, охвате аудитории и времени нахождения в рекламной сети.

Мобильные приложения – полное отображение информации о сайте и наполнение сайта в одном конкретном приложении. Приложение полностью повторяет сайт в стилистике и по функционалу.

Цифровые технологии окружают нас повсюду, поэтому цифровой маркетинг касается практически каждого аспекта бизнеса, оказывая огромное влияние на общение компаний с заказчиками и создание выгодных предложений.

Таким образом, чтобы выдержать конкуренцию в условиях стремительно растущего глобального онлайн-рынка, компаниям не обойтись без продуманной и правильно реализованной стратегии цифрового маркетинга.

Согласно статистике, с 2021 года в экономике Узбекистана начался бурный рост, рекламодатели стали активно выходить в интернет. Объем инвестиций в медиарынок составлял 655 млрд сум. Год спустя он подрос до 779 млрд, а в 2023-м рванул на 46% — до 1,14 млрд. Это произошло за счет прихода на рынок крупных рекламодателей, которые стали осваивать в том числе и digital-инструменты. Вышеуказанные данные приведены в научной статье [1].

В структуре рекламных инвестиций Узбекистана высока доля ТВ: в 2023 году она составляет 63%. Это самый ТВ-ориентированный рынок Центральной Азии. У интернета — 20% рекламных бюджетов, в деньгах это 228 млрд сум (+74% к прошлому году). Еще 15% инвестиций забирает ООН-реклама, и на уровне 2% держится радио. Прессу для продвижения местный бизнес практически не рассматривает.

Главные источники информации для жителей Узбекистана — телевидение (66,29%) и сайты (39,85%). ТВ предпочитает аудитория 46+, молодежь 14-29 лет ищет все необходимое в сети.

Роль телевидения в потреблении информации снижается, а интернета, наоборот, растет. Кроме телевизора и сайтов, узбекистанцы обмениваются информацией через социальные сети (33,91%), общение с родственниками, друзьями, коллегами (15,82%).

По результатам опроса DT Media, около половины аудитории Узбекистана положительно относится к digital-рекламе (SMM) и рекламе в онлайновых СМИ. Треть респондентов доверяет контекстной и outdoor-рекламе (по 36%). Наиболее ходовые и запоминаемые форматы — баннеры и онлайн-видео. Последнее популярно у крупных рекламодателей. Аудитория считает формат видеоролика наиболее запоминающимся, за ним следуют изображения.

Наибольшее доверие у пользователей вызывают такие площадки, как Telegram (73,4%), YouTube (42,7%) и Instagram* (27,4%).

В поисковой рекламе львиная доля у Google (83,21%), но платформа не поддерживает рекламу на узбекском языке. Быстро растет баннерная реклама на

маркетинговой платформе Google DV360. Здесь самый большой объем активных аккаунтов и это эффективный инструмент для охватных кампаний.

В стране растет рынок eCommerce: в текущем году его оборот составляет порядка $350 млн. По прогнозам исследования E-commerce in Central Asia, к 2026 году он достигнет $1 млрд. Тренд ожидаемо привлекает внимание рекламодателей. Количество пользователей социальных сетей в Узбекистане превышает 7,5 млн. Соцсеть №1 — это Instagram* (8 млн). Facebook* насчитывает около 2,2 млн пользователей. Суммарная аудитория «ВКонтакте» и «Одноклассников» — 2 млн. Из мессенджеров узбекистанцы предпочитают Telegram. Поведение аудитории в соцсетях в Узбекистане меняется: потребление информации через посты уменьшается, а через видеоконтент — увеличивается.

Опрос Internews показал, что жители Узбекистана предпочитают получать информацию на родном языке: 44% просматривают сайты только на узбекском, в социальных сетях его использует почти 48%. На обоих языках — узбекском и русском — потребляет информацию более 16% аудитории.

Основные причины миграции бюджетов в интернет — широкие возможности для персонифицированной коммуникации, увеличение охватов, рост доверия к digital-рекламе и накопленная инфляция в офлайновых медиа.

Данная статистика явственно демонстрирует перспективность направления средств и сил в цифровой маркетинг, за счет ожидаемо можно повысить и туристский потенциал внутри Узбекистана. Ведь на сегодняшний день около 70% туристов планируют свои путешествия онлайн. Подготовка медиаконтента для онлайн платформ, взаимодействие через социальные сети и инфлюенсеров – даст ощутимый результат. Инфлюенсеры – или по-другому «лидеры мнений» в социальных сетях сегодня задают тренды туристических направлений, освещают и популяризируют их.

Не менее эффективным может быть и широкая работа с кросс-канальным цифровым маркетинг и контекстной рекламой. Цифровой маркетинг позволяет выстроить прямое общение между компаниями и заказчиками в рамках их уникального покупательского пути. С помощью цифрового маркетинга маркетологи-новаторы могут в интересной форме представить актуальный контент и предложения в подходящее для этого время и по тем каналам, где заказчики проводят много времени. На основе KPI цифрового маркетинга маркетологи могут выяснить, какие стратегии сработали и насколько эффективно, что позволяет непрерывно улучшать стратегию, повысить вовлеченность заказчиков и увеличить окупаемость инвестиций в рекламу.

При правильном подходе цифровой маркетинг приносит пользу как заказчикам, так и компаниям. Благодаря продуманной персонализации контента и предложений с учетом индивидуальных интересов заказчики чувствуют, что Вы понимаете их потребности и можете предложить им ценную услугу или товар. В конечном счете это укрепляет их доверие, превращая в лояльных сторонников бренда. Цифровой маркетинг несет множество преимуществ и для компаний, в том числе следующие:

Проще охват целевой аудитории;

Возможность таргетинга;

Относительно невысокая стоимость контакта;

Высокая скорость передачи сообщения;

Мгновенная обратная связь;

«Онлайн-маркетинг» или «всегда на связи» с потребителями.

Измеримость фактических результатов;

Возможность автоматизации процессов;

Ученые-маркетологи последовательно утверждают, что для процветания цифрового маркетинга в туристических предприятиях, крайне важно использовать продуманные маркетинговые стратегии, т.е. ориентироваться на рынок. Ориентированные на рынок компании чувствительны к потребностям своих клиентов и предпринимают активные усилия для удовлетворения их потребностей. Ориентированные на рынок компании систематически собирают информацию о своих клиентах и быстро реагируют на вызовы конкурентов, выявляя любые признаки неудовлетворенности клиентов и внося соответствующие коррективы в свои стратегии. Таким образом, ориентация на рынок приводит к большей удовлетворенности клиентов, приверженности организации и обеспечивает рост эффективности туристического бизнеса в Узбекистане так же, как и в других странах с рыночной экономикой, о чем упомянуто в научной статье [6].

На сегодняшний день около 80% туристов по всему миру планируют свои путешествия онлайн. Турция, например, объявила, что готова вложить существенные средства в цифровой маркетинг для своей туристической отрасли. Шри-Ланка объявила о запуске масштабного цифрового промо страны как привлекательного маршрута для туристов. Индонезия в качестве ответа на международную экспансию Airbnb при поддержке правительства запустила собственную сеть бронирования жилья, сдаваемого в аренду.

Сегодня во всем мире в сфере туризма действуют десятки технологических стартапов, которые стремятся привнести в туристическую отрасль интересные идеи.

Камбоджийская платформа CamboTicket, например, недавно получила очередной грант. Сервис дает возможность резервировать места по электронной почте в автобусах, на паромах и даже в частных службах такси в Камбодже, Таиланде, Вьетнаме и Лаосе.

У тайского стартапа Local Alike новая концепция для локального туризма: в рамках онлайн-платформы сотрудники компании надеются объединять и консультировать местных жителей по всему миру, которым есть что предложить туристам. На развитие своей концепции Local Alike получил денежный приз от Booking.com.

Некоторые туристические стартапы стремятся найти свою нишу, сосредоточившись на каком-нибудь определенном типе туризма. Французская платформа Tripnparty дает возможность туристам находить в любой стране аутентичные бары и пабы, которые известны только местным жителям. На данной платформе представлены сведения по многим европейским городам.

Летом 2017 года на Бали прошел стартап-контест Startup Weekend Bali, на котором были выбраны самые интересные идеи в туристической отрасли. Судя по списку победителей, становится понятно, что сегодня есть тенденция к удовлетворению нишевых запросов. Жюри отметило стартапы Botol Wisata и приложение Travelis, которые дают возможность туристам связаться с местными водителями и гидами на Бали.

Ну а самый амбициозный стартап изобрели в Финляндии. Сервис Space Nation задался целью ни много ни мало популяризировать космический туризм, и в первую очередь полеты на МКС. Кстати, один из маркетологов проекта – гениальный Питер

Вестербек, который помог Rovio сделать игру AngryBirds тем, чем она является сейчас. «Как можно предоставлять доступ на МКС только определенному кругу лиц?», – задается вопросом Вестербек.3

К тому же, мировой опыт подтверждает эффективность цифрового продвижения туристических и экскурсионных услуг. Сегодня, когда любой желающий первым делом обращается к интернету за любом вопросом, можно быть уверенным, что поиск туристического гида или интересной экскурсии начнется с вопроса поисковику или чтения отзывов, или видео или фото от знакомых и друзей, осветивших данную тему. Таким образом, пользовательский опыт, иными словами UGC – контент, оставленный в сети напрямую влияет на выбор потребителя. Освещение туристических маршрутов и экскурсионных услуг той или иной компании или гида, в первую очередь должно начинаться с сети Интернет, на правильно выбранной площадке: специализированный сайт или видеохостинг или социальная сеть.

Важно также тщательно собирать обратную связь от пользователей туристического продукта, чтобы формировать лояльность потребителей. Каждый отзыв, каждый комментарий или оценка на соответствующем сайте влияет на конечное решение потребителя.

Выводы и рекомендации

В настоящее время туристический потенциал Узбекистана продолжает расширяться, привлекая внимание всего мира. Различные интеграционные договоренности, широкое многостороннее сотрудничество и принятые государственные меры тому способствуют. Статистика показывает ежегодный прирост посещаемости. И вклад цифрового маркетинга в данный результат также значителен. С эпохой глобального интернета пришла эпоха открытия других стран посредством глобальной сети – распространение промо-материалов, видеороликов, социальных интеграций. Все это вскоре выведет информированность об Узбекистане, его туристических и экскурсионных услугах на новый уровень.

Однако, как и прежде, для получения хороших результатов в сети Интернет недостаточно проведения технических работ на сайте. Сайты выбирают реальные люди, и работать приходится с ними, а не с «трафиком». Теперь идет борьба за внимание клиентов, однако дело не только в людях, изменились технологии. Поисковые системы стали «умнее», начинают внедряться технологии нейросетей, сегодня поисковики анализируют поведение пользователей и подстраиваются под их предпочтения. Поэтому, чтобы получить больше клиентов, нужно не выполнять требования систем или обмануть их, нужно заинтересовать людей, и нынешний интернет-маркетинг должен это учитывать. Персонализация и качественный контент являются одним из главных трендов развития интернет-маркетинга сегодня. На сегодняшний день маркетинг идет по пути более узконаправленного развития. Конкурирующие компании стараются показывать свои преимущества в так называемых микромоментах. К ним относится моментальное принятие решения о покупке, стремление избежать появления проблем или быстрое их решение, желание работать без задержек, готовность к инновациям и желание пробовать что-то новое. Добавление контента и поиск целевой аудитории — это лишь малая часть того, над чем должны работать онлайн-продавцы. Помимо этого, необходимо прорабатывать и оптимизировать каждую деталь, в том числе транзакционные письма на электронную почту (например, отчет о доставке, отслеживание статуса заказа и т. п.).

Основанные на поведении покупателей, такие сообщения помогут генерировать повторные продажи и улучшить взаимодействие с клиентами.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

ОЦЕНКА ЭФФЕКТИВНОСТИ ИНВЕСТИЦИОННЫХ СТРАТЕГИЙ

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Аннотация. *Статья посвящена анализу эффективности инвестиционных стратегий в развивающихся странах, с акцентом на Узбекистан. В работе исследуются факторы, определяющие успешность инвестиционных процессов, такие как экономический потенциал регионов и качество институциональной среды. Для оценки влияния этих факторов применяются регрессионный и корреляционный анализ, что позволяет выявить ключевые аспекты, способствующие эффективному привлечению и распределению инвестиций.*

Ключевые слова: *инвестицияя, инвестиционные стратегии, эффективность, макроэкономические факторы, регрессионный анализ, Узбекистан, институциональная среда.*

Abstract. *The article is devoted to the analysis of the effectiveness of investment strategies in developing countries, with an emphasis on Uzbekistan. The work examines the factors that determine the success of investment processes, such as the economic potential of regions and the quality of the institutional environment. Regression and correlation analysis are used to assess the influence of these factors, which allows identifying key aspects that contribute to the effective attraction and distribution of investments.*

Keywords: *investment, investment strategies, efficiency, macroeconomic factors, regression analysis, Uzbekistan, institutional environment.*

Введение

В условиях стремительно развивающихся финансовых рынков и нестабильной глобальной экономической ситуации особое значение приобретает выбор эффективной инвестиционной стратегии. От правильно подобранной стратегии зависит не только уровень доходности инвестиций, но и степень риска, которую инвестор готов принять. В современных условиях инвесторы, будь то институциональные или частные, сталкиваются с необходимостью объективной оценки эффективности выбранных подходов к вложению капитала.

Эффективная инвестиционная стратегия должна учитывать множество факторов: состояние рынка, макроэкономические показатели, уровень инфляции, волатильность активов, а также индивидуальные цели инвестора. Однако даже при наличии теоретически

обоснованных стратегий на практике возникает необходимость их эмпирической оценки — анализа реальных результатов и сопоставления с ожидаемыми.

Особую важность в контексте выбора и реализации инвестиционных стратегий приобретает поддержка государственной политики, направленной на создание благоприятных условий для привлечения инвестиций. В частности, Постановление Президента Республики Узбекистан № ПП-4300 от 29 апреля 2019 года «О мерах по дальнейшему совершенствованию механизмов привлечения прямых иностранных инвестиций в экономику республики» стал ключевым шагом в реформах, ориентированных на улучшение условий для привлечения иностранных и внутренних инвестиций. Этот указ призван создать правовую и институциональную основу для устойчивого роста инвестиций, что позволяет значительно повысить эффективность инвестиционных стратегий в условиях быстро меняющейся экономики.

Обзор литературы

В современных условиях глобализации и цифровизации особую актуальность приобретает вопрос оценки эффективности инвестиционных стратегий, особенно в странах с переходной экономикой, таких как Узбекистан. Эффективное инвестирование требует не только грамотного распределения ресурсов, но и учета множества макро и микроэкономических факторов, включая уровень риска, доходности, устойчивости и влияния на экономическое развитие.

В литературе представлено множество подходов к оценке эффективности инвестиций, как в международном, так и в национальном контексте. Так, в работе Б. Рахимова проанализирован опыт Узбекистана в привлечении международных инвестиций. Автор подчеркивает важность инвестиций для ускорения модернизации экономики и внедрения инноваций, а также рассматривает стратегии реформ и приоритеты инвестиционной политики государства [1].

С точки зрения трансформации инвестиционного климата в странах с переходной экономикой значительный вклад внес Л. Джонсон, который выделяет реформы в области правового регулирования, улучшения деловой среды и роли государства как ключевые факторы привлечения капитала. Он подчеркивает, что инвестиционный климат оказывает непосредственное влияние на экономическую стабильность и конкурентоспособность [2].

В свою очередь, Д. Тошматова предоставляет детальный анализ динамики инвестиционной среды Узбекистана, отмечая положительное влияние реформ последних лет, включая упрощение налоговой системы, оптимизацию разрешительных процедур и внедрение новых гарантий для инвесторов. Эти меры способствуют формированию более прозрачной и привлекательной инвестиционной среды [3].

Дополняет теоретическую базу исследование К. Брауна, в котором рассматриваются устойчивые инвестиционные стратегии на развивающихся рынках. Автор выделяет четыре ключевых условия для успешной реализации таких стратегий: укрепление правовой базы, развитие финансовой инфраструктуры, интеграция ESG-принципов и создание инвестиционных стимулов. Эти элементы рассматриваются как необходимые для формирования долгосрочной инвестиционной привлекательности [4].

В связи с этим отечественные исследователи в своих научных статьей уделяют значительное внимание вопросам инвестиционной активности, механизмам повышения эффективности инвестиций в регионах, а также различным аспектам стимулирования инвестиционных процессов. В числе таких ученых можно отметить Б. Беркинова, Д.

Гозибекова, Э. Махмудова, Ш. Юлдашева, Ш.Х. Назарова, Н.Н. Обломурадова, А.А. Собирова, Ш. Мустафакулова, Б. Муминова и ряд других, чьи работы вносят ценный вклад в развитие теоретических и практических основ инвестиционной политики [5,6,7,8,].

Методология

В данной статье применяется статистический анализ инвестиционных потоков с использованием регрессионных и корреляционных моделей. Такой подход позволяет количественно оценить эффективность различных стратегий и выявить ключевые факторы, влияющие на успешность инвестиционных проектов. В качестве источников данных использованы отчеты национальных и международных финансовых институтов, включая данные Всемирного банка и Министерства инвестиций, промышленности и торговли Узбекистана.

Обсуждение и результат

Оценка эффективности инвестиционных стратегий требует не только качественного анализа политико-экономической и институциональной среды, но и применения количественных методов. В данной работе особое внимание уделено статистическому анализу инвестиционных потоков, их распределения по секторам и регионам, а также их связи с основными макроэкономическими показателями. Использование регрессионных и корреляционных моделей позволяет выявить значимые зависимости и построить прогнозные сценарии, на основе которых возможно формирование устойчивых инвестиционных стратегий.

Применение регрессионного анализа в оценке инвестиционной активности.

Регрессионный анализ позволяет установить количественную зависимость между объемами инвестиций и влияющими на них факторами. В рамках исследования была построена линейная множественная регрессионная модель следующего вида:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Где:

Y — объем привлеченных инвестиций (млрд сумов)

$\mathbf{X_1}$ — ВРП региона (валовой региональный продукт)

$\mathbf{X_2}$ — уровень институционального развития (индекс деловой среды)

$\mathbf{X_3}$ — объем государственной поддержки (млрд сумов)

$\boldsymbol{\varepsilon}$ — ошибка модели

На основании анализа данных по 14 регионам Узбекистана за 2020–2024 гг. были получены следующие результаты:

Таблица 1. Результаты регрессионной модели[8]

Показатель	Коэффициент β	Стандартная ошибка	t-статистика	p-значение
Константа (β_0)	5.42	1.21	4.48	0.0003
ВРП региона (X_1)	0.87	0.15	5.80	0.00001
Индекс деловой среды (X_2)	1.35	0.28	4.82	0.0002
Объем гос. поддержки (X_3)	0.54	0.20	2.70	0.013

[8] http://www.stat.uz – Государственный комитет по статистике Республики Узбекистан

R^2 модели составил 0.76, что указывает на высокую степень объяснённости зависимой переменной.

Таким образом, наиболее значимыми факторами, определяющими эффективность инвестиционных стратегий, выступают ВРП региона и институциональные условия. Это подтверждает гипотезу о том, что инвестиционная привлекательность региона напрямую зависит от экономического потенциала и стабильности административной среды.

Корреляционный анализ - в дополнение к регрессионному анализу был проведён парный корреляционный анализ между объемом инвестиций и рядом макроэкономических показателей. Результаты представлены в таблице ниже:

Таблица 2. Коэффициенты корреляции между инвестициями и макроэкономическими показателями[9]

Показатель	Коэффициент корреляции (r)
ВРП региона	0.83
Уровень занятости	0.69
Индекс деловой среды	0.77
Доля инновационных производств	0.58
Объем экспорта	0.71

Высокие значения коэффициентов корреляции подтверждают наличие тесной связи между объемами инвестиций и макроэкономическими индикаторами, что свидетельствует о том, что инвестиции стимулируют экономический рост, повышают уровень занятости и экспортный потенциал.

Оценка эффективности инвестиционных стратегий требует не только качественного анализа политико-экономической и институциональной среды, но и применения количественных методов, позволяющих выявить закономерности, зависимости и прогнозные сценарии. В данной работе особое внимание уделено статистическому анализу инвестиционных потоков, их распределения по секторам и регионам, а также их связи с основными макроэкономическими показателями. Использование регрессионных и корреляционных моделей позволило получить объективные результаты, которые служат основой для формирования устойчивых инвестиционных стратегий в условиях современного Узбекистана.

Регрессионный анализ использовался в рамках данной работы для установления количественных зависимостей между объемами инвестиций и рядом факторов, предположительно влияющих на их привлечение. В качестве зависимой переменной была выбрана величина привлечённых инвестиций в разрезе регионов. В качестве независимых переменных рассматривались валовой региональный продукт (ВРП), индекс институционального развития (как совокупный показатель деловой среды) и объем государственной поддержки.

Анализ охватил данные по 14 регионам Узбекистана за период с 2020 по 2024 годы. Построенная множественная регрессионная модель продемонстрировала значимый уровень объясняющей способности: коэффициент детерминации (R^2) составил 0,76, что означает, что около 76% вариации в объемах инвестиций может быть объяснено

[9] http://www.stat.uz – Государственный комитет по статистике Республики Узбекистан

выбранными независимыми переменными. Это говорит о высокой надежности модели и позволяет делать уверенные выводы.

Наиболее значимым фактором, влияющим на объем привлеченных инвестиций, оказался ВРП региона. Коэффициент при данной переменной показал устойчиво положительное значение, что свидетельствует о прямой зависимости между экономической мощью региона и инвестиционной активностью. Это логично: развитые регионы обладают лучшей инфраструктурой, высоким уровнем потребления, большим количеством производств и, соответственно, более привлекательны для инвесторов.

Следующим по значимости фактором стал индекс деловой среды, отражающий институциональное качество регионов: степень бюрократической нагрузки, наличие цифровых сервисов, эффективность правоприменительной системы и т.д. Его влияние оказалось даже выше, чем у государственной поддержки, что подчеркивает: институциональная устойчивость и деловая стабильность критически важны для обеспечения инвестиционной привлекательности.

Объем государственной поддержки также оказывает положительное влияние, однако с меньшей значимостью, чем два предыдущих фактора. Это объясняется тем, что государственная поддержка, несмотря на свою важность, зачастую носит временный или целевой характер и не всегда способна компенсировать слабые институциональные или экономические условия в регионе.

Параллельно с регрессионным анализом был проведен парный корреляционный анализ, направленный на изучение степени взаимосвязи между объемом инвестиций и рядом макроэкономических показателей. Среди них — ВРП региона, уровень занятости, индекс деловой среды, доля инновационных производств в ВВП и объем экспорта.

Наиболее высокая корреляция была выявлена между объемом инвестиций и ВРП региона. Коэффициент корреляции составил 0.83, что указывает на сильную положительную связь. Это подтверждает результаты регрессионного анализа и говорит о том, что регионы с более высоким экономическим потенциалом являются главными центрами притяжения инвестиций.

Сильная корреляция также была выявлена между инвестициями и индексом деловой среды (0.77), что вновь подчеркивает роль институциональной стабильности в формировании инвестиционной привлекательности. Кроме того, уровень занятости в регионе показал значимую положительную корреляцию (0.69), что может свидетельствовать о том, что инвестиции способствуют созданию новых рабочих мест, и наоборот — высокий уровень занятости является показателем здоровой экономической среды.

Интересным оказался показатель корреляции между инвестициями и долей инновационных производств — он составил 0.58. Хотя это значение умеренно высокое, оно подчеркивает важную тенденцию: инвестиции всё чаще направляются в сектора с высоким уровнем технологичности, что свидетельствует о переходе к более современным формам экономики.

Наконец, объем экспорта также показал устойчивую связь с инвестициями (коэффициент 0.71). Это говорит о том, что регионы с экспортно-ориентированной продукцией чаще привлекают инвесторов, особенно международных, заинтересованных в масштабировании и глобальной конкурентоспособности.

Вывод

Полученные результаты показывают, что эффективность инвестиционных стратегий зависит от макроэкономических и институциональных факторов. Региональные различия в объемах инвестиций подтверждают важность экономического и административного развития. Институциональная среда играет ключевую роль, порой даже более значительную, чем прямые финансовые вливания. Регионы с низким индексом деловой среды, несмотря на государственную поддержку, показывают слабые результаты, что подчеркивает необходимость реформирования институтов и улучшения защиты прав инвесторов.

Высокая корреляция между инвестициями и экспортом указывает на потенциал для интеграции Узбекистана в международные цепочки поставок. Для успешного развития инвестиций необходимо поддерживать экспортно-ориентированные предприятия и улучшать логистическую инфраструктуру.

Таким образом, эффективные инвестиционные стратегии должны учитывать не только финансовые и налоговые стимулы, но и экономико-институциональные аспекты. Ключевыми факторами успеха являются экономическая мощь региона, качество деловой среды и устойчивость административных институтов. Инвестиционные стратегии должны основываться на принципах устойчивости и диверсификации, что обеспечит устойчивый рост и повышение благосостояния.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

SYNERGY OF INCLUSIVE EDUCATION AND HUMANE PEDAGOGY

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Abstract. *This paper examines how the principles of humane pedagogy—rooted in Shalva Amonashvili's philosophy of unconditional respect, love, and trust for each child—can synergize with inclusive education strategies at the primary and secondary levels. Humane pedagogy emphasizes the intrinsic value and unique potential of every student (Imeri Basiladze, Sophio Panchulidze. (2018) The Basis for the Establishment of Humane Pedagogy in Georgia and the Tendencies of Development. International Journal of Innovative Technologies in Social Science. 7(11). doi: 10.31435/rsglobal_ijitss/31102018/6197), while inclusive education seeks to remove barriers so that all learners, including those with special needs or diverse backgrounds, participate fully in mainstream classrooms (Saniya Kabdrgalinova (2020) Innovative Design in Inclusive Education, Dragana Sretenov (2017) opensocietyfoundations.org). We conduct a comparative analysis of national educational systems (e.g. Georgia, Kazakhstan, Estonia, Ukraine and others) to see how they implement (or could implement) this synergy, noting policy reforms and on-the-ground practice. Funding constraints that impact both inclusive and child-centered pedagogies are also addressed: in many countries, budgets for teacher training, assistive resources, and supportive services are insufficient (Dragana Sretenov (2017) opensocietyfoundations.org, Cecilia Mezzanotte (2022) OECD oecd.org). Based on the review of theory and examples, we offer practical recommendations for policy makers and educators to integrate humane pedagogy into inclusive models, including targeted professional development, collaborative school culture, and participatory classroom practices.*

Keywords: *Humane pedagogy, inclusive education, primary and secondary schooling, individual needs.*

Аннотация. *В данной статье рассматривается, как принципы гуманной педагогики, основанные на философии Шалвы Амонашвили, могут сочетаться со стратегиями инклюзивного образования. Цель исследования заключается в изучении возможной синергии между принципами гуманной педагогики, основанной на философии Шалвы Амонашвили (уважение, любовь и доверие к каждому ребёнку), и стратегиями инклюзивного образования на уровне начальной и средней школы. Для достижения цели исследования проведён сравнительный анализ национальных образовательных систем ряда стран (Грузия, Казахстан, Эстония, Украина и др.), в рамках которого изучены образовательные политики, практики, а также факторы финансирования, влияющие на реализацию инклюзивного образования. Установлено, что ключевыми препятствиями на*

пути реализации инклюзивного образования, основанного на принципах гуманной педагогики, являются недостаточное финансирование подготовки педагогов и дефицит ресурсов необходимых для инклюзии, однако выявлены также примеры успешного внедрения принципов гуманной педагогики в рамках инклюзивного образования. Сформулированы практические рекомендации по интеграции принципов гуманной педагогики в инклюзивные модели образования, включающие совершенствование системы профессионального развития учителей, формирование культуры сотрудничества в школьной среде и расширение участия учащихся в учебном процессе.

Ключевые слова: *Гуманная педагогика, инклюзивное образование, начальное и среднее образование, индивидуальные потребности.*

Introduction

Inclusive education and humane pedagogy share a common ethical foundation: respect for every child as a person. Humane pedagogy, as formulated by Amonashvili, centers the child’s personality and dignity in the learning process (Imeri Basiladze, Sophio Panchulidze. (2018) The Basis for the Establishment of Humane Pedagogy in Georgia and the Tendencies of Development. International Journal of Innovative Technologies in Social Science. 7(11). doi: 10.31435/rsglobal_ijitss/31102018/6197). It holds that the teacher–student relationship should be personal, cooperative, and based on “love for all children regardless of their capabilities” (Imeri Basiladze, Sophio Panchulidze. (2018) The Basis for the Establishment of Humane Pedagogy in Georgia and the Tendencies of Development. International Journal of Innovative Technologies in Social Science. 7(11). doi: 10.31435/rsglobal_ijitss/31102018/6197).

Amonashvili famously stated that educators must be “people of good soul” who “love children as they are” (Saniya Kabdrgalinova (2020) Innovative Design in Inclusive Education). Inclusive education similarly rejects exclusion: it “eliminates any form of discrimination” against learners with disabilities or diverse needs and affirms “equal treatment of all people” by creating necessary support conditions (Saniya Kabdrgalinova 2020, Innovative Design in Inclusive Education). Both approaches advocate environments where each child feels valued and can flourish.

These philosophies have direct relevance to primary and secondary schooling. When teachers believe in each child’s potential and adapt to individual needs, even very diverse classrooms can be unified through a humane, supportive pedagogy (Imeri Basiladze, Sophio Panchulidze. (2018) The Basis for the Establishment of Humane Pedagogy in Georgia and the Tendencies of Development. International Journal of Innovative Technologies in Social Science. 7(11). doi: 10.31435/rsglobal_ijitss/31102018/6197) (Gulsara Berikkhanova et al. 2021 files.eric.ed.gov). Conversely, inclusive policies that mandate barrier-free schooling depend on teachers who actually practice respect and care. This paper explores the synergy between inclusive education and humane pedagogy: how they overlap in goals and methods, and how they can reinforce each other. We also compare how different countries have adopted these ideas in practice, and examine how funding levels and resource allocation affect their implementation. Finally, we propose concrete recommendations for integrating humane pedagogy into inclusive models in schools, drawing on global best practices and theory.

Literature Review

Inclusive education has been framed by UNESCO and others as an equity and human-rights issue: every learner should have access to quality schooling regardless of disability, gender, ethnicity or language (Saniya Kabdrgalinova 2020, Innovative Design in Inclusive Education, Dragana Sretenov (2017) opensocietyfoundations.org). Research categorizes inclusive education in various ways (disability inclusion, responding to vulnerable groups, “education for all”, etc.) (Cecilia Mezzanotte, 2022, OECD), but fundamentally it requires that schools re-organize teaching to fit diverse learners. Contrary to outdated views, inclusion need not be vastly more expensive; OECD analysis finds that “inclusive settings are recognized to be less expensive than segregated ones” because special schools often duplicate resources (Cecilia Mezzanotte, 2022, OECD). Even UNESCO notes that while stakeholders often perceive inclusion as costly, it “is often actually a question of making minor adjustments to accommodate all learners” (Cecilia Mezzanotte, 2022, OECD). Key components of effective inclusion include teacher training, curriculum adaptation, assistive technologies, and flexible classroom practices.

Humane pedagogy (or humane-personal pedagogy) was developed by Georgian educator Shalva Amonashvili in the late 20th century (Imeri Basiladze, Sophio Panchulidze. (2018) The Basis for the Establishment of Humane Pedagogy in Georgia and the Tendencies of Development. International Journal of Innovative Technologies in Social Science. 7(11). doi: 10.31435/rsglobal_ijitss/31102018/6197). It is based on a humanistic psychology of childhood, drawing on thinkers like Vygotsky and Blonsky (Imeri Basiladze, Sophio Panchulidze. (2018) The Basis for the Establishment of Humane Pedagogy in Georgia and the Tendencies of Development. International Journal of Innovative Technologies in Social Science. 7(11). doi: 10.31435/rsglobal_ijitss/31102018/6197). Its core principles (as listed by researchers of Amonashvili’s work) include: belief in the child’s abilities; respect for the child’s personality and love for all children regardless of capacity; focus on goodness and fairness; teacher as creator of lessons and partner in learning; and warm, supportive teacher–pupil cooperation (Imeri Basiladze, Sophio Panchulidze. (2018) The Basis for the Establishment of Humane Pedagogy in Georgia and the Tendencies of Development. International Journal of Innovative Technologies in Social Science. 7(11). doi: 10.31435/rsglobal_ijitss/31102018/6197). In practical terms, Amonashvili’s experiments in Georgian schools led to innovations like relaxed classroom environments, no grades in early classes, shorter lessons for young children, and ethical/moral education lessons (Imeri Basiladze, Sophio Panchulidze. (2018) The Basis for the Establishment of Humane Pedagogy in Georgia and the Tendencies of Development. International Journal of Innovative Technologies in Social Science. 7(11). doi: 10.31435/rsglobal_ijitss/31102018/6197). Summarizing its ethos, Amonashvili’s pedagogy asserts that every child is “a phenomenon in earthly life” with inherent dignity, and that education should express “wisdom and love, humanity and godliness” to foster each child’s development (Imeri Basiladze, Sophio Panchulidze. (2018) The Basis for the Establishment of Humane Pedagogy in Georgia and the Tendencies of Development. International Journal of Innovative Technologies in Social Science. 7(11). doi: 10.31435/rsglobal_ijitss/31102018/6197).

Recent studies in pedagogy have noted parallels between humane pedagogy and modern child-centered learning. A “personal-oriented” approach, for example, treats the child as an “absolute value” and demands a “humane attitude” from teachers – valuing the student’s individuality, freedom of thought, and creative potential (Gulsara Berikkhanova et al. 2021 files.eric.ed.gov). This aligns closely with Amonashvili’s vision of treating students as unique persons. Both frameworks emphasize cooperation rather than authority: communication is based

on goodwill, and teaching aims at nurturing each student’s special qualities (Imeri Basiladze, Sophio Panchulidze. (2018) The Basis for the Establishment of Humane Pedagogy in Georgia and the Tendencies of Development. International Journal of Innovative Technologies in Social Science. 7(11). doi: 10.31435/rsglobal_ijitss/31102018/6197, Gulsara Berikkhanova et al. 2021).

Thus, the theoretical literature suggests strong synergy: inclusive education provides the systems and policies for diversity, while humane pedagogy provides the relational and emotional framework. Studies of humane pedagogy interventions (in Georgian schools and elsewhere) have reported positive effects on student engagement and respectfulness in class (though rigorous impact studies are scarce). Meanwhile, inclusive education research stresses that teacher attitudes and competencies are as important as policy mandates. The convergence implies that training teachers in humane, child-centered methods could improve inclusion outcomes.

Methodology

This paper uses a qualitative, integrative review methodology. We conducted comprehensive searches of academic journals, conference proceedings, and policy reports (using keywords such as “inclusive education,” “humane pedagogy,” and “Amonashvili”) up to 2024. Key sources included peer-reviewed education research, UNESCO and OECD publications, and specialized books on pedagogical theory. We identified case studies and descriptions of national policies or pilot programs from different countries to illustrate how the synergy of humane pedagogy and inclusion is (or could be) manifested. Data on funding and resources was gathered from global NGOs and international education finance reports. The analysis synthesizes these findings into a comparative narrative, highlighting themes rather than statistical measures.

Comparative Analysis of National Systems

In the modern world, the development of inclusive education represents one of the most pressing and prioritized directions of educational policy at both the global and national levels. In the Republic of Uzbekistan, this area holds a special place in the agenda of state social policy aimed at ensuring equal rights and opportunities for all citizens, including individuals with special educational needs. One of the key objectives of contemporary society is to guarantee the full participation of such individuals in social life, as well as to create the necessary conditions for the realization of their right to education on an equal basis with others.

For many years, the traditional educational system was based on a model of segregation, wherein students with special needs were placed in separate classrooms or specialized institutions, and in some cases, were entirely excluded from the educational process. The inclusive paradigm, by contrast, aims to transform this approach. Its philosophy is grounded in the provision of equal access to quality education for all children, including those with disabilities and other developmental challenges. It emphasizes the upbringing of such children as an integral and full-fledged part of society, the development of their individual potential, and the acquisition of essential skills for independent living.

The legislation of the Republic of Uzbekistan affirms the country’s commitment to the principles of inclusion. According to Article 23 of the Law "On Guarantees of the Rights of the Child," every child has the right to education, and the state guarantees access to compulsory free general secondary and specialized secondary education. Furthermore, Article 29 of the same law stipulates that parents of children with physical and/or mental developmental disorders, as well as children with disabilities, have the right, based on recommendations of the medical-psychological-pedagogical commission, to choose the type of educational institution (general or specialized) that best meets the interests and individual needs of the child.

The implementation of inclusive education principles is also reflected in the country’s strategic documents. According to the Presidential Decree of the Republic of Uzbekistan “On the State Program for the Implementation of the Strategy ‘Uzbekistan – 2030’ in the Year of Environmental Protection and Green Economy,” a phased plan has been established to ensure the functioning of at least one general education school in each district (city) that meets the standards of inclusive education. As part of this practical implementation, an order issued by the Minister of Preschool and School Education approved a list of general education schools where inclusive classrooms are to be opened by September 1, 2025. According to this document, inclusive classrooms will be established in 957 schools across the country.

Countries vary widely in how they marry inclusive policies with humane, child-centered practice. **In Georgia** (Amonashvili’s home country), there is a cultural legacy of his pedagogy. Recent initiatives show state-level support: for instance, the Rustavi city municipality introduced Amonashvili’s humane pedagogy methodology in kindergartens, retraining over 600 educators and concurrently offering trainings on inclusive education (rustavi2.ge). This indicates a direct effort to combine inclusive schooling with humane methods at the local level (though evaluation of outcomes is pending).

In Kazakhstan, the government has formally committed to inclusive education by ratifying the UN Convention on the Rights of Persons with Disabilities (2015) and legislating “inclusive education” as ensuring equal access for all students (Saniya Kabdrgalinova, 2020, Innovative Design in Inclusive Education). In practice, however, inclusion policies are implemented top-down: the Ministry issues guidelines and schools draft plans, but teachers often feel ill-prepared or skeptical. A study of Kazakhstan’s system noted that without teacher buy-in and supports, inclusion efforts remain largely formal, and special needs students may not get full support (Saniya Kabdrgalinova, 2020, Innovative Design in Inclusive Education). Notably, Kazakhstan is also retraining teachers in humane pedagogy principles, as part of its education reforms (Tamta Jijavadze, 2022). This suggests growing awareness that true inclusion requires changing school culture and teacher attitudes, not just legal mandates.

In European countries (and parts of Asia), some education systems have explicitly integrated Amonashvili’s pedagogy. According to Shalva’s granddaughter, Nino Amonashvili, “all teachers in Estonia are trained according to these principles; [humane pedagogy] is one of the methods offered by the state in Ukraine; [and] retraining of teachers at the state level … is ongoing in Kazakhstan” (Tamta Jijavadze, 2022). This highlights concrete national actions: Estonia (famous for its high-performing system) uses humane pedagogical training widely, while Ukraine officially includes these ideas in teacher development.

Other systems have advanced inclusive schooling in their own ways. For instance, many Nordic countries (**Finland, Sweden, Norway**) emphasize small classes, collaborative learning, and student well-being, which align well with humane pedagogy ideals even if not formally labeled that way. In North America, the U.S. IDEA law and Canadian policies mandate inclusion of students with disabilities in general classrooms wherever possible, but resource distribution is uneven. Surveys show that even in well-funded systems, shortages of special educators and assistants are common, and some disabilities remain largely segregated (especially in rural or low-income districts) (Dragana Sretenov, 2017).

Global comparisons indicate that inclusive-humane models often hinge on teacher training and funding. For example, the Open Society Foundations report notes that “most governments and external donors are not directing enough funding” for inclusive education

(Dragana Sretenov, 2017). Without investment in training teachers and purchasing resources (adapted materials, technology, etc.), even states with strong inclusion laws struggle in practice. Conversely, research (OECD 2022) suggests that when inclusion is done well, it can be cost-effective: inclusive classrooms may require only “minor adjustments to accommodate all learners” rather than entirely separate systems (Cecilia Mezzanotte, 2022, OECD). This supports the case that merging humane pedagogy (which does not necessarily demand high spending beyond training) with thoughtful inclusion can be financially sustainable. However, countries must still budget for lower student–teacher ratios, professional development, and support services to realize these ideals in reality (Dragana Sretenov, 2017) (oecd.org).

Funding Considerations

Implementing inclusive and humane education broadly depends critically on funding policies. Unfortunately, many education budgets worldwide under-allocate for the needs of disadvantaged learners. As Dragana Sretenov (Open Society Foundations) reports, “millions of children with disabilities are missing out on education because not enough money is being budgeted for their needs” (Dragana Sretenov, 2017). Roughly half of the world’s school-age children with disabilities are not in primary/secondary school, largely due to funding gaps in services, trained teachers, and accommodations (Dragana Sretenov, 2017). In effect, lack of funding perpetuates segregation: small special schools continue at the expense of mainstream inclusion, and low-income groups fall behind.

Within national budgets, inclusive education can strain resources unless prioritized. Training teachers in humane, inclusive methods requires professional development programs and time away from classrooms; classrooms need equipment (e.g., adaptive desks, hearing aids, lesson assistants); schools need materials for differentiated learning. When these are not funded, teachers often revert to lecture-style, non-inclusive methods, undermining both inclusion and humane ideals. That said, OECD analysis indicates that well-run inclusive systems are often cheaper than parallel special schools over time (Cecilia Mezzanotte, 2022, OECD). The perceived high cost of inclusion is mostly a myth: UNESCO notes stakeholders often assume inclusion is expensive, but real costs are typically minor adjustments such as a few teaching aids or extra support staff (Cecilia Mezzanotte, 2022, OECD). The true economic loss is from exclusion — educating disadvantaged students separately often wastes talent and can incur higher long-term social costs (unemployment, welfare) (Cecilia Mezzanotte, 2022, OECD).

In practice, a balanced funding strategy is needed. International reports call for ring-fenced or equity-focused education funds that specifically target students with disabilities and those at risk, to complement general school funding (Dragana Sretenov, 2017). Examples include weighted student funding (allocating extra per-pupil funds for documented special needs) and grants for schools that pioneer inclusive programs. Donor agencies and governments have launched initiatives (e.g. Global Partnership for Education) to finance inclusive classrooms, but according to analysts these are still too small relative to the need (opensocietyfoundations.org). Where budgets are tight, policymakers might also reallocate resources from building new special schools to upgrading existing schools for inclusion, which often yields better returns (Cecilia Mezzanotte, 2022, OECD).

Humane pedagogy also has funding implications. Its emphasis on small-group work, social-emotional learning, and individualized support can be resource-intensive if taken literally (requiring small classes or aides). However, many humane practices (kindness, respect, moral lessons) rely more on teacher mindset than on material inputs. The main cost lies in training and

mentoring teachers in empathetic, reflective practice. Countries like Georgia and Estonia have invested in large-scale teacher seminars on humane pedagogy (rustavi2.ge) (Tamta Jijavadze, 2022). Such investments may be modest compared to infrastructure spending but require political will. In summary, achieving inclusive, humane education demands a strategic blend of human capital investment (teacher training, culture change) and material support (accessibility, specialized aides). Funding models should reflect this dual need.

Recommendations

To realize humane, inclusive classrooms, we recommend the following strategies:

Curriculum and Pedagogy Reform: Integrate humane pedagogy principles into teacher education and in-service training. For example, schools could adopt a "no-shame," growth mindset culture where mistakes are learning opportunities and student cooperation is celebrated (Imeri Basiladze, Sophio Panchulidze, 2018; Saniya Kabdrgalinova, 2020). Classrooms can incorporate moral-ethical discussions and social-emotional learning lessons (as Amonashvili pioneered) to build empathy and mutual respect. Pedagogical techniques like collaborative projects and differentiated instruction allow all students to contribute their strengths, reinforcing both inclusion and personal dignity (Imeri Basiladze, Sophio Panchulidze, 2018; Gulsara Berikkhanova et al. 2021).

Teacher Professional Development: Provide dedicated training modules on both inclusion strategies and humane communication. Teachers should learn how to recognize each student's potential (belief in abilities) and adapt lessons accordingly (Imeri Basiladze, Sophio Panchulidze, 2018; Tamta Jijavadze, 2022). For instance, the practice of asking older students to teach younger ones (as in Amonashvili's "child-led learning" idea) can be extended to mixed-ability teams, promoting peer support. Training should also equip teachers to use positive behavior supports rather than punitive discipline. Countries like Estonia and Ukraine have shown success by making humane pedagogy training a standard for educators (Tamta Jijavadze, 2022).

Collaborative School Culture: Encourage schools to organize multidisciplinary teams (teachers, special educators, psychologists) that model cooperation. This echoes humane pedagogy's cooperation ideal. Schools can set up regular meetings to reflect on students' needs (mirroring Amonashvili's reflection practice) and to plan joint activities. An inclusive, humane school might hold assemblies celebrating diversity and kindness. Parental involvement should be promoted: in Amonashvili's "children's city" model, parents participate in classrooms and flip roles with children to understand their perspective (Tamta Jijavadze, 2022). This nurtures community ownership of inclusion.

Supportive Funding Mechanisms: Allocate or reallocate funds to prioritized inclusive/humane programs. Governments could pilot dedicated grants for schools that implement humane pedagogy initiatives (such as Amonashvili-style workshops). Grant criteria might include evidence of improved student well-being or community engagement. To ensure sustainability, inclusion funding should become part of baseline budgets (for example, including a poverty/disability weight in per-student funding). International aid and NGOs can also target their resources toward curriculum materials that reflect humane values and support diverse learning (e.g. storybooks emphasizing empathy, games for mixed-ability play).

Ongoing Research and Monitoring: Establish systems to evaluate the impact of humane-inclusive practices. Countries should track not only academic outcomes but also measures of student well-being, attendance, and attitudes. Sharing success stories (as Forbes

Georgia did with Shalva Amonashvili’s legacy) can build momentum. Comparative studies between schools using traditional vs. humane-inclusive methods would help refine strategies.

Implementing these recommendations requires commitment but is feasible. The examples above show that policy and practice can align: Estonia, Ukraine, and parts of Central Asia have already embedded Amonashvili’s humane pedagogy into teacher training (Tamta Jijavadze, 2022). With thoughtful adaptation, similar principles can strengthen inclusion worldwide.

Conclusion

The synergy between inclusive education and humane pedagogy lies in a shared vision of schooling that honors each learner. When teachers genuinely believe in students’ inherent worth and adapt instruction to include everyone, the dual goals of equitable access and personal development reinforce each other. Our review shows that nations can and are beginning to integrate these approaches. Training teachers in humane, child-centered methods has been embraced from Eastern Europe to Central Asia (Tamta Jijavadze, 2022) (rustavi2.ge). Yet achieving this synergy fully also depends on addressing practical constraints, especially funding. The largest barrier is political: sufficient budgetary commitment must be made to support teacher development and accessible learning environments (Dragana Sretenov, 2017) (Cecilia Mezzanotte, 2022 OECD).

In summary, applying humane pedagogy principles (trust, respect, co-creativity) within inclusive models promises to improve outcomes and student well-being. As Amonashvili’s work teaches, even small gestures of empathy and genuine interest in the child can transform classrooms. Coupled with inclusive policy (as endorsed by UNESCO and many countries), this combined approach can move education systems closer to truly serving all children. Our analysis suggests that with targeted funding and principled leadership, developing inclusive, humane schools is not just an idealistic goal but an achievable reform path for the 21st century.

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10.00.00 – PHILOLOGICAL SCIENCES

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10.00.00 - FILOLOGIYA FANLARI

* * *

10.00.00 – ФИЛОЛОГИЧЕСКИЕ НАУКИ

O‘ZBEK TILIDA DINIY NUTQIY JANRLAR TASNIFI

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Annotatsiya. *Ushbu maqolada tilshunoslikning yangi yo‘nalishi hisoblangan teolingvistikaning o‘ziga xos xususiyatlari, uning tarkibidagi janrlarni tasniflash masalasi, nutq janrlari orasida diniy nutqiy janrlning tutgan o‘rni haqida firklar bildirildi. Bundan tashqari diniy nutqiy janrlarni tasniflashda har bir janrning o‘ziga xos bo‘lgan grammatik va uslubiy xususiyatlarini ko‘rsatib berishga harakat qilindi.*
Kalit so‘zlar: *teolingvistika, nutqiy janrlar, diniy nutqiy janrlar, duo, xutba, va’z, zikr, munojot, qasida, marsiya.*

Abstract. *This article discusses the specific features of theolinguistics, a new branch of linguistics, and addresses the issue of classifying the genres within it, particularly focusing on the place of religious speech genres among general speech types. In addition, an attempt is made to highlight the grammatical and stylistic features unique to each genre during the classification of religious discourse.*
Keywords: *theolinguistics, speech genres, religious speech genres, supplication, sermon, preaching, invocation.*

Аннотация. *В данной статье рассматриваются особенности теолингвистики, нового направления в языкознании, а также вопросы классификации жанров, входящих в её состав. Особое внимание уделено месту религиозных речевых жанров среди других типов речи. Кроме того, предпринята попытка показать грамматические и стилистические особенности каждого жанра при их классификации.*
Ключевые слова: *теолингвистика, речевые жанры, религиозные речевые жанры, мольба, проповедь, наставление.*

Zamonaviy tilshunoslikda yangi yo‘nalishlardan biri hisoblangan teolingvistika va uning o‘ziga xos xususiyatlarini o‘rganish hozirgi kunda tadqiqotchilar diqqatini o‘ziga tortib kelayotgan eng dolzarb mavzulardan biri hisoblanadi. O‘zbek tilshunosligida teolingvistik tadqiqotlar olib borgan olimlarimiz mazkur yo‘nalishning o‘ziga xos bo‘lgan xususiyatlarini ochib berish uchun bir qancha nazariy ma’lumotlarni aytgan bo‘lsada, ammo mazkur yo‘nalishning janrlar tasnifi va ularning o‘ziga xos bo‘lgan xususiyatlarini o‘rganish masalasi hanuz yakunlanmay qolmoqda. O‘tgan asrning ikkinchi yarimidan boshalab rus tilshunoslari M. Baxtin tomonidan ilgari surilgan nutqiy janrlar masalasi va mazkur g‘oyani izchillik bilan davom ettirgan V.Dementevlarning katta mehnatlari natijasida tilshunoslikda nutqiy janrlar haqida yangi

qarashlar yuzaga keldi. Nutqiy janrlarning tilshunoslikda o‘rganilish masalasi yuzasidan olib jahon miqiyosida juda keng ko‘lamli tadqiqot ishlari olib borildi. Hozirgi kunda tilshunoslikda nutq janrlarining 250dan ortiq turlari borligi aniqlangan. [7.13] Mazkur janrlar orasida teolingvistikaning tarkibiga kiruvchi janrlar haqida ham so‘z yuritilgan bo‘lsada, ammo ularning o‘ziga xos xususiyatlari to‘liq yoritib berilmagan. Biz mazkur maqolada aynan diniy nutqiy janrlarning o‘zbek tilshunosligida o‘rganilish masalasini ko‘rib chiqmoqchimiz.

Tilshunoslikda nutqiy janrlarning o‘rganilishi masalasi – zamonaviy tilshunoslikning dolzarb va ko‘p qirrali yo‘nalishlaridan biridir. Nutqiy janrlar tili, uslubiyati, kommunikativ xususiyatlari va ijtimoiy kontekstdagi funksiyalarini o‘rganish orqali til vositalarining jamiyatdagi real qo‘llanilishi chuqur tahlil qilinadi. Nutqiy janr – bu ma’lum ijtimoiy vaziyatda shakllangan, an’anaviy shakl va tarkibga ega bo‘lgan nutq birliklarining turidir. Har bir nutqiy janr muayyan kommunikativ maqsadga, mazmuniy-tuzilmaviy xususiyatga va til vositalari tizimiga ega bo‘ladi. Nutqiy janrlar og‘zaki va yozma shaklda namoyon bo‘lishi, rasmiy yoki norasmiy muloqot doirasida mavjud bo‘lishi mumkin. Masalan, ilmiy maqola, xat, nutq, intervyu, va’z, xutba, reklama, dialog, reportaj va boshqalar. Tilshunoslikda nutqiy janrlarni o‘rganish tilning funksional imkoniyatlarini yoritish, diskursiv va pragmatik tahlilni aniqlash, ijtimoiy-madaniy konteksni ochib berish hamda tarbiyaviy-estetik vazifani bajarishga xizmat qiladi. Har qanday til o‘zining funktsional imkoniyatlarini jamiyatdagi turli kommunikativ ehtiyojlar orqali namoyon etadi. Diniy nutqiy janrlar – bu ehtiyojlardan biri bo‘lib, jamiyatda e’tiqod, ma’naviyat, axloq va ruhiy tarbiyani shakllantirishga xizmat qiluvchi nutq turlaridir. Ular o‘zbek tili doirasida ham qadimdan mavjud bo‘lib, tilshunoslikda o‘ziga xos o‘ringa ega. Diniy nutqiy janrlarni tilshunoslik nuqtayi nazaridan o‘rganish bu janrlarning kompozitsion tuzilmasi, pragmatik yo‘nalishi, stilistik xususiyatlari, til birliklarining funksional qo‘llanilishi, ijtimoiy-madaniy kontekstdagi roli kabi masalalarni qamrab oladi.

Diniy nutqiy janrlar – bu diniy mazmundagi axborotni uzatish, targ‘ibot olib borish, nasihat qilish, ibodat ifodasini bayon etish yoki diniy-huquqiy masalalarni tushuntirish uchun xizmat qiluvchi barqaror nutqiy birliklardir. Ular diniy kommunikatsiyaning o‘ziga xos shakli bo‘lib, muayyan ijtimoiy va ma’naviy vazifani bajaradi. Diniy janrlar islom dini rivojlangan hududlarda, jumladan O‘zbekiston hududida ham qadimdan shakllanib kelgan va hozirgi zamon og‘zaki hamda yozma madaniyatida muhim o‘rin egallaydi. Nutqiy janrlar nazariyasida diniy janrlar funksional kommunikativ vazifa**,** stilistik xususiyat**,** tuzilish shakli**,** mavzu doirasi kabi mezonlarga ko‘ra farqlanadi. Diniy janrlarning asosiy xususiyati shundaki, ular faqat diniy axborotni emas, balki e’tiqodiy, axloqiy, huquqiy va ma’naviy g‘oyalarni ham uzatadi. Shuning uchun bu janrlar, boshqa nutqiy janrlardan farqli ravishda, ichki mazmun jihatidan ham, tashqi tuzilish va uslubiy belgilar nuqtayi nazaridan ham o‘ziga xosdir.

O‘zbek tilshunosligida diniy nutqiy janrlar hali to‘liq va tizimli tarzda o‘rganilmagan bo‘lsa-da, ularning jamiyat hayotidagi ahamiyati va kommunikativ vazifasi kundan kunga ortib bormoqda. Diniy nutq, avvalo, muayyan e’tiqodiy mazmun, diniy terminologiya va ritual-kommunikativ vazifalarga ega bo‘lgan muloqot shaklidir. Diniy diskurs muayyan ijtimoiy muhitda – masjid, madrasa, diniy yig‘inlar, ommaviy axborot vositalari, internet sahifalari orqali amalga oshiriladi. Bu jihat diniy nutqiy janrlarning shakllanishi, takomillashuvi va ijtimoiy nutq muhitida o‘z o‘rniga ega bo‘lishiga sabab bo‘ladi.

Diniy nutqiy janrlar – bu diniy kommunikatsiya doirasida shakllangan va muayyan diniy maqsadni *(nasihat, duo, zikr, o‘rgatish, e’tiqodni mustahkamlash)* amalga oshiruvchi nutq

shakllaridir. Ular *kompozitsion tuzilmasi, kommunikativ maqsadi, vazifasi va ifoda vositalariga* ko‘ra turlicha bo‘ladi. Diniy nutqiy janrlarni shartli ravishda quyidagicha tasniflash mumkin:

a) og‘zaki diniy nutqiy janrlar,

b) yozma diniy nutqiy janrlar.

Og‘zaki diniy nutquy janrlarga xutba, va’z, suhbat, ilmiy darslar, duo kabilar kirsa, yozma diniy nutqiy janrlarga diniy risola, fatvolar, tafsir, fiqhiy asarlar, diniy maqolalar misol bo‘ladi. Og‘zaki diniy nutqiy janrlarda *interaktivlik* ya’ni tinglovchi bilan bevosita muloqotga kirishish, nutqning tinglovchiga ta’sir qilish jarayonida nutq yo‘nalishini o‘zgartirish imkoniyatining mavjudligi, *emotsionallik* – nutq oqimini ohanglash, pauza va urg‘ular yordamida ma’naviy ta’sir jarayoning boshqarish, kommunikatsiya jarayonida adresantning improvizatsiyasi elementlarini nazorat qilishi, ya’ni nutq jarayoni reja asosida olib borilsada, va’zgo‘y yoki xatib vaziyatga qarab nutqni to‘ldirishi yoki o‘zgartirishi mumkinligi, mazkur nutq jarayonida dialogik shakllar, so‘roq gap, undovlar takorrlarning keng qo‘llanilish imkoniyatining kengligi hamda adresant tomonidan aytilayotgan nutqning makon va muhitga moslashishi kabi xususiyatlari bilan boshqa nutq janrlaridan alohida ajralib turish xususiyatiga egadir. Yozma diniy nutqiy janrlar – fatvolar, diniy risolalar, fiqhiy asarlar, tafsir, diniy maqolalar doimiy yozma shaklda saqlanishi, tahrirlash imkoniyatining borligi va o‘quvchilar tomonidan ko‘p maratoba o‘qish uchun mo‘ljallanganligi bilan xarakterlanadi. Bundan tashqari yozma diniy nutqiy janrlarda rasmiy yozuv me’yorlariga to‘liq amal qilinadi, imloviy, uslubiy va diniy terminologik aniqlikni talab qiladi, o‘zining strukturaviy tuzilishiga qat’iy amal qilishi bilan ham (kirish, asosiy qism va xulosa) og‘zaki diniy nutqiy janrlardan ajralib turadi. Og‘zaki va yozma diniy nutqiy janrlarning o‘zaro farqini quyidagi taqqoslash jadvali orqali ko‘rishimiz mumkin.

1-jadval

Belgilar	**Og‘zaki diniy janrlar**	**Yozma diniy janrlar**
Muloqot shakli	Bevosita jonli shaklda	Bilvosita shaklda
Auditoriyaga ta’siri	Tezkor, hissiy	Sekin, tahliliy
Strukturasi	Moslashuvchanlik	Qat’iy belgilangan qolipda
Qayta ishlash imkoniyati	Chegaralangan	Erkin, tahrir uchun doimiy
Qo‘llanilish sohasi	Masjid, yig‘inlar, darslar	Kitoblar, maqolalar, ilmiy asarlar

Diniy nutqiy janrlar tilshunoslikda alohida ilmiy e’tibor talab etadigan murakkab va ko‘p qirrali fenomen hisoblanadi. Chunki bu janrlar tilda faqatgina axborot uzatish vositasi emas, balki e’tiqod, axloq, ma’naviyat va ijtimoiy ongni shakllantiruvchi muhim kommunikativ birlik sifatida namoyon bo‘ladi. Tilshunoslik nuqtayi nazaridan qaralganda, diniy nutqiy janrlar leksik-semantik, pragmatik, stilistik va diskursiv jihatlari bilan alohida o‘rganishga loyiqdir. Avvalo, diniy nutqiy janrlar leksik-semantik tizimi bilan ajralib turadi. Ular tarkibida Qur’oni karim va hadislardan olingan arabcha diniy terminlar, e’tiqodiy tushunchalar, tavhidiy iboralar, baraka va duo mazmunidagi qadimiy so‘z birikmalari keng qo‘llaniladi. Bunday birliklar tildagi diniy leksika va religiya asosidagi semantikani boyitadi. Masalan, “taqvo”, “halol”, “harom”, “sabr”, “hikmat”, “duo”, “zikr”, “qiyomat”, “tafsir”, “xutba”, “va’z” kabi tushunchalar tilda doimiy ishlatiluvchi diniy semantik qatlamni hosil qiladi. Ikkinchidan, bu janrlar stilistik jihatdan qat’iy me’yorlarga tayanadi. Xususan, xutba va fatvo rasmiy-uslubiy, lo‘nda, dalilga asoslangan, normativ-stilistik belgilar bilan ajralib turadi. Va’z va munojot esa ko‘proq obrazlilik,

emotsionallik va badiiylik bilan ajralib turadi. Bu holat turli nutq uslublari — ilmiy, publitsistik, og‘zaki, she’riy uslublarning diniy janrlarda birlashib, yangi stilistik kontekstlar vujudga keltirganini ko‘rsatadi.

Diniy nutqiy janrlar bugungi kunda texnologik imkoniyatlar bilan uyg‘unlashgan holda yangi shakllarda ham rivojlanmoqda. Masalan, video xutbalar, onlayn va’zlar, Telegram’dagi diniy bloglar yoki internet orqali beriladigan fatvolar bu janrlarning zamonaviy ko‘rinishidir. Umuman olganda, diniy nutqiy janrlar O‘zbek tilida nafaqat e’tiqodiy hayotning, balki xalq tilining badiiy-estetik, axloqiy va madaniy qatlamlarini ham aks ettiradi. Ular orqali diniy bilimlar uzatiladi, ma’naviy qadriyatlar mustahkamlanadi va tilning ijtimoiy-funksional imkoniyatlari boyiydi. Og‘zaki va yozma diniy nutqiy janrlar bir-birini to‘ldiruvchi, lekin uslub, shakl va kommunikativ strategiyalar jihatidan farqlanuvchi vositalardir. Og‘zaki janrlar ko‘proq hissiy-ma’naviy ta’sirga urg‘u bersa, yozma janrlar ilmiylik va saqlanuvchanlik jihatidan ustundir. Ularning har ikkalasi diniy bilimni tarqatishda, ijtimoiy ongni shakllantirishda va dinga e’tiqodni mustahkamlashda muhim o‘rin tutadi. Diniy nutqiy janrlar o‘zbek tilshunosligida uslubiyat, pragmatika, stilistika, matnshunoslik, sotsiolingvistika va diskurs tahlili kabi yo‘nalishlar kesimida o‘rganilishi mumkin bo‘lgan boy va chuqur qatlamdir. Ular tilni nafaqat muloqot vositasi, balki ma’naviy-ma’rifiy, ruhiy tarbiya vositasi sifatida ochib beradi. Shu bois, diniy janrlarni tilshunoslik doirasida o‘rganish, nafaqat tildagi shakl va vositalarni, balki ularning jamiyatdagi ma’naviy yukini chuqur anglashga xizmat qiladi.

Zamonaviy tilshunoslikda diniy janrlar, ayniqsa diskursiv yondashuv asosida, diniy diskurs tarkibida tahlil qilinmoqda. Bunda nafaqat matnning ichki tuzilishi, balki uning kimga, qachon, qanday vaziyatda va qanday niyat bilan aytilganligi ham hisobga olinadi. Masalan, bir xutba matni va’zdan farqli ravishda maxsus auditoriya uchun, muayyan marosim doirasida va rasmiylikni saqlagan holda aytiladi. Bu esa diniy janrlarning kontekstual bog‘liqligi va vazifaviy ko‘p qirraliligini ko‘rsatadi.

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“ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS”

KOREYA TARIXINI O‘RGANISHDA DAVRLASHTIRISH MASALASI: METODOLOGIK YONDASHUVLAR VA NOMLARNI QAYTA ISHLATISH TAHLILI

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Annotatsiya. *Ushbu maqolada Koreya tarixini o‘rganishda davrlashtirishning metodologik muammolari tahlil qilinadi. Koreya tarixidagi asosiy davrlar, ularni aniqlashdagi qiyinchiliklar hamda milliy, mintaqalararo, postkolonial va sivilizatsion kabi yondashuvlar keng yoritilgan. Shuningdek, maqolada “Choson”, “Koryo” va “Hanguk” nomlarining tarixiy qayta ishlatilishi va siyosiy o‘zgarishlar ta’sirida ularning mazmuniy yangilanishi tahlil qilinadi. Tadqiqot, tarixiy manbalarni tanqidiy baholash va terminologik yondashuvlar orqali Koreya tarixining murakkab hikoyasini chuqurroq anglash zarurligini ta’kidlaydi.*
Kalit so‘zlar*: Koreya tarixi, davrlashtirish, tarixshunoslik, Choson, Koryo, Hanguk, milliy yondashuv, mintaqalararo tarix, postkolonial tadqiqotlar, madaniy identitet.*

Abstract. *This article examines the methodological problem of periodization in Korean historical studies. It presents the main historical periods of Korea, the challenges in defining them, and the different academic approaches used in their analysis, including national, transnational, postcolonial, and civilizational perspectives. Additionally, the article explores the historical reuse and transformation of the names “Choson,” “Koryo,” and “Hanguk,” revealing how political shifts and cultural identity shaped their meanings over time. This study emphasizes the need for critical evaluation of historical sources and terminology in understanding Korean history and its complex narrative structure.*
Keywords: *Korean history, periodization, historiography, Choson, Koryo, Hanguk, national approach, transnational history, postcolonial studies, cultural identity*

Аннотация. *В данной статье рассматривается методологическая проблема периодизации в изучении истории Кореи. Освещаются основные исторические периоды, сложности их определения, а также различные научные подходы: национальный, транснациональный, постколониальный и цивилизационный. Особое внимание уделено историческому переосмыслению и повторному использованию названий «Чосон», «Корё» и «Хангук», отражающих политические изменения и формирование культурной идентичности. Работа подчёркивает важность критической оценки источников и терминологии для глубокого понимания корейской истории и её сложного нарратива.*
Ключевые слова: *История Кореи, периодизация, историография, Чосон, Корё, Хангук, национальный подход, транснациональная история, постколониальные исследования, культурная идентичность.*

Kirish

Koreya tarixini o‘rganishda davrlashtirish masalasi markaziy metodologik muammo bo‘lib qolmoqda. Har qanday tarixiy tadqiqotda davrlarni ajratish, ularning chegaralarini belgilash va asosiy o‘zgarishlarni tushuntirish muhim ahamiyatga ega. Biroq Koreya tarixida bu masala bir nechta sababga ko‘ra murakkablik kasb etadi. Ushbu maqolada Koreya tarixini davrlashtirishga oid asosiy yondashuvlar, ularning tarixiy va metodologik asoslari, shuningdek, Koreya nomining tarixiy taraqqiyotdagi o‘zgarishi tahlil qilinadi.

Metodlar

Ushbu tahliliy maqola tarixiy-davriy yondashuvlar, manbaviy tanqid va nomshunoslik asosida shakllangan. Koreya tarixidagi turli davrlash tizimlari, arxeologik hamda yozma manbalar asosida baholandi. Shuningdek, madaniy, siyosiy va postkolonial yondashuvlar asosida nomlar va davrlar evolyutsiyasi o‘rganildi. Tadqiqot, mavjud tarixiy kontseptlar va turli ilmiy maktablar yondashuvlariga tayangan holda olib borildi.

Natijalar

Koreya tarixini o‘rganishda davrlashtirish masalasi markaziy metodologik muammo bo‘lib qolmoqda. Har qanday tarixiy tadqiqotda davrlarni ajratish, ularning chegaralarini belgilash va asosiy o‘zgarishlarni tushuntirib berish muhim ahamiyatga ega. Biroq, Koreya tarixida bu masala bir nechta sababga ko‘ra murakkablik kasb etadi.

1. Tarixiy davrlashtirishning o‘ziga xos jihatlari

Koreya tarixining o‘ziga xosligi – uning geografik joylashuvi, qadimiy jamiyatlarning madaniy ko‘p qatlamligi va tashqi ta’sirlarning (ayniqsa, Xitoy va mo‘g‘ul davlatchiligi) doimiy mavjudligida namoyon bo‘ladi. Shu sababli, Koreya tarixini davrlashtirishda quyidagi asosiy davrlar ajratiladi:

• Ibtidoiy jamiyat davri (paleolit – neolit – bronza davri): qadimgi jamiyatlar, totemistik tuzilmalar va dastlabki iqtisodiy faoliyatlar;

• Devor bilan o‘ralgan shahar-davlatlar va konfederatsiyalar davri: Qadimgi Choson, Puyo, Koguryo, Samhan singari tuzilmalar;

• Markazlashgan qirolliklar davri: Silla, Pekche, Koguryo davlatlarining raqobati va birlashuvi;

• Feodal qirolliklar va tashqi bosqinchiliklar davri: Koryo, Mo‘g‘ullar bosqini va Xitoy bilan o‘zaro ta’sir;

• Choson davri: Konfutsiylik asosida qurilgan siyosiy-iqtisodiy tuzum, ichki ijtimoiy qatlamlanish va tashqi izolyatsiya;

• Zamonaviy davr: XIX asr oxiri – XX asr boshlarida Yapon bosqini, mustamlakachilik siyosati, bo‘linish va hozirgi Janubiy hamda Shimoliy Koreya davlatlarining shakllanishi.

2. Davrlashtirishdagi muammolar

Koreya tarixini davrlashtirishda quyidagi muammolar yuzaga chiqadi:

— Arxeologik va yozma manbalar tafovuti: Erta davrlarga oid yozma manbalar kam, asosan afsona va rivoyatlar asosida shakllangan, bu esa ilmiy asosda davr ajratishni qiyinlashtiradi.

— Koreya va Xitoy yondashuvlari orasidagi farq: Koreya tarixini ko‘pincha Xitoy manbalari orqali o‘rganilgan bo‘lib, bu ba’zan Koreya tarixiy suverenitetini cheklangan tarzda talqin qilishga olib keladi.

— Davlatlararo madaniy sintez: Puyo, Koguryo yoki Viman Choson singari tuzilmalar bir necha etnik yoki siyosiy elementlardan tashkil topgan bo‘lib, ularni aniq bir etnos yoki davlatchilik bilan bog‘lash mushkul.

3. Turli yondashuvlar va ilmiy yo‘nalishlar

Koreya tarixini o‘rganishda quyidagi asosiy ilmiy yondashuvlar kuzatiladi:

Milliy yondashuv: Koreya tarixini uzluksiz, yagona milliy taraqqiyot yo‘li sifatida ko‘ruvchi konsepsiya. U qadimgi afsonaviy davrlardan to zamonaviy davrga qadar Koreya xalqi yagona tarixga ega degan g‘oyaga asoslanadi.

Mintaqalararo (transmilliy) yondashuv: Koreya tarixini Xitoy, Yaponiya, Markaziy Osiyo va hatto Yevropa bilan bog‘liq kontekstda, o‘zaro aloqadorlik asosida o‘rganadi. Bu yondashuv, ayniqsa, madaniy almashinuvlar va tashqi ta’sirlarni yoritishda muhim.

Postkolonial (mustamlakachilik davridan keyingi) yondashuv: Yapon mustamlakachiligi davrida yaratilgan tarixiy tasniflarni qayta ko‘rib chiqishga intiladi. Koreya tarixini o‘z mustaqil kontekstida qayta anglashni maqsad qiladi.

Madaniyatlararo (sivilizatsion) yondashuv: Koreya tarixini diniy, falsafiy va ijtimoiy tizimlar asosida davrlashtirishga urinish, masalan – shomonlik davri, konfutsiychilik davri, buddaviylik dini ta’siri, zamonaviy g‘oyaviy oqimlar va h.k.

Koreya tarixini davrlashtirish – bu nafaqat tarixiy faktlar asosida davr ajratish, balki tarixga qanday nazar bilan qaralishiga bog‘liq murakkab metodologik masaladir. Shu bois, Koreya tarixini o‘rganishda ilmiy tadqiqotlar faqat faktlarni emas, balki tarixiy manbalarni tahlil qilish, yondashuvlarni tanqidiy baholash orqali o‘z mustaqil yondashuvlarini shakllantirishi lozim bo‘ladi.

4. Koreya tarixini yoritishda tarixiy nom va terminlarning ishlatilishi

Har bir mamlakatning nomi, tabiiyki, uning tarixini aks ettiradi. Masalan, Germaniyaning turli hudud va tillarda yarim o‘ndan ortiq rasmiy nomlari mavjud bo‘lib, bu Germaniyaning XIX asrda yagona davlatga aylanishidan oldingi uzoq va bo‘lingan tarixini anglatadi.

Koreya nomining shakllanish tarixi biroz boshqacha. Mo‘g‘ul tilidagi “Solongos” so‘zidan tashqari (uning ham qiziqarli tarixi bor), butun dunyoda Koreya uchun uchta asosiy nom ishlatiladi: Koryo (Korea), Choson va Hanguk. Koreya o‘z tarixida qo‘shnilar tomonidan ham, koreyslarning o‘zlari orasida ham turli ifodalar bilan atalgan, biroq hozirgi davrda aynan shu uchta nom standartlashgan. Eng qiziq tomoni shundaki, bu uchala atama ham qadimgi tarixiy davrlardan qayta tiriltirilgan bo‘lib, zamonaviy davrda siyosiy o‘zgarishlarga qarab yangicha ma’nolarga ega bo‘lgan. Koreya nomining bunday qayta ishlatilishi – bu sivilizatsiyaning qadimiyligini hamda xalqning o‘z umumiy o‘tmishidan xabardorligini ko‘rsatadi.

Bu uchta nom ichida eng qadimiysi “Choson” bo‘lib, u qadimgi Xitoy manbalarida Koreya yarimoroli shimolidagi, Manchuriyagacha cho‘zilgan siyosiy birlikka ishora sifatida uchraydi. Bu bog‘liqlik keyinchalik Koreyaning ibtidoiy kelib chiqishi haqidagi milliy afsonalarga asos bo‘ldi – bunday afsonalar bugungi kunda ham Janubiy va Shimoliy Koreyada targ‘ib qilinmoqda.

Choson nomi o‘rnini keyinchalik Koguryo qirolligi egalladi, u taxminan ikki ming yil oldin xuddi shu hududda hukmronlik qilgan va mavjudligi ancha ishonchli tarzda tasdiqlangan. O‘sha davrdagi Xitoy manbalari urf-odat va marosimlar haqida yorqin tasvirlar berib, Koguryoni Koreya yarimorolidagi bir qancha guruhlardan biri sifatida tilga olgan. Bu guruhlar orasida yarimorol janubidagi uchta “Han” – Chinhan, Mahan va Byonhan qabilaviy konfederatsiyalari mavjud edi. “Han” atamasi, ehtimol, “buyuk”, “katta” yoki hatto “shoh” ma’nosini bildiruvchi

mahalliy so‘zdan olingan, biroq unga qadimgi Xitoy davlatini anglatuvchi iyeroglif (韓) tayinlangan. Bu esa chalkashlikka olib kelgan, lekin keyinchalik “Samhan” – “Uch Han” atamasi Koreya yarimoroli uchun umumiy ifoda bo‘lib qoldi.

Bu atama Koguryo va Pekchening VII asrda Sillaning bosqini ostida yo‘q bo‘lishidan keyin ham ishlatilgan. Biroq tarixda nomlarni ilk bor qayta ishlatish IX asrda boshlangan, ya’ni Yagona Silla ichki isyonlar tufayli parchalana boshlagach, shimoliy va janubi-g‘arbiy hududlar rahbarlari mos ravishda Koguryo va Pekche nomlarini qayta tiklashdi. Xuddi shu Koguryoning ikkinchi versiyasi yetakchisi X asr boshida yarimorolni harbiy yo‘l bilan yana birlashtirgach, u bu nomni qisqartirib, yangi qirollik uchun rasmiy nom sifatida “Koryo” deb tanladi. Aynan shu atama dunyo bo‘ylab yoyilib, hozirgi kunda Sharqiy Osiyodan tashqarida Koreya nomining yagona shakli sifatida tanilgan.

Koryo davrida esa, hatto mamlakat ichida ham boshqa ko‘plab nomlar ishlatilgan: Samhan (Uch Han), Tongguk va Tongbang (Sharqiy mamlakat), Hedong (Dengizning sharqi), Tedong (Daedong – Buyuk Sharq) kabi. Bu nomlarning ko‘pchiligi Koreyaning Xitoy bilan bo‘lgan tarixiy munosabatlarini anglatgan va ehtimol, Xitoyda yaratilgan bo‘lsa-da, xalq orasida oddiy atama sifatida ishlatilgan.

Siyosiy o‘zgarishlar natijasida rasmiy diplomatik nomlar o‘zgargan bo‘lsa-da, bunday epitetlar saqlanib qolgan. XIV asr oxirida Koryo sulolasining ag‘darilishi bilan yangi hukmdorlar yana qadimgi nomlardan birini – Chosonni tiklab, yangi qirollikning qonuniyligini asoslab berishga urinishdi. 500 yil o‘tgach, bu nom yana o‘zgartirildi, ammo bu safar Choson sulolasining tugaganini emas, balki unga xalqaro maqom berishni ko‘zlagan. Natijada, 1897-yilda “Daehan Jeguk” (Buyuk Koreya imperiyasi) nomi rasmiylashtirildi, lekin hukmdor o‘sha-o‘sha bo‘lib qoldi – u endi “imperator” deb ataladigan bo‘ldi.

Tehan Cheguk (“Daehan Jeguk”) qisqartmasi – “Hanguk” nomi keyinchalik kengroq tarqaldi va “Choson” bilan birga ishlatila boshlandi. 1910-yilda Yaponiya Koreyani mustamlakalashtirganida, “Chōsen” (Choson) nomini yana qayta tikladi. Biroq bu eski nomni yo‘q qilishga erishilmadi. 1919-yilda Shanxayda tuzilgan Koreyaning muvaqqat hukumati o‘zining rasmiy nomi sifatida Tehan Minguk (“Daehan Minguk”) – Koreya Respublikasi nomini tanladi.

Qiziq jihati shundaki, 1945-yilda ozodlikka chiqib, orqasidan mamlakat ikkiga bo‘lingach, Janubiy Koreya aynan shu nomni o‘zining rasmiy nomi sifatida qabul qildi. Shimoliy Koreya esa yaponlar tomonidan tiklangan “Choson” nomini saqlab qoldi. Bugungi kunda Shimoliy koreyslar o‘z mamlakatlarini, hatto butun Koreyani ham “Choson” deb atashadi, janubliklar esa “Hanguk” deydi. Ular bir-birini “Janubiy Choson” va “Shimoliy Hanguk” deb atashadi – bu esa milliy bo‘linish tarixining murakkabligini, uning nomlash tizimiga ham ta’sir qilganini ko‘rsatadi.

Qo‘shni davlatlarda ham bu aralashma ko‘zga tashlanadi: Xitoy ikki davlatning o‘zlari istagan nomlarini ishlatadi, lekin Shimoliy Koreya bilan uzoq yillik kommunistik ittifoq sababli butun yarimorolni “Choson yarimoroli” deb ataydi. Tayvanda esa Shimoliy Koreya uchun Janubiy Koreya ishlatadigan atama ishlatiladi, biroq qiziq tomoni shundaki, Janubiy Koreya uchun emas. Eng g‘alati ifoda esa Yaponiyada: ular Shimoliy Koreyani “Kita Chōsen” (Shimoliy Choson), Janubiy Koreyani esa “Kankoku” (Hanguk) deb atashadi.

Munozara

Koreya tarixini davrlashtirish bu nafaqat faktlar asosidagi tasnif, balki tarixga nisbatan yondashuvni ham aks ettiruvchi murakkab metodologik masaladir. Turli manbalar va

yondashuvlar asosida tarixni davrlashtirish o‘quvchilarga tanqidiy fikrlash, tarixiy tafakkur va o‘z mustaqil qarashlarini shakllantirish imkonini beradi. Bundan tashqari, Koreya tarixidagi nomlarning qayta ishlatilishi xalqning tarixiy ongini aks ettiradi va tarixiy-siyosiy jarayonlarning belgisi sifatida muhim ahamiyatga ega. Ismlar o‘zgarishining mintaqaviy va xalqaro kontekstdagi ifodalanishi esa Koreya tarixining o‘ziga xosliklarini yanada chuqurroq anglash imkonini beradi.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

QORAQALPOQ TILIDA GLYUTTONIK DISKURS TADQIQINING DOLZARBLIGI

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Annotatsiya. *Bu maqolada zamonaviy tilshunoslikda taraqqiy etayotgan diskurs tushunchasining matn tushunchasi bilan bog'liqligi va farqli tomonlari dunyo tilshunoslarining fikrlari asosida yoritib berilgan. O'tgan asrning 50-yillaridan so'ng paydo bo'la boshlagan diskurs yo'nalisining qoraqalpoq tilshunosligida o'rganilishining dolzarb masalalari keltirilib, glyuttonik diskursni bevosita xalqning, millatning madaniyatiga bog'laydi. Glyuttonik diskurslarni o'rganish orqali madaniyatimizning mavhum asoslarini ochish, ko'plab so'zlarning etimologiyasini aniqlash va millat hayot tarzini, madaniy-ma'rifiy boyligini keng olamga ko'rsatish, tanishtirish va targ'ib etish imkonini beruvchi vosita sifatida qaralib, dolzarb ahamiyatga egaligi asoslanadi.*

Kalit so'zlar: *diskurs, matn, madaniyat, lisoniy omillar, nolisoniy omillar, lingvokulturologiya, pragmatika, glyuttoniya, glyuttonik diskurs, qoraqalpoq tili, millat madaniyati.*

Аннотация. *В данной статье на основе мнений мировых лингвистов освещается связь и различие между понятием дискурс и понятием текста, широко разрабатываемым в современной лингвистике. Представлены важные вопросы изучения направления дискурса в каракалпакском языке, которые стали появляться после 50-х годов прошлого века, напрямую связывая глюттоническая дискурс с культурой народа, нации. Через изучение глюттоническая дискурсов отмечается как огромный инструмент, позволяющий раскрыть основы нашей культуры, определить этимологию многих слов, показать и представить всему миру жизнь, культурное и духовное богатство нации и обосновывает необходимость исследования.*

Ключевые слова: *дискурс, текст, культура, языковые факторы, неязыковые факторы, лингвокультурология, прагматика, глюттония, глюттоническая дискурс, каракалпакский язык, национальная культура.*

Annotation. *In this article, the connection and difference between the concept of discourse and the concept of text, which is widely developed in modern linguistics, is highlighted based on the opinions of world linguists. Important issues of the study of the direction of discourse in the Karakalpak language, which began to appear after the 50s of the last century,*

are presented, directly connecting the gluttonous discourse to the culture of the people, the nation. Through the study of gluttonous discourses, it is noted as a huge tool that allows us to reveal the foundations of our culture, to determine the etymology of many words, and to show and introduce the nation’s life, cultural and spiritual wealth to the wider world, and justifies the need for research.

Keywords: *discourse, text, culture, linguistic factors, non-linguistic factors, linguoculturology, pragmatics, gluttony, gluttonous discourse, Karakalpak language, national culture.*

KIRISH

Diskurs - fanlararo tadqiqotlar mavzusi hisoblanib, nazariy tilshunoslikdan tashqari, kompyuter lingvistikasi va sun’iy intellekt, psixologiya, falsafa va mantiq, sotsiologiya, antropologiya, etnologiya, adabiyot, semiotika, tarixshunoslik, ilohiyot, huquq, pedagogika, tarjima nazariyasi va amaliyoti, siyosat kabi boshqa diskurs bilan bog‘liq fan va tadqiqot sohalarining ham asosiy o‘rganish obyekti hisoblanadi. Bu fanlarning har biri diskursni o‘rganishda o‘ziga xos tarzda ishtirok etadi.

O‘tgan asrning 70-yillaridan boshlab tilshunos olimlarning diqqati gapdan kattaroq birliklar doirasiga qaratila boshladi. Diskursga qiziqishning boshlanishi aynan o‘sha davrga to‘g‘ri keladi. Ammo atamaning qo‘llanish tarixi ancha qadim: 1950-yillarning boshida amerikalik tilshunos olim Z.Xarris gapdan kattaroq matn parchasini diskurs deb atagan. Fransuz tilshunosi E.Benvenist esa bu atamani muloqot jarayonida gapirishni anglatish uchun qo‘llagan. Lekin aynan 70-yillarga kelib xorijiy tilshunoslar - U.Cheyf, V.Deysler, J.Grayms, T.Van Deyklarning tadqiqotlari diskurs talqinini alohida fan yo‘nalishi sifatida shakllantirdi [3: 7].

ADABIYOTLAR SHARXI

Diskurs (fransuzcha discourse; inglizcha discourse; lotincha discursus - orqaga-oldinga yugurish; aylanma takroriy harakat; suhbat; gap) - ekstralingvistik-grammatik, ijtimoiy-madaniy, psixologik va boshqa omillar bilan boyitilgan izchil matn; voqeaga bog‘liq baholangan matn; maqsadli ijtimoiy harakat sifatida qabul qilingan odamlarning o‘zaro ta’siri va ularning ongining mexanizmlarining (kognitiv jarayonlar) tarkibiy qismi sifatida qabul qilingan gap. Shuning uchun "diskurs" atamasi, "matn" atamasidan farqli o‘laroq, jonli hayotga bo‘lgan aloqalar bevosita tiklanmaydigan qadimiy va boshqa matnlarga nisbatan qo‘llanilmaydi, deyiladi eng keng tarqalgan ta’riflarda [3: 7-8].

Diskurs - bir vaqtning o‘zida ham lisoniy faoliyat jarayoni, ham uning (faoliyatning) mahsuli hisoblanadi. Shunday qilib, diskurs bu insonlarning o‘zaro fikr almashishi, aloqasi, bir-biriga turli ma’lumotlarni yetkazishi, ma’lumotlarni yetkazish uchun turli vositalardan foydalanishi, ikkala suhbatdoshga ham tushunarli bo‘lgan jarayon diskurs deyiladi. Diskurs dialogik va monologik ko‘rinishda uchrashi mumkin. Pragmatik ifodalar bo‘yicha diskurs atamasi sakkiz xil ma’noda uchrashi aniqlangan:

1) so‘z alternativi;
2) frazalardan o‘lchami bo‘yicha ortuvchi birlik;
3) nutq sharoiti hisobga olingan holda fikrning adresatga ta’siri;
4) suhbat;
5) nutqda so‘zlovchining pozitsiyasi;
6) til birliklaridan foydalanish;

7) fikrning ijtimoiy yoki mafkuraviy cheklangan shakli;

8) matn hosil bo‘lish shartlarini o‘rganishga mo‘ljallangan nazariy qurilmalar [2: 155].

Filologiya fanlari doktori, professor G.Odilova "Glyuttonik diskurs asoslari" nomli monografiyasida diskursning umumiy tavsifini berishda T.Van Deyk, V.E.Chernyavskaya, V.E.Kibrik, N.D.Arutyunova, V.I.Karasik, R.A.Karimova kabi olimlarning fikrlarini keltiradi [3: 6-7]. Masalan: Diskurs - kommunikativ harakatning yozma yoki og‘zaki verbal mahsuli; Diskurs matn bilan birga uning paydo bo‘lishi va qabul qilinishiga ta’sir etuvchi nolisoniy omillarni o‘z ichiga olgan murakkab kommunikativ hodisa; Diskurs - kommunikantlarning ongini o‘z ichiga olgan kommunikativ vaziyat va muloqot jarayonida paydo bo‘lgan matn; Diskurs - so‘zlashuv holatiga kirgan matn; Diskurs - voqea bo‘yicha olingan ekstralingvistik, pragmalingvistik va boshqa omillar bilan birlashtirilgan izchil matn; Diskurs - ma’lum kognitiv va tipologik tarzda shartli aloqa makoni amalga oshiriladigan kommunikativ hodisa. Zamonaviy tadqiqotlar nuqtai nazaridan diskurs murakkab kommunikativ hodisa bo‘lib, matnga qo‘shimcha ravishda uni tushunish uchun zarur bo‘lgan qo‘shimcha lingvistik omillarni (fikrlar, dunyo haqidagi bilimlar, qabul qiluvchining maqsadlari, munosabatlari) o‘z ichiga oladi.

Diskurs - suhbat turi bo‘lib, u janr kabi. Nutq janri - tipik tuzilishi, lisoniy vositalardan foydalanishning o‘ziga xosligi, aniq adresat, ma’lum kommunikativ maqsad va informativlik, imperativlik, etiketlik kabi jihatlari bilan ajralib turuvchi nutq turi hisoblanadi. Har qanday diskurs matn, lekin har qanday matn diskurs emas [2: 155].

"Diskurs" atamasi tilshunoslik sohasida juda ko‘p qo‘llaniladigan atamalardan biriga aylangan. Tarixiy jihatdan bu atama birinchi marta amerikalik tilshunos Z.Xarrisning 1952-yilda e’lon qilingan "Discourse Analysis" (Diskurs tahlili) deb nomlangan maqolasida qo‘llanilgan. Diskurs bu so‘zlovchi va tinglovchining o‘zaro fikr almashish, bir-biriga ta’sir ko‘rsatish maqsadida lisoniy va nolisoniy vositalardan o‘zlari uchun eng unumli, samarali va qulay deb hisoblagan ko‘rinish va shakldan amaliy foydalanish jarayonidir.

Diskurs so‘ziga yana bir tushuncha, lotincha "discursus" - muhokama so‘zidan olingan bo‘lib, hissiy, bevosita, intuitiv, ya’ni muhokama talab qilinmaydigan bilimdan farqli ravishda, muhokama orqali hosil bo‘ladigan mantiqiy dalil - dalillanuvchi bilimdir. Bu ta’rifda diskursning muhokama, suhbat qilish ma’nosi ilgari suriladi. Boshqa bir tushunchada, lotin tilidagi "dis" uzoq ma’nosidagi prefiksdan va yugurish ma’nosini beruvchi "currere" o‘zagidan olingan.

Tilshunoslikda diskurs bir gapdan ham uzunroq til birligiga qaratiladi. Diskurs keng tarixiy ma’nolarni yetkazishda tilning ijtimoiy jihatdan qo‘llanilishi. Bu qo‘llanilishning ijtimoiy sharoitlari, kim va qanday sharoitlarda qo‘llanayotgani bilan belgilanadigan til. Til hech qachon neytral bo‘la olmaydi, chunki u bizning shaxsiy va ijtimoiy dunyolarimizni bog‘lashga xizmat qiladi.

Diskurs bo‘yicha tadqiqotlar olib borgan Z.Xarris, N.Arutyunova, V.Grigoreva, T.Van Deyk, V.Karasik, R.Karimova, A.Kibrik, V.Krasnix, E.Kubryakova, M.Makarov, O.Mixaleva, L.Yorgensen, M.Chernyavskaya, V.Yakobson, A.Olyanich, I.Derjaveckaya, Sh.Safarov, G.Odilova va boshqa olimlarning ishlarini, fikrlarini o‘rganish orqali diskurs yo‘nalishining yanada kengayishi va rivojlanishiga hissa qo‘shamiz.

Diskurs haqidagi savollarga javob sifatida V.M.Undrichova, V.Z.Demyankov, V.V.Krasnix, N.N.Mironova, E.N.Mishkurov, E.V.Sidorov, N.B.Grabovskiy, A.A.Kibrik, V.I.Karasik, M.Stabs, P.Serio, M.L.Makarov, A.V.Olyanich, o‘zbek olimlaridan O‘.Q.Yusupov, N.Mahmudov, B.Mengliyev, Sh.Safarov, L.Raupova va b. olimlarning ko‘pchiligi diskurs nima, uning turlari qanday, komponentlari nimalardan iborat, umumiy tavsifi, ta’rifi, shakliy tuzilishi

va turlarini aniqroq ko‘rsatib berishga harakat qilgan. Olim E.S.Kubryakova esa, -tilshunoslik fanining hozirgi rivojlanishi davrida diskursning umumiy qabul qilingan birorta ham ta’rifi yo‘q, - degan fikrni bildiradi.

METODOLOGIYA

Jamiyatdagi har bir sohaga tegishli diskurslar mavjud. Bulardan glyuttonik diskursni o‘rganishning ahamiyati haqida f.f.d., professor G.Odilova shunday deb yozadi: Jahon tilshunosligining muhim masalalaridan biri tilning ma’lum qatlamlarida uchraydigan xususiy diskurslarning lisoniy, ijtimoiy, madaniy, antropologik, semiotik xususiyatlarini o‘rganishdan iborat. Shuningdek, adabiyot va ijtimoiy-maishiy sohalarda uchraydigan diskursning qo‘llanilish doirasini tadqiq etish keng o‘rganilayotgan muammolardan hisoblanadi. Glyuttonik diskurs muayyan xalq madaniyati, adabiyoti, turmush tarzi va ijtimoiy hayotida muhim o‘rin tutadi. "Gluttoniya" so‘zi qadimgi fransuz va o‘rta ingliz tillaridagi glutonie, lotincha gluttire ("yutish") so‘zidan olingan bo‘lib, bu so‘z gula "tomoq" degan ma’noni anglatadi. "Glyutoniya" so‘zi oziq-ovqat jarayonini uyg‘un holda, ya’ni uni topishdan boshlab, yarimfabrikatlarni qayta ishlash va qo‘llashga yaroqli mahsulot tayyorlashgacha bo‘lgan bosqichlarni o‘z ichiga oladi. Glyuttonik diskurslarning lisoniy xususiyatlarini tadqiq etish, gastronomik atamalarning lingvokulturologik xususiyatlarini o‘rganish, millat hayoti, dunyoqarashi va adabiyotdagi o‘rnini belgilashda yordam beradi. Milliy madaniyatni targ‘ib qilishda glyuttonik freymlar va arxetiplarni qayta yaratish masalasi juda dolzarb [3: 3-4].

TADQIQOT NATIJASI

Darhaqiqat, xalq o‘z turmush tarzini dunyoga tanitishda, millat o‘z milliyligi va madaniyatini dunyoga namoyon etishda til vositasining o‘rni katta. Bir millatning hayotiga xos bo‘lgan milliy o‘ziga xoslikni boshqa xalqlarga ham tanishtirishda unda qo‘llaniladigan glyuttonik diskurslarning ham ma’lum hissasi bor. Ularni o‘rganish va tadqiq qilish orqali tilimizdagi ko‘plab glyuttonik so‘zlarning etimologiyasini ham aniqlashtirish imkoniyatiga ega bo‘lishimiz mumkin. Undagi so‘zlarning semantik talqini va ularning denotatga (nutq parchasida nazarda tutilgan nolisoniy faoliyat obyektlari) munosabati bu denotatlarning madaniy-ekologik, tarixiy-geografik tavsifini tiklashga yordam beradi. Istalgan madaniyatni qayta tiklash tilshunoslik, etnografiya, folklorshunoslik, arxeologiya va madaniyatshunoslik hamkorligida amalga oshiriladi.

Glyuttonik diskursning tadqiqi xorijiy tilshunoslikda 1960 - 1970-yillarda K.Levi-Stross, R.Bart va M.Duglas tadqiqotlarida etnomadaniy mifologiya va din nuqtayi nazaridan o‘rganilgan. Glyuttonik diskurs - iste’mol qilinadigan oziq-ovqat bilan bog‘liq muloqot jarayonida tilning o‘ziga xos xususiyatini yuzaga chiqarish yo‘llaridan biri. Uni yeyish jarayoni millatlarning etnik, diniy qarashlari natijasi bo‘lsa, "ovqat" shu millatning gastronomik kommunikatsiyasiga xos bo‘lgan bir qator semiotik xususiyat, ma’naviy birlikni o‘zida mujassamlashtirgan dominant tushuncha sifatida asosiy o‘rinni egallaydi [3: 27]. Glyuttonik diskursning lisoniy jihatlarini o‘rganish, tilning gastronomik olami milliy lisoniy aksini chuqurroq anglashga yordam bersa, gastronomik olam haqidagi qarashlar bilan tanishish millatning hayoti, turmush tarzi, dunyoqarashi, madaniyati, tirikchiligi, yashash sharoiti, ijtimoiy muhiti, umuman o‘sha millatning ruhi haqida ham aniq tasavvurlar hosil qilishga yordam beradi.

DISKUSSIYA

Har bir xalqning tilidagi glyuttonik diskursda ma’lum konseptlar bor, ular shu millatning madaniyati darajasigacha ko‘tarilgan. Ya’ni, eng tansiq taom bo‘ladimi yoki faqat o‘sha xalqda yetishtiriladigan, boshqa xalqlar uchun sevimli, qiymati juda yuqori bir mahsulot bo‘ladimi, uni

ko‘rganingizda yoki yeganingizda, o‘sha millatning madaniyati, milliy g‘ururi ekanligi ma’lum bo‘ladi. Masalan, fransuzlarda vino, italyanlarda pitsa, spagetti, nemislarda frankfurt kolbasalari va bavariya pivosi, turklarda qahva, o‘zbeklarda palov, qoraqalpoqlarda jo‘xori guruch, qozoqlarda beshbarmoq va h.k. kabi. Hattoki, jamiyatimizdagi barcha oilaning ham o‘ziga xos bo‘lgan delikates taomlari bo‘ladi. Shuning uchun, har bir millatning, xalqning milliyligini aks ettiradigan, uni bir joydan ikkinchi joyga tashiydigan ma’lum konseptlar bo‘ladi. Va, ularni lingvokulturologik, lingvopragmatik jihatdan o‘rganish bizga ko‘plab madaniyatimizning yangi asoslarini anglashda yordam beradi. Natijada millatimiz, xalqimizning bebaho madaniyatini dunyo miqyosida baham ko‘rishimiz, tarqatishimizga bir imkoniyat tug‘iladi. Shu bois ushbu yangi yo‘nalishni tadqiq etish va o‘rganish dolzarb masalalardan.

XULOSA

Xulosa qilib aytganda, filologiya fanlari doktori, professor Sh.Abdinazimov va X.Tolibayevning ishida berilgan, -tilning sirlari insoniyatning asosiy sirlaridan biri bo‘lib qoladi. Chunki, rivoyatlarda Yaratguvchi odamni "olim" deb atab, farishtalarning unga bosh egishini buyurganida, Odamning ismlar ilmini bilishini nazarda tutgan edi ("Qissasi Rabg‘uziy"). Agar biz til sirlarini kashf eta olsak, ko‘p asrlik va yo‘qolgan bilimlar xazinasi ochiladi. Bizning maqsadimiz - til birligi anglatadigan madaniy "bo‘yoq"ni ko‘ra bilishga yordam berishdir. Bu belgi tilning ichki tuzilishini tashqi shaklga bog‘lay olish imkoniyatini beradi, -degan xulosani yuqoridagi fikrimizni isbotlash maqsadida keltiramiz.

Diskursga bo‘lgan qiziqish o‘tgan asrning 50-yillaridan boshlangan bo‘lsa, qoraqalpoq tilshunosligiga endi kirib kelayotgan yo‘nalishlardan va bu bo‘yicha hali maxsus tadqiqotlar e’lon qilinmagan. Bu holat ham diskursni, jumladan milliy madaniyatimizni aks ettiruvchi glyuttonik diskursni o‘rganishga bo‘lgan eng asosiy va muhim sabablardan biridir.

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THEORETICAL FOUNDATIONS FOR TEACHING LITERARY TRANSLATION AS A TOOL FOR INTERCULTURAL COMMUNICATION

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Annotatsiya. *Ushbu maqola madaniyatlararo suhbat orqali tarjimani o'rgatish g'oyasiga qaratilgan. Madaniyatlararo muloqot g'oyasini quyidagi asosiy toifalar tashkil etadi: "madaniyat - shaxs - dialog - matn - tushunish". Shu ma'noda tarjima nazariyasi so'nggi paytlarda madaniy hodisa sifatida ko'rilib, u lingvistik va madaniy to'siqlarni kesib o'tib, boshqa tilda va boshqa madaniyatda foydalanishga olib keladi.*
Kalit so'zlar: *samaradorlik, madaniyat, integratsiya, fanlar, tushunish, kompetentsiya, komponent, maqsadlar, tarjima, motivatsiya.*

Аннотация. *В данной статье рассматривается идея обучения переводу посредством межкультурной беседы. Идею диалога культур составляют следующие основные категории: «культура — личность — диалог — текст — понимание». В этом смысле перевод в последнее время рассматривается как культурное явление, поскольку он преодолевает языковые и культурные барьеры и приводит к созданию текста, который одновременно написан на другом языке и принадлежит другой культуре.*
Ключевые слова: *эффективность, культура, интеграция, дисциплины, понимание, компетенция, компонент, цели, перевод, мотивация.*

Abstract. *This thesis focuses on the idea of teaching translation through intercultural conversation. The following fundamental categories comprise the idea of the dialogue of cultures: "culture - personality - dialogue - text - comprehension." In this sense, translation has recently been viewed as a cultural phenomenon since it crosses linguistic and cultural barriers and results in writing that is both in a different language and a different culture.*
Key words: *effectiveness, culture, integration, disciplines, comprehension, competence, component, objectives, translation, motivation.*

The contemporary period demands that training quality be further raised. Reviving students' learning and independent creative work, as well as systematically enhancing the educational process, are all necessary to increase the quality of training in the translation area. Our belief that the training system for translators should be professionally rather than substantively oriented enables us to incorporate the teaching of literary translation as a means of

international communication into the reading comprehension course. The discipline of the language cycle in general and reading in the commonly understood sense in particular are not diminished in any way by such an approach. Furthermore, it requires in-depth knowledge, which is necessary for the translator to function as a professional.

However, the training of an interpreter requires a modification of professional language training. According to this method, a translator’s language, cultural, and psychological skills—which are bolstered by all other disciplines with a professional orientation—are the fundamental, system-forming component of their training. Training translators should be a priority for all academic fields. We are certain that teaching the translation of artistic works is possible and should be done, even though some specialists continue to believe that literary translation is a field of pure art. We acknowledge that literary translation depends to some degree on talent, but it also suggests the presence of translation competence and does not preclude the pursuit of answers to the particularly challenging literary issues that literary translation specialists have been discussing. It is essential to know two languages, but to do so "in a translational way," that is, in conjunction with the guidelines and requirements for moving from one culture to another or from one language’s units to another.

The translator needs to be skilled at finding appropriate ways to convey a particular idea and in coming up with unconventional solutions, particularly when faced with challenging problems. It necessitates a wide range of competencies, including the capacity to make the best decision given the entirety of extralinguistic and linguistic aspects. Since the primary objective of higher education is for students to gain a thorough understanding of the most varied sciences, improving their individual competencies will allow them to apply this knowledge in practice and in their professional endeavors, which will increase the effectiveness of classes as a means of accomplishing goals. Each special branch depends and specifies the general theory for it is the job of the general theory to reflect what is common to all types and varieties of translation while the special branches arc mainly concerned with the specifics of each genre.[10]

The primary means of enhancing reading comprehension effectiveness include the intricate resolution of practical and educational tasks, the provision of a communicative orientation of training, the integration of the activity with extracurricular activities, the use of age-appropriate teaching methods, forms of activity organization and control, and enhancing motivation for teaching literary translation. Contemporary psychologists concur that an individual’s motivation and needs are the primary determinants of the quality of activities performed and the outcomes obtained. Motivation, or a system of facts that determine human conduct, is what leads to purposeful activity, which in turn dictates the choice of means and procedures and their ordering to attain goals.

The purpose of professional translation is to familiarize the render with the source material; educational translation, as a linguistic subject taught in schools and special institutions, is one way to study the foreign language more deeply and consciously by incorporating its lexical, grammatical, and stylistic quirks into English texts. The meaning of the phrase "faithfulness of translation" should be established before discussing the fundamentals of the translation process. When the native language is used to convey the context’s content and stylistic quirks, the translation is deemed accurate.

[10] Muminov O.M. Tarjima nazariyasi va amaliyoti fanidan ma‘ruza matnlari. − O_zDJTU ilmiy kengashining 1 yig_ilishida muhokama qilingan va tasdiqlangan. − T.: O_zDJTU, 2006. − 46 b.

The nineteenth century saw the widespread development of literary approaches to translation. According to researcher R. Young, "the history of translation criticism does not impress until the century, with a number of exceptions." Therefore, according to R. Young, "there are no Platons and Aristotels" in the literary school of translation, who would provide their own standards for judging quality and formulate their study methods from the perspective of literary translation. The theory of translation is separated into two categories: general theory, which addresses the general features of translation in general, regardless of the type, and special branches, which focus on a theoretical description and analysis of the different kinds of translation, including official documents, technical and scientific literature, poetry, and fiction. Under the motivation as a psychological phenomenon, we, following P.M. Jacobson is understood as “a real, all noticed feature of a person’s psychic life, which is made into a chain of its acts leading to one or another action”.[11]

The general theory of translation has a well-defined topic: the complete translation process, including its outcomes, while taking into account all relevant variables. Since the general theory’s role is to reflect what is common to all types and varieties of translation, each special branch depends on and specifies the general theory, although the special branches are primarily concerned with the particulars of each genre. Although primarily a linguistic field, general theory of translation has tight ties to philology, sociology, anthropology, and other fields. Its foundation lies in applying the theory of linguistics to a particular kind of speech behavior, such as translating.

The theory of translation has its own subject matter (the process of translation) and uses the data from contrastive linguistics only as a starting point. In contrast, contrastive linguistics appears to compare various language systems in order to identify their similarities and distinctive features.

Which clauses best describe literary analysis of translation? Initially, it seems that several scholars have expressed a want to separate literary translation.

In many articles of literary criticism, the idea that literary translation, due to its aesthetic features, seems to be separate from other types of translation, is clearly slipping. Is it really? Not excluding the possibility of independent development of the theory of literary translation, it should be noted that it differs from other types of translation, which consists in the fact that the process of literary translation is characterized by the presence of critical thinking. Givi Gachechiladze, according to this, wrote that “an element of a text can be not only a word and a phrase with its own meaning, but also a literary image, a stylistic or a rhythmic element, etc., then there is a literary figure system of the original. This is a very subtle and correct remark. The above signs just make up a distinctive feature of literary speech.

From the perspective of the essence of the translation process, the theory of literary translation is an integral part of the general theory. Here are some researchers’ writings on the subject: "the task of the general theory of translation is precisely the opening of those general laws that are inherent in translation in general, despite the specifics of one or another of its varieties." If we think of the translation process as a type of linguistic activity that aims to recreate the content and form of a foreign language text in another language, it becomes clear why a literary translation demands a special ability, or, as they say, art.

[11] Бим И.Л. Методика обучения иностранному языку в школе: Учебное пособие. -М.: Просвещение, 2003. -159с.

Because of its efficacy, this knowledge-based approach is stable in terms of both subject matter and incentive force. Simultaneously, it is critical that students become proficient in the acts and procedures of this knowledge, as they are the primary drivers of their self-realization as unique persons. As a result, motivation must be discussed in relation to an individual’s internal requirements, interests, emotions, goals, and objectives, as well as the existence of reasons intended to alter its activities. Given the significance of motivation in teaching translation, the instructor must envision the processes and strategies that lead to its development.

The development of positive learning motivation is influenced by the methodologies, training materials, and the effective administration of the educational process. It is not acceptable to oversimplify the concept of motivation while thinking about it and figuring out how to create it. Motivation formation is not a teacher shifting ideas from outside the stated learning objectives and motives to the students’ already prepared minds. First and foremost, motive formation involves establishing the conditions necessary for the internal motivations for learning to emerge, for students to become aware of them, and for the motivational sphere to continue developing on its own.

Therefore, drawing inferences from the aforementioned, it is not at all unaffected by the reasons behind the student’s motivation to complete the task when developing the intercultural component of translation ability in the reading comprehension course. To offer the most valuable motives impetus, it is crucial to raise them to the level of full consciousness.

Professional translators always go beyond a general understanding of the text and recreate the author’s ideas in their entirety, depending not only on their own intuition and understanding of the text but also on the translation work principles that guide their translation practice and course. Whether we like it or not, translation is based on the idea that if we don’t address the issues that arise from accurately translating a text down to the level of individual words and phrases, we will be guilty of inaccuracy and suffer greatly in terms of quality. For this reason, from a professional perspective, translating is both an art and a school. The highest level of a translator’s creative talent across all of his competencies is the school of professional translation. All forms of art, including translation, have distinctive and unmatched processes. The methods used in translation, which represent collective rather than individual experience, can be replicated and internalized. Translation is the process of expressing something in the source language in the target language while maintaining stylistic and semantic equivalency.

The development of a linguistic personality—that is, a personality represented in a language that determines the processes of perception and understanding and reflects a picture of the world through language—occurs during the process of mastering these abilities, according to Yu.N. Karaulov. It can be formed "as the overcoming of cultural distance as a result of entering," "passing," through one’s own self, consciousness, and perspective of another culture.

Therefore, the challenges of developing a new type of translator’s linguistic personality should take center stage in the methods of teaching translation. In this sense, the student-translator’s cultural-linguistic personality—which is part of a particular linguacultural community—emerges when literary translation is taught with an emphasis on the correlation between cultural and linguistic consciousness, the unity of cultural succession, and the commonality of its forms.

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O‘ZBEK SHEVALARINING O‘RGANILISH TARIXI: ANDIJON SHEVASINING O‘ZIGA XOS XUSUSIYATLARI

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Annotatsiya. *Ushbu maqolada o‘zbek tilining tadqiq etilishiga asos bo‘lib xizmat qilgan davlat qonunlari, Prezident farmoyishlari haqidagi mulohazalar, shuningdek, o‘zbek shevalarining o‘rganilish tarixiga nazar tashlangan bo‘lib, unda shevalarning joylashuvi, ilk turlari haqida tilshunos olimlarning mulohazalari, qarashlari berib o‘tilgan.*
Kalit so‘zlar: *sheva, lahja, dialektal hudud, fonema, fonetik, leksik, grammatik tafovut.*

Abstract. *This article reviews state laws and presidential decrees that served as the basis for the study of the Uzbek language, as well as the history of the study of Uzbek dialects, and provides linguists' comments and views on the location of dialects and their early types.*
Keywords: *dialect, dialect, dialectal area, phoneme, phonetic, lexical, grammatical difference.*

Аннотация. *В статье рассматриваются государственные законы и указы президента, составляющие основу изучения узбекского языка, а также история изучения узбекских диалектов, излагаются мнения и взгляды лингвистов на локализацию диалектов и их первоначальные типы.*
Ключевые слова: *диалект, говор, диалектный ареал, фонема, фонетическое, лексическое, грамматическое различие.*

Shevalarni o‘rganish kechagi yoki bugungi dolzarb masala emas balki butun til yaralibtiki o‘z dolzarbligini yo‘qotmagan eng qamrovli masala bo‘lgan. Bunga sabab til hamisha rivojlanishda ekanligi yoxud aholi etnogenezi o‘zgarib aholi joylashuvi urbanizatsiyalashish hisobiga o‘zgarib borayotganidadir balki. Shuningdek rivojlanish asnosida tillar aro o‘zaro ta'sir ham rivojlanib borayotgani, chet tillarini o‘rganish asnosida o‘z tilidagi ayrim unsurlarni o‘zga tilda nutq jarayonida qorishtirish asnosida shevaga xos xususiyatlar yangi va dolzarb tus olayotgani ham ushbu mavzuning dolzarbligini oshiradi. Bu dolzarblik davlat siyosati masalasiga qadar chiqqani fikrimizning yorqin dalili. Jumladan O‘zbekiston Respublikasi Prezidentining 2016 yil 13 maydagi "Alisher Navoiy nomidagi Toshkent davlat o‘zbek tili va adabiyoti universitetini tashkil etish to‘g‘risida"gi PF-4797-sonli, 2019 yil 21 oktabrdagi "O‘zbek tilining davlat tili sifatidagi nufuzi va mavqeini tubdan oshirish chora tadbirlari to‘g‘risida"gi PF-5850-sonli, 2020 yil 20 oktabrdagi "Mamlakatimizda o‘zbek tilini yanada rivojlantirish va til siyosatini

takomillashtirish chora-tadbirlari to‘g‘risida”gi PF-6084- sonli Farmonlarida davlat tilini har tomonlama rivojlantirish bilan bir qatorda o‘zbek tilining qadimiy va boy sheva va dialektlarni chuqur o‘rganish, mintaqadagi boshqa tillarga o‘zaro hurmat e’tiborda bo‘lish masalalariga ham alohida ahamiyat qaratilgan [4].

O‘zbek shevalarini tadqiq etgan I.I. Zarubin ularni to‘rt guruhga bo‘lgan, ular: 1.Xiva guruhi, 2.Farg‘ona guruhi, 3.Toshkent guruhi, 4.Samarqand -Buxoro guruhi. E.D. Polivanov shevalarni meditatsiya hamda gibridatsiya holatlarini kuzatib misollar bilan o‘rgangan holda o‘zbek shevalarini uch guruhga bo‘lib o‘rgangan. Ular: 1. Eronlashgan shevalar; 2. O‘quz lahjasi; 3. Qipchoq lahjasi. Ushbu sheva guruhlari o‘zaro tiplarga ham bo‘lingan. Professor G‘ozi Olim o‘zbek shevalarini uch lahjaga bo‘lib tadqiq etgan. Ular:1. o‘zbek -qipchoq lahjasi, 2. Turk-barlos lahjasi; 3. Xiva-Urganch lahjasi. Professor A.K. Borovkov esa o‘zi tahlil etgan ma’lumotlar asosida o‘zbek shevalarini katta ikki guruhga bo‘lgan: 1. “a” lovchi shevalar, 2. “o” lovchi shevalar. Keyinchalik Professor tarixiy -lingvistik unsurlarni ham tadqiq etgan holda shevalarni yana to‘rt guruhga bo‘lishni taklif etdi. Bular: 1. O‘rta o‘zbek dialekti; 2. Shayboniy-Tojik yoki “dj” lovchi shevalar; 3. Janubiy Xorazm dialekti; 4.Alohida guruh o‘zbek shevalari.

Bugungi kunga qadar tayanch bo‘lib xizmat qilayotgan g‘oya ya’ni shevalarning uch guruhga ya’ni : qarluq-chigil-uyg‘ur , qipchoq, o‘g‘uz guruhlariga bo‘linishi esa professor V.V. Reshetov tasnifiga asoslanadi. Andijon shevasi esa Toshkent, Namangan, Farg‘ona va bir qator shahar shevalari bilan bir qatorda Qarluq-chigil-uyg‘ur lahjasi guruhiga kiradi. Qarluq-chigil-uyg‘ur lahjasiga kiruvchi dialekt va shevalar ayrim individual xususiyatlarni saqlash va saqlamasligi holatiga ko‘ra ichki yana to‘rt guruhga bo‘linadi. Ular: 1. Farg‘ona guruh shevalari, 2. Toshkent guruh shevalari, 3. Qarshi guruh shevalari, 4. Shimoliy o‘zbek guruh shevalari, Farg‘ona guruh shevalariga: Andijon -Shaxrixon dialekti, Namangan dialekti, O‘sh-O‘zgan dialekti, Marg‘ilon-Qo‘qon dialekti.

XX asrning 50-90 - yillarida o‘zbek tilshunos olimlari ilmiy tadqiqotlar olib bordilar. Jumladan F. Abdullayev, F. SHermatov, B. Jo‘rayev, A. Aliyev, S. Rahimov o‘zbek shevalarini guruhlab o‘rgangan. F.Abdullayev Xorazm viloyati shevalarini guruhlab o‘rgangan, ya’ni ushbu shevani ikkita : o‘g‘uz va qipchoq lahjalari guruhlariga to‘g‘ri keltirdi. B.Jovrayev, A.SHermatov esa Qashqadaryo shevasini tadqiq etgan tilshunoslar hisoblanadi. Bunda ular Qashqadaryo shevalarini yuqori va quyi guruhlarga bo‘lib o‘rgangan hisoblanadi. A.Aliyev esa Namangan viloyat shevalarini tadqiq etgan. Shuningdek S.Rahimov Surhondaryo shevalarini o‘rgangan va ularni ikki ya’ni: 1. “j” lovchi hamda 2. “y” lovchi shevalarga bo‘lib tadqiq etgan tilshunosdir. Ayrim manbaalarda oraliq shevalar haqida ham fikrlar mavjud. T.Qudratov oraliq shevalarni tadqiq etgan olim hisoblanadi.

Inson yaralibtiki til u bilan doim rivojda va o‘sishda, bunda inson o‘z tilining mohiyati, kelib chiqishi haqida bilimga ega bo‘lmog‘i inson zimmasidagi qarz ham farz deb hisoblaymiz. Andijon shevasining naqadar salmoqli, jozibador ekanligiga misol ushbu diyorda tavallud topgan shoir-u fozillardir. Jumladan Zaxiriddin Muhammad Bobur, Cho‘lpon, Muhammad Yusuf kabi so‘z san’ati sohiblari fikrimizning isbotidir.

Areal lingvistika asosida ma’lum hududlarga bo‘linishni yoqlamagan Diyora Jahongirova [3] Farg‘ona viloyati shevalarini o‘rganilishini areal lingvistika asosidagi Farg‘ona vodiysidagi dialektal zonalar Janubiy-sharqiy Farg‘ona dialektal zonasi (Andijon-O‘sh), Janubiy-g‘arbiy Farg‘ona dialektal zonasi (Marg‘ilon-Qo‘qon), Shimoliy Farg‘ona dialektal zonasi (Namangan) tarzida uchta katta guruhga ajratilganligi haqidagi qarashlarni ayrim sabablarga ko‘ra noo‘rin deb hisoblaydi. Bunday hududlashtirish asosida ayrim hududlardagi bilingvizm hodisasi mavjud

bo‘lgan hududlar o‘rganilmay chetda qolishi mumkinligini, jumladan Andijondagi Paxtaobod tumanidagi Tojikqishloq kabilarni misol qilib keltiradi. Bunda hududlar kesimida emas balki qirg‘iz dialketal zonasi, tojik dilalektal zonasi kabi hududlarga bo‘lish taklifini kiritadi. Lekin bu qarash bizning fikrimizcha ham o‘rinli chunki xalqlar aro aralashuv, yuqorida aytib o‘tganimizday urbanizatsiya hamda rivojlanish asosida ayrim hudulardagi aholi qatlamini o‘zgarishi natijasida bu yerdagi til qatlami ham o‘zgaradi. Shu sababdan tillarga asoslangan dialketal hududlar asosida ish olib borish alohida ahamiyatga ega. Bunda bu ma’lumotlarni ham yangilash imkoni mavjud bo‘ladi. Qirg‘iz-o‘zbek shevasi vakillari hududi har besh yilda yangilab borilishi taqozo etadi.

Andijon shevasi vakillari Farg‘ona vodiysining ko‘p millatli hudulari orasida ko‘p tillilik hodisalari bilan ajralib turadi. Andijon shevasi o‘z tarixida adabiyotga, tilga katta e’tibor qaratgan yuksak ma’naviyatli insonlar diyori hisoblangan. Andijon olimlar, shoirlar, bastakorlar, san’atkorlar, sportchilar yetishtirgan diyordir.

Andijon shevasi vakillarining nutqi adabiy o‘zbek tiliga juda yaqin ammo ushbu sheva vakillarining chet tilida so‘zlashuv jarayoniga ayrim to‘sqinchiliklar sezilishi mumkin. Bu borada turli qarashlar mavjud. Masalan Anarbayeva Marifatxon Murodiljonovna o‘zining “Andijon Turk-Barloslari Shevasining o‘ziga xos (Fonetik, Leksik Va Morfologik) Xususiyatlari “ maqolasida shunday fikrlarni berib o‘tadi: “O‘zbek tilining Andijon turk-barloslari shevasida unli fonemalarning tilning gorizontal harakati bilan belgilanuvchi kontrast juftlari bor va shu sababli singarmonizm qonuniyati ma’lum darajada saqlangan. Bu shevada qo‘llaniladigan unli fonemalar miqdori o‘zbek adabiy tili alfavitidagi hamda Farg‘ona vodiysining Namangan, Marg‘ilon, Farg‘ona va Qo‘qon shahar shevalari va Toshkent, Samarqand, Buxoro shevalaridagi unlilar miqdoridan ko‘pdir. Bu holat adabiy til orfografiyasi bilan Andijon turk-barloslari shevasi o‘rtasida ziddiyat uncha sezilmaydi, balki orfografiyada yo‘q unli fonemalarni sheva vakillari o‘z talaffuzlari asosida o‘qib, matnni erkin tushunaveradilar. So‘z yuritilayotgan shevaning leksik qatlami adabiy tilning leksik qatlamidan keskin farq qiladigan darajada emas, mavjud fonetik, leksik, va grammatik tafovutlar esa nutq jarayonida fikr olishuviga mutlaqo ta’sir etmaydi. Aksincha, ularning bazilari adabiy tilni boyitishga xizmat qilishi tabiiydir “ [1].

Adijon shevasi tarixiy jihatdan Chig‘illarga borib taqaladi. Bu o‘sha davrlarda O‘zgand shahri Chig‘illarning poytaxti bo‘lgan va keyinroq Andijonga ko‘chishi bilan bog‘liq voqealarga borib taqaladi. Andijon shevasi kelib chiqishi haqidagi shunday qarashlar mavjud:” XII asrlargacha O‘zgand chigillarning poytaxti bo’lib kelgan, keyinchalik u Andijonga ko’chadi va bunda turkiy-o‘zbek tili rivoj topadi, andijon shevasi yuzaga keladi va u O‘rta Osiyoda va undan tashqarida, ya’ni Xurosongacha tarqaladi. Alisher Navoiy va zamondoshlari ham o’z asarlarini qariyb shu lahja asosida yozganlar.

Andijon shevasining tarixi qadimgi davrlarga borib taqaladi va bu sheva vakillarining asosiy qismi turkiy tillarda so‘zlashuvchilar bo‘lib, Andijon shevasi XV-XVI asrlarda butun O‘rta Osiyo hamda Movarounnahrdagi adabiy tilga tayanch til vazifasini bajargan. Bu borada ko‘plab sharqshunos olimlar o‘z fikrlarini bildirib o‘tganlar. Jumladan Professor A.Y. Yakubovskiy ta’kidlab o‘tganidek : “Mo‘gullar zamonida Farg‘onadagi talay shaharlar turk shaharlariga aylandi. Ulardan ba’zilari, masalan, Andijon turk madaniyati, ayniqsa turk tilining chinakam markaziga aylandi”[7]. Andijon Temuriylar davrida ham rivojlangan shaharlar qatorida edi. Farg‘ona vodiysining markazi sifatida tan olingan ushbu shahar shevasi barcha hududlar uchun na’munadagi ustun shevaga aylandi. Bu borada akademik V.V.Bartold shunday

ta’kidlaydi: “XV asr oxirida Andijon Farg‘onadagi shaharlarning ko‘plaridan turk tilining ustun turishi jihatidan farq qiladi” [5].

Andijon shevasi to‘g‘risida Boburnomada shunday fikrlar suriladi: “Eli turktur va shahar bozorisida turkiy tilni bilmas kishi yuqtur”[6]. Shuningdek Bobur Marg‘ilon hamda Axsi shaharlari vakillari sort tilida gaplashishini Andijon shahri vakillari esa turk tilida so‘zlashishini ta’kidlab o‘tganlar. Mo‘g‘ullar davrida so‘g‘d tilida so‘zlashuvchi aholining aksariyati turk tilida so‘zlashishni boshladi. Bu davrda Andijon aholisining ko‘p qismi esa butunlay turk tilida suhbatlashishni boshladilar.

O‘rta Osiyo Rossiyaga qo‘shib olingandan so‘ng bu Shahar sobiq Turkiston davlatiga qo‘shib olindi. Shundan boshlab Rus madaniyatiga qiziqish boshlandi va sanoat rivojlandi,buning natijasida ruslashish va yevropalashish rivojlandi, buning ta’siri aholi so‘zlashishiga ham ta’sir qildi. Bobur asarlarining tili aynan Andijon shevasida yozilgandir. Shuningdek Navoiy yaratgan ijod namunalari ham turkiy tilning Andijon shevasi asos bo‘lgan variantlari hisoblanadi. Bobur va Navoiy ishlarini keyinchalik Furqat, Muqumiy, Zayqiy, Niyoziy kabi ilm ahli o‘z badiiy asarlarida davom ettirdi va bu borada Andijon shevasi hozirgi o‘zbek adabiy tili tashkillanishida katta ro‘l o‘ynadi. Andijon shahrida o‘zbeklardan tashqari uyg‘ur, tatar, rus, arman, tojik, yahudiy, qirg‘iz, qozoq kabi millat vakillari yashaydi va ularning tillari o‘zaro diskurs jarayonida bir-biriga ta’sir qiladi va ko‘plab interferensiyalar paydo bo‘ladi. S. Ibrohimov “ O‘zbek tilining Andijon shevasi ”kitobida :”Andijon shevasi Andijon shahridan tashqari ko‘plab hududlada tarqalgan. Andijondagi Qipchoq-qoraqalpoq, Saroy, Nayman-turk tip shevalarida so‘zlashuvchilardan boshqalar asosan Andijon shevasida gaplashadilar “-deb fikr yuritadi [2].

Hozirgi andijon shevasi “y” lovchi o’zbek shevalarining alohida keng tarmog‘idir. Bu shevani o’zbek tilining boshqa shahar shevalaridan farqlovchi bosh va muhim belgilari 9 unli fonemali ekanligi, x va h undoshlarining keskin farqlanishi, I-II shaxs kishilik olmoshlarining (men), (sen) tarzida aytilishi, uz olmoshining II shaxs ko’plik va hurmatlash formasida o’ziynar shaklida ishlatilishi, oxirida burun ng undoshi bo’lgan fe’llarga -lar qo’shimchasi qo’shilganda -narga aylanib: keliynar, boriynar (ad. tilda kelinglar, boringlar) formasida kelishi, birinchi qismi -ib orqali yasalgan ravishdosh, ikkinchi qismi qo‘ymoq fe’lidan iborat bo’lgan va ad. orf. deb qo’y, olib qo’y kabi qo’shma fe’llar deppo’y(di), oppo’y-(di) tarzida talaffuz etilishi va shu kabilardir .” [1].

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

LEXICOLOGY AND ITS OBJECT

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Abstract. *This article explores the definition, scope, and relevance of lexicology within linguistics and language learning. It examines the structural, semantic, and historical aspects of words, emphasizing their role in theoretical and applied linguistics. Connections between lexicology and related fields such as phonetics, stylistics, and grammar are analyzed. Special attention is given to word motivation and how lexicological principles assist in vocabulary acquisition, dictionary creation, and semantic understanding.*
Key words: *lexicology, phonetics, meaning, structure, fundamental unit, borrowed, words, vocabulary.*

Аннотация. *В данной статье рассматриваются определение, область и значимость лексикологии в рамках лингвистики и изучения языков. Анализируются структурные, семантические и исторические аспекты слов, подчеркивая их роль в теоретической и прикладной лингвистике. Особое внимание уделяется связям лексикологии с такими областями, как фонетика, стилистика и грамматика. Также рассматривается мотивация слов и то, как лексикологические принципы способствуют усвоению словарного запаса, составлению словарей и пониманию значений.*
Ключевые слова: *лексикология, фонетика, значение, структура, основная единица, заимствованные, слова, словарный запас.*

Annotatsiya. *Ushbu maqolada leksikologiyaning ta'rifi, doirasi va tilshunoslik hamda til o'rganishdagi ahamiyati tahlil qilinadi. So'zlarning tuzilishi, semantikasi va tarixiy taraqqiyoti yoritilib, leksikologiyaning nazariy va amaliy tilshunoslikdagi o'rni ko'rsatib beriladi. Fonetika, uslubiyat va grammatika bilan bog'liqligi hamda so'z motivatsiyasi haqida fikr yuritiladi. Leksikologik tamoyillar lug'at boyligini egallash, lug'atlar tuzish va ma'nolarni chuqur anglashda qanday yordam berishi ko'rsatilgan.*
Kalit so'zlar: *leksikologiya, fonetika, ma'no, tuzilish, asosiy birlik, o'zlashtirilgan, so'zlar, lug'at.*

Introduction

Lexicology, as a subfield of linguistics, is dedicated to the study of words—their origin, structure, meaning, and use within a language. Derived from the Greek words *lexis* (word) and *logos* (study), lexicology encompasses both theoretical and practical dimensions of language

analysis. It investigates how words function as the basic units of communication and how they interact with other linguistic components such as phonetics, grammar, and stylistics. In an age of growing multilingualism and digital communication, understanding the nature of words has become increasingly significant for both linguists and language learners [1].

This article provides a comprehensive exploration of lexicology’s definition, scope, and relevance. It delves into the structural, semantic, and historical aspects of words while analyzing the interconnections between lexicology and related linguistic fields. Special attention is paid to the concept of word motivation and its implications for vocabulary acquisition, dictionary compilation, and semantic analysis. By bridging theoretical perspectives with practical applications, this study highlights the central role lexicology plays in both linguistic research and language education.

Lexicology’s role and relationships

Lexicology, as a distinct branch of linguistics, has been extensively studied from various theoretical and applied perspectives. Foundational works by Jackson and Amvela (2000) define lexicology as the study of the lexical system of a language, emphasizing the nature, structure, and use of words. Bauer expands this understanding by highlighting lexicology’s role in describing and explaining the evolution and organization of vocabulary across languages [2]. Lipka further explores how lexicology intersects with morphology, semantics, and etymology, providing insights into word formation processes such as neologisms and loanwords [7]. The field is traditionally divided into general and special lexicology, where the former studies vocabulary universally, and the latter focuses on the lexicon of specific languages, including historical and descriptive approaches [6]. This bifurcation underscores the complexity and depth of lexicological study.

Lexicology’s relationships with other linguistic subfields such as phonetics, stylistics, and grammar are well documented. Scholars note that phonemes form the acoustic basis of words, while stylistics examines vocabulary choices in context, and grammar links words to syntactic structures [5]. The concept of motivation, critical to lexicology, explains how phonetic, morphological, and semantic factors influence word meaning and formation [8]. Examples such as onomatopoeic words ("hiss," "bang") and metaphorical extensions ("mouth" of a river) illustrate these motivational types. Applied lexicology plays a pivotal role in language learning and lexicography. Nation emphasizes that understanding word formation and semantic relations enhances vocabulary acquisition and teaching [8]. Cowie stresses that lexicological theories provide essential frameworks for dictionary compilation, guiding decisions about definitions, usage, and grammatical properties [3].

While these studies offer comprehensive insights, ongoing research continues to explore how lexicology adapts to evolving linguistic phenomena such as digital communication and cross-linguistic influences. This article aims to synthesize these perspectives and highlight lexicology’s enduring relevance in both theoretical linguistics and practical language education. The study focuses on synthesizing theoretical frameworks and empirical observations from previous research to present a cohesive understanding of lexicology. Key linguistic concepts such as word structure, motivation, and interrelations with phonetics, stylistics, and grammar are examined through comparative analysis of existing literature. No primary data collection or experimental procedures were conducted; instead, the emphasis is on evaluating and integrating the findings and theories proposed by established experts in the field. The research scope primarily addresses lexicology within English language studies but draws on examples and

insights applicable to other languages to demonstrate general principles. Limitations of the methodology include its reliance on existing literature, which may omit emerging or less-documented phenomena in lexicology. Nonetheless, this approach allows for a thorough theoretical discussion that informs both academic inquiry and applied linguistics, especially in vocabulary teaching and lexicography.

Definition and scope of lexicology

Lexicology is recognized as the systematic study of words, encompassing their structure, meaning, and evolution. It is traditionally divided into general lexicology, which examines vocabulary across languages, and special lexicology, which focuses on the vocabulary of a specific language [6]. These dual approach allows for both comparative and descriptive analyses, facilitating a comprehensive understanding of lexical systems. When using interdisciplinary connections, lexicology intersects with various linguistic subfields, notably phonetics, grammar, and stylistics. Phonetics provides insights into the sound structures of words, essential for understanding pronunciation and acoustic patterns. Grammar relates words to syntactic structures, influencing their morphological forms and syntactic behavior. Stylistics examines how word choice varies across different contexts, contributing to the expressive function of language [3]. When it comes to word motivation, the concept of word motivation explores the relationship between a word’s form and its meaning. Phonetic motivation is evident in onomatopoeic words like "buzz" and "hiss," where the sound imitates the source. Morphological motivation is observed in derived forms such as "rethink," where the structure indicates a semantic shift. Semantic motivation involves metaphorical extensions, as in the word "mouth," which denotes both a facial feature and an opening like the mouth of a river [4]. Also, applied relevance in language learning, lexicology plays a pivotal role in language education and lexicography. Understanding word formation processes and semantic relationships aids in vocabulary acquisition, enabling learners to infer meanings of unfamiliar words and expand their lexical knowledge efficiently. In lexicography, lexicological principles guide the systematic description of word meanings, usage, and grammatical properties, ensuring the creation of comprehensive and user-friendly dictionaries [4].

Future directions also important while lexicology has established foundational principles, emerging linguistic phenomena such as digital communication, language contact, and globalization-induced borrowing present new challenges and opportunities. Future research should explore these areas to adapt lexicological theories to the evolving linguistic landscape, ensuring their continued relevance in understanding and teaching language.

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LANGUAGE CLASSIFICATION: UNDERSTANDING LINGUISTIC STRUCTURES AND EVOLUTION

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Abstract. *Classifying languages is essential to comprehending how they have changed over time and how they relate to one another in different communities. This study highlights the sociolinguistic factors that influence language structures while examining linguistic classification using typological and genetic methods. This study examines important language families, structural changes, and social processes influencing language classification using knowledge from scholarly sources and linguistic research. This article also emphasizes the ways in which migration, social relationships, and technical developments affect language classification across time. The results advance our knowledge of how languages change, interact, and affect communication.*

Key words: *Language, Classification, Sociolinguistic, Typological, Genetic, Migration, Communication.*

Аннотация. *Классификация языков необходима для понимания того, как они изменялись со временем и как они соотносятся друг с другом в разных сообществах. Это исследование подчеркивает социолингвистические факторы, влияющие на языковые структуры, при этом рассматривая языковую классификацию с использованием типологических и генетических методов. Это исследование рассматривает важные языковые семьи, структурные изменения и социальные процессы, влияющие на классификацию языков, используя знания из научных источников и лингвистических исследований. Эта статья также подчеркивает, как миграция, социальные отношения и технические разработки влияют на классификацию языков с течением времени. Результаты продвигают наше понимание того, как языки изменяются, взаимодействуют и влияют на общение.*

Ключевые слова: *Язык, Классификация, Социолингвистический, Типологический, Генетический, Миграция, Коммуникация.*

Annotatsiya. *Tillarning tasnifi ularning vaqt o'tishi davomida qanday o'zgarishini va turli jamoalarda bir-biriga qanday aloqada bo'lishini tushunish uchun muhimdir. Ushbu tadqiqot til tasnifini tipologik va genetik usullar yordamida o'rganar ekan, til tuzilmalariga ta'sir etuvchi sotsiolingvistik omillarni ta'kidlaydi. Tadqiqotda muhim til oilalari, tuzilish*

o‘zgarishlari va til tasnifiga ta’sir etuvchi ijtimoiy jarayonlar ilmiy manbalar va lingvistik tadqiqotlardan olingan bilimlar asosida ko‘rib chiqiladi. Ushbu maqola shuningdek, migratsiya, ijtimoiy munosabatlar va texnik taraqqiyotning vaqt o‘tishi davomida til tasnifiga qanday ta’sir ko‘rsatishini ham ta’kidlaydi. Natijalarimiz tillarning qanday o‘zgarishi, o‘zaro ta’siri va muloqotga ta’sirini yanada chuqurroq tushunishimizga yordam beradi.

Kalit so‘zlar: *Til, Tasnif, Sotsiolingvistik, Tipologik, Genetik, Migratsiya, Muloqot.*

Introduction

A basic procedure in linguistics is language classification, which groups languages according to structural, historical, and social characteristics. To track language evolution, comprehend linguistic linkages, and examine cross-cultural communication trends, scholars employ classification techniques. Linguistic study is dominated by two main categorization techniques: genetic classification and typological classification [2]. Languages are categorized typologically based on structural characteristics, including phonetic, syntactic, and morphological aspects. Genetic categorization, on the other hand, identifies historical ties between linguistic families and tracks the ancestry of languages. Migration, technological advancement, and cross-cultural interactions are examples of sociolinguistic factors that have shaped language classification over time. Beyond the classroom, language categorization is crucial because it aids linguists in the analysis of global linguistic diversity, the development of translation systems, and the preservation of endangered languages. This essay examines the various methods of language classification while taking sociolinguistic viewpoints that influence language evolution and change into account.

Literature review and methodology

Language classification requires a methodical, multidisciplinary methodology that incorporates sociolinguistic, typological, and historical viewpoints. In order to analyze existing frameworks in linguistic classification, this study uses a qualitative research technique, incorporating primary sources like Fernando Zúñiga’s contributions to linguistic typology and Ekaterina Chirkova’s critique of language classification principles. Furthermore, linguistic research databases and reliable Britannica references offer additional information, allowing for a thorough analysis of the structural and social factors that influence language classification.

To begin with, to assess genetic and typological traits among various languages, comparative linguistic analysis is utilized. By making it easier to identify morphosyntactic patterns and phonological linkages, this comparison approach illuminates the linguistic characteristics that distinguish different classification models [3]. This study emphasizes the intricate relationship between inherited language features and adaptive linguistic development by looking at linguistic variance and genealogical lineage [4].

Following this, the historical review places theoretical developments in historical linguistics and philological research in context by charting the evolution of language categorization techniques. This examination clarifies the theoretical underpinnings of linguistic taxonomy by tracing the development from early descriptive frameworks to modern classification models [1]. Additionally, the significance of proto-language reconstruction in tracking linguistic origins and diachronic language alterations is examined, along with its role in genetic classification [7].

Ultimately, sociolinguistic contextualization offers a lens through which to analyze how migration, education, and technological development affect the way languages are classified. Language contact phenomena, bilingualism, and policy-driven standardization are examples of external sociocultural forces that shape linguistic variety in addition to its intrinsic structural characteristics [6]. This study examines the degree to which technological advancements and cultural interactions change classification paradigms, necessitating a flexible and dynamic approach to linguistic classification [5]. This study provides a comprehensive framework for understanding the complex nature of language classification and its wider consequences in historical and modern linguistic analysis by combining academic viewpoints and linguistic ideas.

Results and discussions

Classification by Type Typological classification separates languages into the following categories based on their structural characteristics: Isolating Languages: These languages don’t need intricate morphological frameworks to express meaning; instead, they rely on individual words. Vietnamese and Mandarin Chinese are two examples. Agglutinative Languages: In these languages, morphemes are combined to produce words without undergoing major changes. Swahili, Finnish, and Turkish are a few examples. Morphemes that combine several grammatical meanings into a single unit are used in fusional languages. Spanish, Latin, and Russian are a few examples. [8]

By grouping languages into families according to common historical history, genetic classification follows linguistic lineage. Among the major language families are: English, Hindi, Russian, and numerous European languages are all considered Indo-European. Sino-Tibetan: Consists of Burmese, Chinese, and other dialects. Arabic, Hebrew, and Amharic are among the languages covered by Afro-Asiatic. Hungarian, Finnish, and Estonian are all included in Uralic. Linguists can comprehend linguistic migration patterns and discover historical links between languages using genetic classification.

Language development and classification are greatly influenced by sociolinguistic elements in addition to structural and genetic classification: Borrowed vocabulary and linguistic hybridization are the effects of migration and language contact between various populations. Education, specifically standardized curricula, reinforces classification structures by dictating which dialects or languages are taught. Technology: New language trends brought about by digital communication platforms could put conventional classification models to the test.[3]

The results show that while typological and genetic classifications offer organized frameworks for language study, sociolinguistic factors also play a role in the dynamic changes in language. For instance, linguistic blending brought about by worldwide migration patterns has resulted in pidgin languages and hybrid dialects that do not cleanly fit into conventional classification groups. Rigid classification frameworks are further challenged by bilingualism and code-switching, which show how language users modify their communication patterns according to social situation. Furthermore, because AI-driven language models rely on probabilistic associations rather than rigid classification systems, the development of artificial intelligence and automated translation is changing the way linguists define linguistic borders. These new developments imply that in order to represent the linguistic diversity of the real world, future methods of language classification could need to include more adaptable, flexible models.

Conclusion

To comprehend linguistic diversity, historical ties, and sociocultural influences on communication, language classification is crucial. A more thorough understanding of language

structures and their relationships across various societies is provided to scholars by combining typological, genetic, and sociolinguistic viewpoints. In order to improve categorization models, future research should look at multilingual identities, digital communication trends, and AI-driven linguistic analysis as globalization speeds up linguistic change. Maintaining the preservation of linguistic history and capturing changing speech patterns require linguists to keep modifying language classification schemes.

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13.00.00 – PEDAGOGICAL SCIENCES

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13.00.00 - PEDAGOGIKA FANLARI

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13.00.00 – ПЕДАГОГИЧЕСКИЕ НАУКИ

THE IMPACT OF TEACHING AND LEARNING ENGLISH LANGUAGE WITH CULTURAL COMPETENCE

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Abstract. *This article is about learning language and teaching to young people using cultural competence. The main importance and education field are shown as well as effect too. The role of globalization and integration are expressed with explanations.*
Key words: *cultural competence, globalization, integrative approach, learning, potential education, students, teaching, teachers.*

Annotatsiya. *Ushbu maqola til o'rganish va madaniy kompetensiyadan foydalangan holda yoshlarga o'rgatishga asoslanadi. Talabalarga asosiy ahamiyati va ta'lim sohasi, shuningdek, ta'siri ham ko'rsatilgan. Globallashuv va integratsiyaning roli tushuntirishlar maqolada mufassal ifodalangan.*
Kalit so'zlar: *madaniy kompetentsiya, globallashuv, integrativ yondashuv, o'rganish, potentsial ta'lim, talabalar, o'qitish, o'qituvchilar.*

Аннотация. *Эта статья посвящена изучению языка и преподаванию молодым людям с использованием культурной компетенции. Показаны основное значение и область образования, а также эффект. Роль глобализации и интеграции выражена с пояснениями.*
Ключевые слова: *культурная компетентность, глобализация, интегративный подход, обучение, потенциальное образование, студенты, преподавание, преподаватели.*

"Culturally responsive teaching in foreign language is culturally and linguistically diverse students who have been marginalized in schools build their skill and capacity to do rigorous work. The focus is not on motivation but on improving their brainpower and information processing skills."

"Cultural competence in ESL refers to the ability to understand, communicate with, and effectively interact with people across cultures. It involves being aware of one's own world view, developing positive attitudes towards cultural differences, and gaining knowledge of different cultural practices and world views. We say that language and culture are inextricably linked. The nuances, idioms, and colloquialisms of a language are often deeply rooted in the

cultural context. Understanding the culture of a language can provide insights into its subtleties and complexities, which are crucial for effective communication. Students are learning in any conditions, through interactive and modern methods. They are learning through integrated culture. It is no exaggeration to say that culture changes every day. There are English Language Education & Pedagogy sufficient skills or new methods to ensure that the lessons are being delivered correctly to students, but they may not be effective. Developing cultural competence helps learners to be more empathetic and understanding towards people from different backgrounds. This fosters a learning environment that is respectful, inclusive, and conducive to effective language acquisition. If we unite foreign professors with our local professors, develop new principles through discussions and experiences, there will be a new change in the field of education for the potential of our country.

Using modern technologies, delivering lessons through presentations, using online tests and programs, even before them, currently not with markers, but with special gadgets (tablets) to check students, automatically provide lesson syllabi through high technologies, creating projects, journaling, and entering grades or scores for lessons are more efficient and useful. Students also face this issue: they have a choice of modifying their cultural boundaries and adapting to the culture around them or holding on to their native culture and surrounding themselves with people from their own country. In addition above, classroom activities that promote cultural exchange, such as group discussions, role-plays, and cultural presentations, can be highly effective. These interactions allow students to share their own cultural backgrounds and learn from others, fostering mutual respect and understanding.

The students who decide to hold on to their native culture are those who experience the most problems in their university life and who encounter frequent culture shocks. But international students who adapt themselves to the culture surrounding them (and who interact more with domestic students) will increase their knowledge of the domestic culture, which may help them to “blend in” more. Learning about different cultures fosters empathy and tolerance. Students who are exposed to diverse cultures are more likely to develop open-mindedness and respect for others. One significant case study comes from the general field of education, emphasizing the profound impact of cultural competence on students’ emotional, social, and academic well-being. Educators (teachers or professors) who understand the cultural backgrounds, holidays, family structures, and values of their students can create more inclusive and effective learning environments. Culturally competent teachers are better equipped to build authentic relationships with students from diverse backgrounds, reducing the likelihood of misunderstandings and fostering a positive classroom atmosphere. The key to this success lies in the educators’ ability to not only accept but also respect and incorporate cultural differences into the core of their teaching practices.

When a student is taught English or industry-related English, teachers will develop an understanding of that industry (for example, Business English, Technical writing, Engineering). Such cases mean that motivations, knowledge, skills, qualifications, the cultural integrity of the teacher are invisible in the student, and the merging of the opinions of the two sides in the educational process. When we talked about his experience in the field of education, Prof. Yung Shin, a visiting PhD from Ajou University in South Korea, said: GPA (grade point average) is very important in universities in South Korea. Students are mainly given directions for lessons and tasks related to lesson syllabi. Students themselves should submit these projects and lessons to their teacher at the specified time through libraries, special conferences, exchanges of ideas.

Only then will he get the grades and GPA he needs, says Yung Seok Shin. At South Korea’s Sogang University, a cross-cultural approach has been introduced in the training of students in the field, which includes knowledge about the specific integrative features of different cultures, the ability to interpret information about their cultures, their qualities, that is, empathy, tolerance [3; p.7-6] .

Another interesting fact we should point out is that the cross-cultural approach of the English scientist H. Cairns not only examines the similarities and differences in our knowledge about people, but also examines the gaps in our traditional knowledge by studying people from different cultures. In its narrowest form, cross-cultural research simply involves participants from different cultural backgrounds and examines the differences that exist. In 1951, Kluckhohn explained culture as sharing a pattern of thinking, feeling, reacting, and problem-solving.

Culture is a dynamic relational process of shared meanings that originate in the interactions between individuals. In 2010, Gregory and colleagues emphasized that culture must be considered in historical, social, political, and economic contexts. In 2004, Betancourt defined culture as a pattern of learned beliefs, values, and behavior that are shared within a group; it includes language, styles of communication, practices, customs, and views on roles and relationships. In the year of 2004, Edgar Schein described a culture as “shared beliefs, values, and assumptions of a group of people who learn from one another and teach to others that their behaviors, attitudes, and perspectives are the correct ways to think, act, and feel.” Psychologists argue that unfamiliar culture negatively affects an individual’s sense-making mechanisms and determine their behavioral responses. As a result, individuals cannot accurately perceive, interpret, explain, and predict the behavior of people with different cultural background(s).

A broad view of the cross-cultural approach refers to cultural identity or truth and psychological principles (some people reliably represent all cultures) or universal or culturally specific understandings that represent different cultures [4; p.87]. After these interpretations, the content of the cultural competence of students is reflected as follows, that is, we emphasize that it is important to develop cultural knowledge by integrating traditional knowledge with modern knowledge, and in turn, cultural knowledge is developed by imitating foreign English Language Education & Pedagogy experts, great personalities and scientists. It is no exaggeration to say that it is achieved (down to the manner of speaking, demeanor and even the expressions used). The processes of globalization and integration taking place in all aspects of human life in the world community, its main feature, multiculturalism, are expressed in the educational system.

Today, social demand is for professionals who strive for responsible and effective professional and social activity, cooperation, mutual understanding and coexistence without conflict with representatives of different cultures, that is, they have cultural competence. Culture is seen by them as an ever-improving mechanism of connecting human activity at all levels of social division. Other recognized researchers define this concept as: “the total volume of human creativity” [2; p. 608] “a collection of non-genetically inherited information in the field of human behavior” [1; p.352] “a system of symbols representing the world” [5; p.26] “something introduced into nature by man” (A. Disterweg) and others.

In the modern world, relations between different peoples and countries are strengthening, and the interaction of cultures is increasing. In addition, the process of globalization, the development of science, technology and technology, unites the population of different countries and at the same time standardizes their living conditions, so that acquaintance with the “benefits of civilization” can lead to the loss of the uniqueness of national values. For students planning to

live or study in English-speaking countries, cultural competence is key to adapting and integrating into new environments more smoothly. Against this background, it is explained by the strong tendency to preserve the uniqueness of national cultures and integrate them into the global culture. It would be illogical to study the process of developing cultural competence in students outside of a competency-based approach. Since each competence, including cultural competence, is formed and manifested in activity, it is important to apply the approach of activity. This methodological principle implies the need to study pedagogical processes in the logic of an integrative review of all components of activity: goals, motives, actions, operations, regulation, control, results analysis methods.

In addition, culture itself can be considered a type of human activity, on the basis of which human consciousness and thinking are formed. In order to ensure effective preparation of students for professional, social and personal relationships in a cultural environment, it is necessary to create opportunities to engage students in relevant activities during the educational process. Development of cultural competence in the language teaching center based on an integrative. The general didactic principles of foreign language teaching, selected taking into account the classification of principles proposed including developmental and innovative tendencies. The principles of this category include:

- orientation of education to the individual;
- consciousness;
- activity, visibility, usability and implementation, construction of learning as a creative process;
- active nature English Language Education & Pedagogy of the training and increasing the training from simple to complex.

It is important that education is aimed at developing the student’s independence in extracurricular activities. Cultural competence and its impact to teaching is a vital component of ESL education, enriching the learning experience and preparing students for effective communication in a diverse world. By integrating cultural understanding into language education, ESL programs can produce more proficient, empathetic, and globally aware individuals. The future of ESL education lies in embracing cultural diversity, not just as an addition to language learning, but as an integral part of it. The article underscores the notion that mastering a language goes beyond mere vocabulary and grammar; it involves an understanding and appreciation of the culture behind the language. As the world continues to globalize, the integration of cultural competence in language education becomes not just beneficial, but essential.

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INTEGRATIV YONDASHUV ASOSIDA TALABALARNI IJODIY VA TAHLILIY FIKRLASH KO‘NIKMALARINI RIVOJLANTIRISH

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Annotatsiya. *Maqolada integrativ yondashuv bo‘lajak o‘qituvchilarda ijodiy va tahliliy fikrlash ko‘nikmalarini rivojlantirishning asosiy omili hamda oliy ta’lim tizimida, fanlarni integratsiyalab o‘qitish mexanizmlarini yaratish, uning pedagogik va didaktik asoslarini aniqlash sifatida nazariy tahlil qilinganligi bilan asoslidir.*
Kalit so‘zlar: *Pedagog, ijodiy, talaba, tahliliy, innovatsion, kompetensiya, texnologiya, vatanparvarlik, konsepsiya, integrativ yondashuv, modernizdtsiya.*

Аннотация. *В статье обоснован интегративный подход как основной фактор развития навыков творческого и аналитического мышления у будущих учителей, так и теоретический анализ в системе высшего образования, создание механизмов интегрированного обучения предметам, определение его педагогических и дидактических основ.*
Ключевые слова: *педагог, креатив, студент, аналитический, инновационный, компетентность, технология, патриотизм, концепция, интегративный подход, модернизация.*

Annotation. *The integrative approach in the article is justified by the fact that it is theoretically analyzed as a key factor in the development of creative and analytical thinking skills in future teachers, as well as in the higher education system, the creation of mechanisms for integrating disciplines and determining its pedagogical and didactic foundations.*
Keywords: *educator, creative, student, analytical, innovative, competence, technology, patriotism, concept, integrative approach, modernization.*

Mamlakat ta’lim tizimini barqaror rivojlanish hamda modernizdtsiyalash jarayonlariga moslashtirish, o‘quv jarayoniga innovatsion g‘oyalar, integratsiyalashgan texnologiyalar va ishlanmalarni faol qo‘llash orqali talabalarning kasbiy ko‘nikmalarini integrativ yondashuvlar asosida rivojlantirish metodikasini takomillashtirish muammosi bugungi kunda dolzarb ahamiyat kasb qiladi.

Zamonaviy mutaxassis ma’lumotli, axloqiy, harakatchan, mas’uliyatli, hamkorlik, ijodkorlik qobiliyati bilan ajralib turishi, faoliyatda integrativ yondashuvdan foydalanishi kerak. Integratsiya ta’limdagi muhim innovatsion hodisalardan biridir.

Integrativ yondashuv bizga quyidagi imkoniyatlarni beradi.

mutaxassisni shakllantirish uchun zarur shart-sharoitlarni yaratadi;

ta’lim oluvchini dunyoni yaxlit idrok etishga o‘rgatadi;

ijtimoiy va kasbiy sohada faol harakat qila oladigan darajada tarbiyalaydi;

talabalarga ta’lim sifatini oshirishga ko‘proq talablar qo‘yadi va talabaga darsni o‘qitish sifatini, bilim sifatini tobora oshirishga motivatsiya beradi;

turli xil fanlar o‘zaro bog‘lanadi.

Integratsiya talabalarni faol birgalikdagi ijodiy jarayonga jalb qilish imkonini beradi. Bu puxta o‘ylangan ta’lim va tarbiya jarayoni bo‘lib, u ta’limni tashkil etishning umumiy tuzilmasini qayta ko‘rib chiqishga, talabalarni idrok etish jarayoniga tayyorlashga yordam beradi.

Axborotni tushunish va taxlil qilishga o‘rgatib, talabalarda dunyodagi barcha jarayonlarning bir butun sifatida o‘zaro ta’siri haqidagi tushuncha va g‘oyalarni shakllantiradi. Shu bilan bir qatordaintegrativ yondashuvning kamchiliklari va salbiy oqibatlari ham mavjud.

Ta’limda integratsiya orqali reproduktiv usulni amalda qo‘llash bir talaba o‘rgangan materiallar foydalanishni o‘z ichiga oladi, chunki ta’limda eng samarali usullardan biri hisoblanadi.

Z.Sh.Karimov yozganidek: “u eksperimental mujassamlanishning kengligi, ijodiy konsepsiyaning chuqurligi, tarixiy rivojlanishning davomiyligi va dialektikasi bo‘yicha boshqa barcha hodisalardan ustundir”. [1]

Integrativ yondashuv-bu ta’lim pedagogik integratsiya jarayoni va natijasi sifatida ko‘rib chiqiladigan tadqiqot pozitsiyasidir (fanlararo, fan ichidagi, shaxslararo, shaxslararo). Olimlar pedagogikada integrativ yondashuvni turli yo‘llar bilan izohlaydilar.

I.A.Zimnaya, E.V.Zemtsova integrativ yondashuvni “kamida bitta xarakteristikaning umumiyligi bilan birlashtirilgan ob’ektlar, hodisalar, jarayonlar majmuasining yaxlit tasviri, natijada uning yangi sifati yaratiladi” deb ta’riflaydi.[2]

V.F. Tenishchevaning biroz boshqacha pozitsiyasi, u integrativ yondashuv – “dunyo rasmining yaxlitligini ta’minlaydigan vosita; nazariy va amaliy muammolarni hal qilishda insonning tizimli fikrlash qobiliyatini rivojlantirishga yordam beradi”. [3]

Integrativ yondashuv texnologik va mazmunli darajada amalga oshiriladi, integrativ yondashuv quyidagi muammolarni hal qilishga yordam beradi:

talabaning intellektual salohiyatini ochib beradi; talabalarning shaxsiyati;

kasbiy kompetentsiyalarni shakllantiradi;

o‘z-o‘zini tarbiyalash, o‘z-o‘zini tarbiyalash, o‘z-o‘zini rivojlantirish, ijtimoiylashuv uchun psixologik va pedagogik sharoitlarni yaratadi.

Ijtimoiylashuv - bu “shaxs hayotining barcha sohalarini qamrab oladigan ko‘p qirrali jarayon; aniq belgilangan natijaga ega bo‘lgan ijtimoiy kategoriya” va berilgan natija shaxsiy qiymat yo‘nalishlari. Ijtimoiy ta’lim muhiti ta’lim va tarbiya uchun katta imkoniyatlarga ega.

B.Abdullayeva ta’kidlaganidek, ko‘nikma, malakalar fikrlash operatsiyalari orqali o‘quv-tarbiya jarayonini tashkil etadi.

Integratsiyasining uchta darajasi mavjud. predmet ichidagi - tushunchalar, bilimlar, ko‘nikmalar va boshqalarning integratsiyasi. alohida elementlarning ichida;

fanlararo - faktlar, tushunchalar, tamoyillar va boshqalarni sintez qilish. ikki yoki undan ortiq fanlar;

transdisiplinar – ta’limning asosiy va qo‘shimcha mazmuni tarkibiy qismlarining sintezi. Integratsion ta’lim bizga qanday imkoniyatlar beradi.

Pedagogik fanlarni o‘rganishda integrativ yondashuvning asosiy printsiplari quyidagilardan iborat: sub’ektivlik, madaniyatlilik, ijodkorlik, fuqarolik-vatanparvarlik qadriyatlari va qadriyat munosabatlariga yo‘naltirish, sinergiya, o‘z-o‘zini tarbiyalash, madaniyatlar muloqoti, o‘quv jarayoni sub’ektlari o‘rtasidagi o‘zaro ta’sir vositalarini tanlashda o‘zgaruvchanlik, dialogizatsiya, fikr-mulohazalar. Integrativ yondashuvning tarkibiy qismlari quyidagilar bo‘lishi mumkin: tashkiliyuslubiy, faoliyat-amaliy va nazariy-mazmunli. [4]

Tashkiliy va uslubiy komponent o‘qitish usullarini (munozaralar, loyiha usuli, moderatsiya, deliberatsiya, interaktiv o‘yinlari, munozaralar, davra suhbatlari, festivallar, tanlovlar, konferentsiyalar, ish texnologiyalari va boshqalar) birlashtirishni o‘z ichiga oladi.

Faoliyat va amaliy komponent tanqidiy fikrlash va ijodkorlikni rivojlantirishga, shaxsning shaxsiy ahamiyatli va kasbiy fazilatlarini shakllantirishga hissa qo‘shadigan ijodiy vazifalardan foydalanishga yordam beradigan ta’lim shakllarini birlashtirishni o‘z ichiga oladi.

Resurs tarkibiy qismi o‘quv va kognitiv faoliyat uchun zarur bo‘lgan resurslarni (sinf va sinfdan tashqari) birlashtiradi, mazmuni, vositalari, usullari va usullari tufayli kasbiy kompetentsiyani shakllantirishga yordam beradigan integrativ maxsus kursning mazmunini belgilaydi.

O‘quv fanlarini o‘rganishda integrativ yondashuvning asosiy maqsadlari orasida quyidagilarni ajratib ko‘rsatish muhim ko‘rinadi:

fuqarolik ongini shakllantirish, o‘qituvchi shaxsining o‘z-o‘zini anglashi, ijtimoiy-huquqiy, fuqarolik-vatanparvarlik va axloqiy me’yorlar, bilimlar;

tadqiqot, loyihalash, kommunikativ, aks ettiruvchi va boshqa ko‘nikmalarni rivojlantirish;

shaxsning shaxsiy ahamiyatga ega va kasbiy fazilatlarini tarbiyalash va boshqalar. [5]

Ta’lim muassasalarining zamonaviy moddiy-texnik bazasini shakllantirish va yanada mustahkamlash, undan oqilona foydalanish bo‘yicha yuqori samarali kompyuter texnikasi va boshqa axborot kommunikatsiyalari bilan jihozlanishi o‘z ichiga oladigan tizimli chora tadbirlar amalga oshirilmoqda.

Ilmiy adabiyotlar tahlili zamonaviy ta’limning turli sohalarida integratsiyalash masalasi pedagogik jarayonning dolzarb muammolaridan biri sifatida e’tirof qilinadi. Jumladan, oliy ta’lim tizimida, fanlarni integratsiyalab o‘qitish mexanizmlarini yaratish, uning pedagogik va didaktik asoslarini aniqlash hamda amaliyotga tatbiq qilish muammolarini hal qilish zamon talabiga aylanmoqda. Shuning uchun biz, birinchi navbatda, “integratsiya” terminining ma’nosi, mohiyati va ta’rifiga to‘xtalishni lozim topdik. Integratsiya - ayrim bo‘laklar yoki elementlarning bir-biriga qo‘shilishi hamda bir butunga aylanishi, demakdir.

“Integratsiya” so‘zi lotincha “integration” so‘zidan (“integr” - to‘liq, butun, yaxlit) olingan bo‘lib, “qayta qurish, tiklash, to‘ldirish”, “integratsiya”-“o‘zaro bog‘langan holda rivojlantirish”, “integratsiyalash” - “bir butun qilib birlashtirmoq, yaxlit holga keltirmok” degan ma’nolarni anglatadi. [5]

Didaktikada o‘quv fanlariaro aloqadorlikni ta’minlash muammosiga jiddiy e’tibor qaratildi. Ushbu muammolar tahlili asosida o‘quv fanlariaro aloqadorlikning metodologik yo‘nalishlari belgilab berildi.

Xususan, V.N.Fedorova rahbarligida amalga oshirilgan tadqiqotlar fanlararo aloqadorlikning nazariy asoslarini bayon etganligi bilan muhim ahamiyatga ega. O‘quv fanlariaro aloqadorlikni ta’minlashning didaktik jihatlari faqatgina muayyan o‘quv fanlari mazmunida turli bilim va tushunchalarni ifodalash bilan cheklanib qolmaydi deyiladi.

Rossiyalik tadqiqotchi L.V.Pivovarova ishlarida integrativ metodikaning ta’limga texnologik yondashuvlar tavsifi quyidagicha bayon qilingan: - “integrativ metodika” atamasini qo‘llashdan asosiy maqsad ta’limga texnologik yondashuvning asosiy xususiyatlarini aniqlab, ulardan foydalanishda pedagogik hamda axborot-kommunikatsiya texnologiyalarini uyg‘unlashtirishni tatbiq qilish modellarini ishlab chiqishdir. - ta’lim jarayonida integratsiyalashgan texnologiyalarning qo‘llanishi bir qancha didaktik, metodik va kognitiv omillarga bog‘liq. [5]

Ta’lim jarayoni, uning sub’ektlari va ob’ekti o‘rtasidagi integrativ jarayonlarni tashkil qilishning o‘zi o‘quvchilarda o‘quv-bilish faoliyati natijasidagi kognitiv kategoriyalar asosidagi modellar mavjudligini taqozo qiladi.

O‘quv fanlariaro aloqadorlikni ta’minlashga oid pedagogik tadqiqotlarda uni mustaqil tadqiqot yo‘nalishi sifatida mujassam rivojlanayotgan shaxsga nisbatan pedagogik ta’sir ko‘rsatish imkoniyati sifatida qarash lozim. So‘nggi yillarda amalga oshirilgan tadqiqotlarda o‘quv fanlararo aloqadorlikning tarbiyaviy ahamiyatiga ham alohida e’tibor qaratilmoqda.

O‘quv fanlariaro aloqadorlik ta’minlangan pedagogik sharoitda o‘qitish jarayonida tarbiyaviy tadbirlarni amalga oshirishda o‘qituvchining tutgan o‘rnini alohida ajratib ko‘rsatish lozim.

Integrativ yondashuv - turli fanlardan olingan bilimlar, ko‘nikma, malaka va tajribalarni hisobga olish, tayanish, birlashtirish va kompetentsiyalarni baravar rivojlanishini nazarda tutadi.

Psixologik turkum fanlarida barcha insonlarga xos bo‘lgan fikrlash operatsiyalari bilish faoliyatining yaxlit qismi sifatida fikrlash strategiyalarining ko‘p miqdordagi qismini tashkil qiladi hamda sintez orqali turli darajadagi va tavsifdagi tizimlarni birlashtiradi.

Integratsiya bilish mexanizmi asosida yotadigan qismlarni yaxlit sintezlash nuqtai nazaridan bilish strategiyalari kabi farqlanadi va natijada ko‘zlangan maqsadga erishiladi.
Integrativ bilimlarni shakllantirish jarayoni uch yo‘nalishda kognitiv, kontseptual, integrativ model asosida shakllanadi.

Integrativ bilimlarni shakllantirish jarayoni yo‘nalishlari.

Kognitiv	Kontseptual	Integrativ
Interoektsiya - o‘quvchi individual imkoniyatlari asosida o‘zlashtirayotgan bilimlarini o‘z ichki dunyosiga integrativ motivlar bilan qabul qilishi. **Sinektika** - turli fanlar bo‘yicha amalga oshirilayotgan o‘quv-bilish faoliyatining kontseptual xususiyatlarini umumlashtirish. **Kogerentlik** - integrativ va moslashuvchan didaktik jarayonlarni asosan texnologik turkum fanlaridagi barcha elementar printsiplarning bir-biri bilan ketma-ketlikda ilmiykognitiv jihatdan joylashtirish.	Fanning kontseptual tarixiy aspektlari, evolyutsion rivojlanish bosqichlari, tajribalar, zamonaviy rivojlanish tendentsiyalari.	**Gorizontal** - fanlararo (Jismoniy tarbiya, odam anatomiyasi, matematika, geometriya, kimyo, geografiya, fizika, tarix). **Diagonal** - fan ichida (Jismoniy tarbiya, odam anatomiyasi, matematika, geometriya va x.k.). **Vertikal texnologik:** pedagogik, axborot kommunikatsiya tarmoqlararo: nonotexnologiya, kibernetika.

Interoektsiya – o‘quvchining individual imkoniyatlari asosida o‘zlashtirayotgan bilimlarini o‘z ichki dunyosiga integrativ motivlar bilan qabul qilishi sanaladi. Bu jarayonda o‘quvchilarning tafakkuri muhim o‘rin tutadi. O‘quvchilarda tayanch va fanga oid kompetentsiyalarni rivojlantirishda shaxsning tafakkuri muhim asos bo‘lib xizmat qiladi. Tafakkurning sofistik, eklektik, metafizik-dogmatik, dialektik usullari mavjud bo‘lib, inson tafakkuri faoliyatning turli qirralari sifatida bir- biriga qarama-qarshi, ayni vaqtda birbirlarini to‘ldiradi. Tafakkur xotirada yig‘ilgan axborotni qayta ishlashi, umumlashtirishi natijasida voqealarning rivojlanishi, takomillashishi to‘g‘risida taxmin qilish, oldindan aytib berish uchun shart-sharoitlar tug‘iladi. [6]

Xulosa sifatida shuni aytishimiz mumkinki harbiy tayyorgarlik mashg‘ulotlarida integrativ yondashuv orqali bo‘lajak o‘qituvchilarda ijodiy va tahliliy fikrlash ko‘nikmalarni rivojlantirish orqali pedagogika fani ta’lim-tarbiya jarayonida muammoli o‘quv vaziyatlarini hal qilishda tafakkur operatsiyalaridan foydalanish orqali o‘quvchilarning aqliy faoliyati, aql-zakovatini rivojlantirish, ongli xatti-harakatga yo‘naltirish ilmiy dunyoqarashini rivojlantirishga zamin tayyorlaydi.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

INTERACTIVE LEARNING IN ELECTRICAL ENGINEERING WITH AI AND AUGMENTED REALITY

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Abstract. *This article examines the transformation of teaching and learning processes in contemporary classrooms due to educational technology. It examines how various technology tools, like as artificial intelligence (AI), augmented reality (AR), and collaborative platforms, might be integrated to enhance student engagement and improve learning results. The essay emphasises the advantages and obstacles of using these technologies through a comprehensive analysis of current research and case examples. Moreover, it addresses the imperative for educators to pursue ongoing professional development and to integrate instructional technology. The findings indicate that well integrated educational technology can promote individualised learning experiences, enhance collaboration, and eventually result in increased academic achievement. This article might significantly help educators, policymakers, and others seeking to manage the evolving educational landscape in the digital era.*

Keywords: *artificial intelligence (AI), augmented reality (AR), collaborative platforms.*

Аннотация. *Эта статья рассматривает трансформацию процессов обучения и преподавания в современных классах благодаря образовательным технологиям. Он исследует, как различные технологические инструменты, такие как искусственный интеллект (ИИ), дополненная реальность (AR) и совместные платформы, могут быть интегрированы для повышения вовлеченности студентов и улучшения результатов обучения. Эта статья подчеркивает преимущества и препятствия использования этих технологий через всесторонний анализ текущих исследований и примеров из практики. Более того, в нём подчеркивается необходимость для педагогов продолжать профессиональное развитие и интегрировать учебные технологии. Результаты показывают, что хорошо интегрированные образовательные технологии могут способствовать индивидуализированным учебным опытам, улучшать сотрудничество и в конечном итоге приводить к повышению академической успеваемости. Эта статья может значительно помочь педагогам, политикам и другим, стремящимся управлять развивающимся образовательной сферой в цифровую эпоху.*

Ключевые слова: *искусственный интеллект (ИИ), дополненная реальность (AR), совместные платформы.*

Introduction

Augmented reality and AI-powered interactive learning has the potential to revolutionise electrical engineering education. These technological advancements offer engaging educational opportunities that sustain students’ attention and facilitate a deeper comprehension of complex concepts. If we want to give the upcoming generation of engineers the knowledge and skills they need to compete in a rapidly evolving technological environment, educators must accept these findings. To create a lively learning community, we want educators to research these intriguing tools, experiment with their uses, and share their findings.

In the classroom, interactive learning has become increasingly popular, particularly in fields like electrical engineering that require in-depth understanding and real-world application. Traditional teaching methods may struggle to engage students and make complex concepts understandable. Augmented reality (AR) and artificial intelligence (AI) technologies could contribute to a more immersive and customised learning environment.

This study explores the integration of artificial intelligence and augmented reality in teaching English language for electrical engineering students, aligning with global educational trends and Uzbekistan’s focus on developing globally competitive professionals (Presidential Decree No. UP-4996, 2021and No. UP-475, 2021).

Artificial intelligence has changed how students pick knowledge by offering tailored learning chances. It helps teachers to change their courses by means of personal student data identification of areas of strength and weakness. In electrical engineering—where concepts might be both abstract and particular—AI can enable focused learning. AI-powered systems might provide tests and assessments fit for a student’s ability level before advancing, so ensuring they understand fundamental topics.

According to Zhang (2023), personalised learning is a student-centered approach that aims to meet the needs of each individual student, which is especially beneficial for students who have difficulty learning. This approach differs from the traditional "one-size-fits-all" method in that it tailors lessons, assignments, and assessments to each student’s unique needs. Its principles of adaptability, student agency, and flexibility will help create an engaging learning environment (Ayeni et al., 2024). Some research also makes reference to individualised learning through terms like customised instruction, adaptive learning, and customisable learning (Shemshack & Spector, 2020). [China] T. Hu. Influence of AI-enabled tailored learning.Volume 24, Issue 1, 20243876 of SIEFAccording to Zhang et al. (2020), a plethora of studies have demonstrated that personalised learning outperforms conventional methods of instruction in terms of improving students’ academic performance. Personalisation of instruction, particularly on an institutional level, was formerly extremely challenging due to shortages in both human and material resources for schools (van der Vorst & Jellic, 2019). More and more technology is finding its way into classrooms, and with it, opportunities for successful individualised instruction (Shemshack & Spector, 2020). The development of individualised educational programmes may rely heavily on AI applications in the classroom. Some fundamental capabilities, according to Murtaza et al. (2022), should be present in any effective system of personalised learning. These include providing information that is appropriate for the student’s academic level, tailoring the presentation of instructional materials to the student’s specific needs, and continuously evaluating the student’s progress. As a result of AI algorithms’ ability to gather and analyse massive amounts of data, such as students’ academic performance, learning preferences, and learning processes, they can personalise learning experiences and dynamically adjust the

difficulty levels of instructional materials, allowing for adaptive content delivery (Ayeni et al., 2024). To top it all off, AI allows for customised learning by providing students with timely, relevant feedback on their daily assignments.

A revolutionary new technology, augmented reality (AR) allows users to superimpose digital information on top of their actual physical surroundings. The use of augmented reality in electrical engineering has the potential to simplify the visualisation of otherwise difficult ideas, such as circuit design or electromagnetic fields. Using augmented reality goggles or mobile devices, students may engage with 3D representations of electrical components, transforming the way they learn. Students are able to make the connection between theory and practice using this method, which involves drawing circuit diagrams and analysing the interactions between different parts.

Case Studies of AI and AR in Action

Many universities and companies are already tapping into the potential of AI and AR for educational purposes. For instance, institutions such as MIT have developed AR applications that allow students to visualize and manipulate electrical systems. Feedback from students shows improved engagement and comprehension, demonstrating the effectiveness of these technologies in enhancing the learning environment.

Creating Interactive Learning Modules

Teachers eager to create their own courses using augmented reality and artificial intelligence have access to a great range of resources. Interactive teaching experiences could be produced using software including artificial intelligence platforms used for adaptive learning and Unity used for the development of augmented reality. Teachers could be able to include these technologies into the classroom by designing simulations and tests that motivate students to actively address challenges.

Challenges and Considerations

The benefits of including artificial intelligence and augmented reality into the classroom to teach electrical engineering are great even if some challenges still exist. The technologies and tools required for the evolution of augmented reality experiences could be rather expensive. Moreover, teachers have to participate in thorough professional development activities to maximise the use of these technologies in the classroom. When evaluating the application of new educational technology, educational institutions have obligations to take into account not only the technical advantages and disadvantages but also the possibility for better learning outcomes.

Based on data from the National Centre for Education Statistics, educational policy specialist Dr. Emily Johnson says the long-term benefits in student involvement and learning outcomes justify the initial technology investment. The main goal is to provide students with the tools they need to negotiate life beyond secondary education.

Applications for augmented reality (AR) and artificial intelligence (AI) will abound in the classroom as technology develops. Predictive analytics and data visualisation could perhaps form the basis of next solutions meant to increase understanding even more. Components of gamification could be included into courses to give students the opportunity to learn by means of cooperative and competitive interactive challenges.

Engaging Students with Hands-On Learning

The instruction of electrical engineers must prioritise practical experience. Interactive simulations, which are powered by artificial intelligence and augmented reality, allow students to experiment with electrical systems in a risk-free environment that is devoid of the possibility of

failure in practical applications. The confirmation of academic knowledge is facilitated by this type of learning through hands on experience, which also fosters the confidence necessary for any forth coming work environment.

Building Collaboration Through Interactive Tools

Using interactive tools helps Thanks to their cooperative nature, artificial intelligence and augmented reality technologies could help to enable peer learning. Students have the chance to cooperate and share ideas by engaging in immersive augmented reality projects by means of platforms providing cooperative augmented reality experiences. This helps youngsters to develop community and teamwork.

Conclusion

Interactive learning motivated by augmented reality and artificial intelligence could transform electrical engineering education. These technologies present dynamic learning opportunities that maintain student involvement and help to deepen understanding of difficult ideas. Teachers have to embrace these findings to equip the next generation of engineers with the knowledge and abilities required to succeed in a fast-changing technological scene. To build a vibrant learning community, we urge teachers to investigate these fascinating technologies, try their applications, and record their results.

Especially in disciplines like electrical engineering that demand thorough knowledge and practical application, interactive learning has become rather common in the classroom. Conventional teaching approaches could find it difficult to involve pupils and clarify difficult ideas. Technologies related to augmented reality (AR) and artificial intelligence (AI) can help to provide a more customised and immersive learning environment.

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ENHANCING STUDENTS' CRITICAL THINKING THROUGH READING: IN THE SAMPLE OF «PASSANGER TO FRANKFURT»

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Abstract. *This article examines the central role of reading in foreign language teaching, emphasizing its multifaceted importance for the development of linguistic, analytical and cultural skills of students. The author uses Agatha Christie's book «Passenger to Frankfurt» as a concrete example of the successful application of fiction in the educational process and describes how the selected book contributes to an exciting learning process, allowing students not only to learn the language but also to explore cultural nuances. The article also provides practical advice for teachers. The conclusion sums up what has been said, emphasizing that reading fiction can serve not only as a tool for language learning, but also as a bridge to cultural awareness and analytical thinking.*

Keywords: *Critical thinking, language literacy, students' perception, communicative skills.*

Аннотация. *Эта статья рассматривает центральную роль чтения в преподавании иностранных языков, подчеркивая его многогранное значение для развития лингвистических, аналитических и культурных навыков студентов. Автор использует книгу Агаты Кристи «Пассажир во Франкфурте» как конкретный пример успешного применения художественной литературы в образовательном процессе и описывает, как выбранная книга способствует захватывающему процессу обучения, позволяя студентам не только изучать язык, но и исследовать культурные нюансы. Статья также содержит практические рекомендации для учителей. Заключение резюмирует сказанное, подчеркивая, что чтение литературы может служить не только инструментом для изучения языка, но и мостом к культурному сознанию и аналитическому мышлению.*

Ключевые слова. *Критическое мышление, языковая грамотность, восприятие учащихся, коммуникативные навыки.*

In the world of foreign language learning, reading plays a key role in developing all language skills. It helps not only to expand the vocabulary but also to strengthen grammatical knowledge, improve listening perception, and develop the ability to use the language independently. However, many students often perceive reading as one of the most difficult and

boring parts of learning. But what if reading can be turned into an exciting process that helps not only in language practice but also in cultural and intellectual development? A striking example of this approach is the use of fiction, as it was in my class with students of the faculty of International Relations, where we discussed Agatha Christie’s book "Passenger to Frankfurt". While working with the text, students not only improved their language skills but also developed important analytical skills.

Reading is the basis for several aspects of learning a certain language, and this is quite obvious. Every time a student opens a book in a foreign language, he or she is introduced to a new vocabulary, which facilitates the acquisition of new words. He observes the use of phrases and words in context, which allows him to understand their meaning and master their use. It is important to emphasize that reading is not just an act of perception, it also helps to develop other skills.

Reading also plays a significant role in improving grammar skills. When reading various texts, students intuitively learn the grammatical structures, which allows them to apply them in oral speech. In contrast to standard grammar exercises, reading contributes to a deeper understanding of the functioning of language in real contexts, creating a solid foundation for free communication.

Reading also significantly improves listening skills. Active reading helps students develop the ability to perceive language just by listening, as they become more familiar with different language structures, pronunciation and intonation. This, in turn, facilitates the understanding of speech, which is an important aspect of learning any foreign language.

Finally, reading promotes critical thinking and analytical skills. Kurland (2000) remarks critical thinking and critical reading work together in harmony. He indicated that critical thinking will allow readers to monitor their understanding as they read. By analyzing text, whether it is an artwork or informational material, students learn to identify hidden meanings, understand context, draw conclusions, and build logical connections. This is an important aspect that can be useful not only in learning but also in other spheres of life.

"Passenger to Frankfurt" as an example

Reading motivation is an important factor which supports students to read more, and it has a significant relationship with reading and understanding texts (M.R. Ahmadi 2012). Wang (2008) pointed out that students who study a foreign language need to improve their reading ability in order to comprehend the texts (Rosenfeld, Leung, & Oltman, 2001). It is concluded that, additional benefits of being a motivated reader by stating that it is important to motivate students to read by providing them opportunities to select their desired materials. In other words, readers need to read more when they are allowed to choose their reading materials because they would discover that reading is an enjoyable activity (Pachtman & Wilson, 2006), also is exciting and stimulating their interest in reading. In this regard, *"Passenger to Frankfurt"* by Agatha Christie was a great choice. A book written by a master of the detective genre provides an exciting storyline that simultaneously develops attention to detail, critical thinking, and language literacy. As I have made a survey about the book, the followings are the responses of the students about the choice of the book:

- *“I realized that this book was for me, because I am a huge fan of detective books. I can say that this book is not only about crime, it is about politics as well. For me, it was so helpful to understand the world. The book is very useful for people who are interested in*

politics; it provides the information about the life of diplomats and about the relations between countries. I recommend it to everyone. “

- *“Honestly, I have never read a book in any foreign language and this book is the first that I have ever read. After reading this book I began to be interested in reading English books like this novel. “The "Passenger to Frankfurt" is related to our profession and I have gained a lot of impressions from it. I learnt how a diplomat should be and how to solve social and political issues. I saw the entire life of an ambassador and drew my own conclusions. It is engaging to read a book that leaves readers reflecting on the nature of trust and the consequences of their actions.”*

- *I think Agatha Christie wrote this book to explore important themes such as political intrigues, personal sacrifice and the challenges of diplomacy in a world filled with conflicts. I took a lot of experience from this book and I am going to be a good diplomat like Stafford Nye. From this book I learnt about politics, human nature and the fight against oppression. I found "Passenger to Frankfurt" engaging and it blends mystery with a deeper message about the importance of standing up for justice. The morale questions raised in the book stayed with me long after we finish the book.”*

Students gained familiarity with the literary work’s atmosphere during chapter discussions which functioned as both language practice exercises. Analyzing character motivation and plot twists allowed students to identify complex hero relationships which deepened their text comprehension and enhanced their ability to formulate arguments and share personal insights. Concerning the characters students wrote:

- *“I like the character of Mary Ann, because she is sharp, alert, kind and charismatic.”*
- *“If I could be someone in the "Passenger to Frankfurt", I would choose Sir Stafford Nye. He has a unique character that leads him into exciting and dangerous situations.”*

- *“If it could be possible, I would be Lord (Edward) Altamont:, who sacrificed himself for the government and state, also made a lot of political and risky missions during his life.”*

- *“I liked especially Lady Matilda. She has a clear vision about political issues and she is really knowledgeable. Reading her opinions towards any issues is a motivation to read this book further.”*

- *“My favorite character is Mary Ann who is the main character in this book. I just adore her because of her intelligence. Sometimes she showed herself to be so knowledgeable that I even wanted to be like her.”*

- *“If I could be someone in the story, I would like to be Sir Stafford Nye, of course. Because, he is like me – he can make strange but witty jokes.”*

In addition, it has helped to develop the ability to communicate across cultures. In the process of working with the book, students were exposed to cultural variabilities and differences, which was necessary for their future professional activity in the field of international relations. The book has become not only a tool for language practice but also a kind of cultural bridge,

allowing students to understand more deeply the specifics of English literature and the perception of the world through the lens of Western culture.

Discussion of texts in a foreign language is a powerful tool for practicing live communication. In contrast to the passive perception of material, active participation in discussion helps students not only understand the text, but also develop skills of active listening, argumentation and public speaking.

During our classes, the students actively exchanged opinions about the characters and the story, which allowed them to use new words and expressions in context. Students engaged in small group discussions after completing each reading. In their discussions, students were expected to share their understandings of the text they had read as well as their comprehension strategy use. The discussions helped to overcome the language barrier, each student learned to make up their thoughts in a foreign language, even if they had to find equivalents and suitable expressions. As Knickerbocker & Rycik mentioned, discussions can provide students space to examine ideas and learn new ways of thinking and speaking (2006). It was a great way to improve your speaking skills and learn how to make more complex phrases.

Also, such discussions provide an opportunity to develop critical thinking. When students try to understand the actions of characters or deconstruct the motivation of heroes, they are forced not only to apply language constructs, but also to analyze, compare, draw conclusions. This is an important skill that will help them in any field of professional activity.

It is equally important that discussions in a foreign language promote self-confidence. When students discuss a book, they realize that their opinion is important and that they can effectively express their thoughts in a foreign language. This helps to build confidence in one’s own abilities and to use the language more freely in real situations.

As reading provides lots of opportunities developing basic foreign language skills on any global topic, while reading the book we dealt with many global issues like poverty, human rights, multiculturalism, environmental issues and their influence on us. This increased students’ engagement and they commented on text and talked about similarities and differences between our culture and those mentioned in the book, also they suggested some solutions to the challenges. Some students suggested even to make some changes in the book:

- “*If I had a chance I would make the ending of the story even better. For instance, I would focus on more about Aunt Matilda, about her work and her influence on politics.”*
- *“To make the book even better, I would add some characters from other nationalities as well. Because, as we know during World War there were many battles between other countries and I think it would be interesting to read about them too.”*

From the findings, it could be seen that reading books in teaching foreign languages provides a basis for entertaining and successful learning. In this process teachers perform a wide range of roles during their work with students in the classroom. To put it simply, the teacher equips the readers with not only knowledge of the language but also with skills, techniques and strategies which are essential for the reading process. (Let’s read in English). Here are some practical tips that can help make classes more productive and interesting:

- *Choosing a book based on the interests of students.* Teachers can provide the list of books with various options and students can choose from them according to their interest and the book which gained more votes can be the option for everyone. In our

case, Agatha Christie was ideal for creating intriguing and entertaining discussions, as well as working with rich lexical and grammatical material.

- *Choosing the right level of book to read.* This will help students feel comfortable and confident.
- *Group discussions.* It is vital to create a collaborative atmosphere, let the students share their opinions, ask questions from each other, offer alternative interpretations. It develops communicative skills and helps students learn to listen and accept different points of view and express their thoughts and ideas freely.
- *Using different types of activities.* You can create role-playing games in which students play back scenes from a book or they can choose any part they like the most. This will help not only to learn the language, but also to develop creativity and students can explore their hidden talents as well. Also, in order to deepen the understanding of the book, you can use additional activities, such as interviews with authors, historical or cultural references about time and place. This widens horizons of the students and they may challenge themselves from different angles.

These methods can significantly increase students' interest in the learning process and help them not only in mastering the language, but also in developing analytical and cultural skills.

The discussions we had in class demonstrated how important it is not only to read, but also to actively interact with the text. This helps students better understand and absorb the material, as well as develop confidence in their language and communication skills.

Reading fictional books in teaching foreign languages opens up a lot of possibilities for teachers and students to be creative and to work deeply with texts. This experience can and should be continued by exploring more literature, broadening the horizons and deepening knowledge. In the end, literature becomes not only a tool for language learning, but also a key to deeper understanding of the world.

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ENHANCING STUDENTS' SELF-STUDY SKILLS THROUGH INQUIRY-BASED LEARNING

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Abstract. *This article analyzes the role of Inquiry-Based Learning (IBL) in developing students' self-study skills. The approach encourages learners to engage in problem-solving, questioning, and independent investigation, shifting education from teacher-centered to student-centered paradigms. IBL supports critical and creative thinking, fostering deeper student engagement. Research findings demonstrate that IBL improves learners' autonomy, innovative thinking, and their capacity for lifelong learning, making it an effective strategy for modern education.*

Keywords*: Inquiry-Based Learning, self-directed learning, reflection, critical thinking.*

Annotatsiya. *Ushbu maqolada Inquiry-Based Learning (IBL) texnologiyasi asosida talabalarning mustaqil ta'lim ko'nikmalarini shakllantirish masalalari tahlil qilinadi. IBL texnologiyasi o'quvchilarni mustaqil fikrlashga, muammoni hal qilishga, savol berishga va tadqiqot olib borishga undaydi. Bu yondashuv o'qituvchidan o'quvchiga yo'naltirilgan ta'lim modeliga o'tishni ta'minlab, ijodiy va tanqidiy fikrlashni rivojlantiradi. Maqolada IBL metodining hayotiy muammolar asosida qurilgan mashg'ulotlar orqali o'quvchilarni faol ishtirokga jalb etishdagi samaradorligi yoritilgan.. Tadqiqotlar shuni ko'rsatmoqdaki, IBL yordamida talabalarda innovatsion fikrlash va o'z-o'zini boshqarish qobiliyati kuchayadi.*

Kalit so'zlar*: Tadqiqotga asoslangan ta'lim, mustaqil ta'lim, refleksiya, tanqidiy fikrlash.*

Аннотация. *В статье анализируется роль технологии обучения на основе исследования (Inquiry-Based Learning, IBL) в развитии навыков самостоятельного обучения у студентов. Данная педагогическая модель способствует формированию у обучающихся критического мышления, способности к решению проблем и ведению самостоятельных исследований. IBL переводит акцент с преподавателя на учащегося, создавая условия для активного участия в учебном процессе. Исследования показывают, что применение IBL значительно повышает уровень инновационного мышления и самостоятельности студентов, способствуя их успешному обучению и будущей профессиональной деятельности.*

Ключевые слова*: Исследовательское обучение, самостоятельное обучение, рефлексия, критическое мышление.*

Introduction

In an increasingly interconnected world, the significance of fostering self-study skills in students cannot be overstated. Inquiry-based learning serves as a critical pedagogical approach that empowers students to take ownership of their educational journeys, enhancing their ability to engage deeply with content. This method not only promotes critical thinking but also cultivates essential skills necessary for lifelong learning. By encouraging students to pose questions and seek answers through exploration and research, inquiry-based learning aligns with the principles of Responsible Research and Innovation (RRI), which emphasizes the development of creative and critical thinking abilities in educational settings (Torruella B et al., 2020). Furthermore, observing the dynamics of classroom interactions can illuminate the ways inquiry-based practices can shift the focus from teacher-centered instruction to more learner-centered experiences, ultimately fostering a deeper engagement with the learning material (Dzakiria et al., 2007). As such, this essay will explore the multifaceted benefits of inquiry-based learning in enhancing students self-study skills.Self-study skills are essential competencies that empower students to take charge of their own learning processes, fostering independence and critical thinking. These skills encompass a range of abilities, including goal setting, time management, and self-assessment, which collectively enhance a student’s capacity to engage deeply with educational material. By developing strong self-study skills, learners become more adept at navigating complex subjects and effectively synthesizing knowledge, which is particularly significant in higher education settings. As highlighted in contemporary pedagogical practices, inquiry-based learning (IBL) can significantly contribute to the advancement of these skills, as it emphasizes active exploration and problem-solving. In this context, students are encouraged to engage in open, discovery-focused inquiries, which not only cultivate their innovative abilities but also reinforce necessary self-study skills (Acar et al., 2018). Consequently, integrating IBL into educational frameworks presents a promising avenue for enhancing student autonomy and academic success (Goldberg et al., 2012).

Inquiry-based learning (IBL) serves as a crucial pedagogical approach for cultivating self-study skills among students, emphasizing active engagement and independent exploration. By adopting methodologies that mirror the inquiry processes used by scientists, IBL fosters a sense of curiosity and critical thinking necessary for effective self-directed learning. This approach not only encourages students to pose questions and seek answers through investigation but also enhances their ability to synthesize information and draw conclusions autonomously. Research indicates that when students participate in open, discovery-focused, and team-based inquiries, their innovative capabilities increase substantially, reinforcing their readiness for lifelong learning and adaptability in various contexts (Acar et al., 2018). Furthermore, integrating digital and arts-based methods within IBL can cultivate essential values such as creativity and critical engagement, aligning with frameworks such as Responsible Research and Innovation (RRI) (Torruella B et al., 2020). As a result, IBL effectively equips students with the skills and mindset required for successful self-study and personal growth.

Inquiry-Based Learning (IBL) fosters critical thinking and independence by encouraging students to engage deeply with subject matter, fostering a sense of ownership over their learning process. By actively questioning and seeking answers, students develop essential skills such as analytical reasoning and problem-solving, which are crucial for success in both academic and real-world contexts. This approach aligns well with the European Commissions Responsible

Research and Innovation (RRI) framework, which emphasizes the importance of creative and critical thinking as fundamental educational outcomes (Torruella B et al., 2020). Furthermore, the integration of technology into IBL enhances the feedback process, allowing for real-time assessment and fostering student engagement (Bolat et al., 2014). As students navigate through their inquiries, they learn to reflect on their findings and adapt their approaches, cultivating not just independence but also resilience—a vital skill in todays rapidly changing educational landscape. Ultimately, IBL equips students with a toolkit for lifelong learning and critical engagement.

A crucial strategy for effectively implementing inquiry-based learning (IBL) in the classroom involves the careful design of inquiry activities that foster independence and critical thinking. Educators are encouraged to create open, discovery-focused inquiries that pivot on real-world problems, thereby engaging students in meaningful exploration. Research indicates that structured inquiry with a collaborative approach enhances students skills in innovativeness, a vital component of future employability (Acar et al., 2018). Furthermore, integrating scaffolding techniques in IBL allows for personalized support, ensuring that all students can navigate complex tasks effectively (Adelman et al., 2018). By aligning inquiries with students interests and incorporating tools that promote self-directed learning, educators can cultivate an environment where learners take ownership of their educational journey. This multifaceted approach not only enhances students self-study skills but also prepares them for lifelong learning beyond the confines of traditional classroom settings.

Fostering inquiry and self-directed learning in students requires a strategic approach that emphasizes creative engagement and critical thinking. Teachers can implement interdisciplinary methods that incorporate digital technologies and arts-based activities, aligning with the European Commissions policy on Responsible Research and Innovation (RRI), which advocates for educational practices that produce socially responsible outcomes (Torruella B et al., 2020). By developing lessons that encourage curiosity and autonomy, educators empower learners to take ownership of their educational journey. Moreover, evaluating the efficacy of teaching methods through instruments like the Teacher Evaluation Beliefs (TEB) questionnaire can enhance understanding of student-centered and teacher-centered beliefs about evaluation (Fella et al., 2009). This reflective process not only aids in identifying effective teaching strategies but also fosters an environment conducive to inquiry, ultimately enhancing students self-study skills and preparing them for active engagement in their education and society.

The implementation of inquiry-based learning (IBL) presents significant benefits for enhancing self-study skills among students, as it fosters an environment conducive to independent exploration and critical thinking. By encouraging students to engage in open, discovery-focused inquiries, IBL promotes curiosity and a deeper understanding of subject matter, which are essential for self-directed learning. For instance, research indicates that such an approach aids in developing individual innovativeness, a crucial skill for future employability, suggesting that students who actively participate in IBL are better prepared to innovate in complex work environments (Acar et al., 2018). Furthermore, transitioning from traditional teacher-centered methods to a more learner-centered framework not only enhances engagement but also cultivates a sense of ownership over the learning process, reinforcing the students ability to manage their study habits effectively (Dzakiria et al., 2007). Consequently, IBL emerges as a powerful pedagogical strategy to enhance self-study skills, preparing students for lifelong learning.

In conclusion, the integration of inquiry-based learning (IBL) within educational frameworks enhances students self-study skills by fostering a more engaging and interactive learning environment. By empowering students to take ownership of their educational journeys through exploration and questioning, IBL nurtures critical thinking and promotes adaptability—qualities essential for success in today’s dynamic workforce. This pedagogical approach aligns with the need for modern employability skills, as research indicates that individual innovativeness is increasingly crucial for university graduates (Acar et al., 2018). Furthermore, the collaborative aspects of IBL encourage peer learning and communication, essential in both academic and professional settings. Such an environment not only improves academic outcomes but also builds essential soft skills required for effective teamwork and problem-solving. As educators continue to adapt teaching methods, incorporating IBL will undoubtedly serve as a cornerstone in developing self-directed learners who are proficient in navigating complex challenges (Nurmalia (Editor) et al., 2015).

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THE ROLE OF HYPERMEDIA-BASED LITERATURE LEARNING ON VOCABULARY DEVELOPMENT: A STUDY OF HIGHER NATIONAL DIPLOMA IN ENGLISH STUDENTS

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Abstract. *Literature learning with hypermedia through designated learning strategies plays a chief part in the enactment of the students' learning English as a second language. The research was led to identify the capability of hypermedia-based teaching for designated classifications in the literature programme monitored in the Higher National Diploma in English with correct learning strategies: operations and actions in language placard with poetry-based method, and the enactment in the terminology growth. It was led in the Higher National Diploma in English course of the Advanced Technological Institute of Sri Lanka, Institute of Advanced Technological Education, as no prior research studies were completed in this area of the academic field. Ninety students from HNDE, class-A were taken to experiment, and an equal number of students from class-B were also taken as the controlled group. A pre-test was conducted for both groups to determine the earlier proficiency level of terminology of the students to match them, and the mean differences were found to be insignificant for both groups from the pre-test. Later, the experimental group was used in the classroom to follow hypermedia-based literature learning based on selected learning strategies for six months, with sixty hours of learning, while the controlled group was trained without the use of hypermedia-based literature learning. After six months, a post-test was conducted for both groups. When the post-test was led, the mean (-0.090) was slightly enriched for group B than the pre-test, and the mean (-2.761) was significantly enriched for group A in the post-test. Therefore, it is found that there is a progressive relationship between the hypermedia-based literature learning and the performance in the terminology growth. The research results suggest that hypermedia-based literature learning improves the terminology growth of the learners for all four skills in language.*

Keywords: *Hypermedia, Language placard, Literature learning strategies, poetry method, Terminology growth.*

Introduction

The students' enactment in terminology growth through hypermedia-based literature learning with appropriate learning strategies is a topic in today's higher education. Hypermedia is an amalgamation of many types of media messages in the teaching and learning process. Furthermore, hypermedia is emblematic of the revolution of information presentation and writing. Hypermedia permits learners to absolutely unite renewed knowledge into their original knowledge bases so that learners become choice makers in information processing with their syllabus contents.

It is found that low participation of students in hypermedia-based literature learning without appropriate learning strategies is understood as one of the motives for disappointment in the enactment of vocabulary expansion in academic courses. During the last decade, a number of studies that reflected the connection between hypermedia-based literature learning and the enactment in the terminology growth determined that a positive correlation occurs between these two variables (Ibaria, 2003), but there are no research studies have been found in the context of higher education at SLIATE. As per the gap, along with the straight examination, this study aims at looking into the result of the hypermedia-based literature learning with selected learning strategies in the enactment in the terminology growth using data collected from Higher National Diploma in English course at ATI - Advanced Technological Institute – Sammanthurai in SLIATE under the Ministry of Education in Sri Lanka.

The hypermedia-based literature learning was understood as one of the highest central resources of communication in our society after the entrance of the internet. The learners of English as a Second Language can gain several information regarding legal vocabulary, creative sentences, aesthetic thoughts, daily writing structure of sentences and so on from the hypermedia-based literature. Learners are informed by the hypermedia-based literature about what is going on around them and an area with a taste of literature. And also, hypermedia-based literature unlocked ways to learners' lives with many thoughtful supports, exploration and valuable articles on diverse themes worldwide. It is found that learners cannot absorb much about diversity, possible scenarios and evidence on tragedies without a hypermedia-based literature as they suffer from poor language ability (Webb, 2012).

Literature Review:

The focal aim of this section is to review the related research studies, their key findings, limitations of the reviewed studies. Nation (2001) empirically examines the effectiveness of incorporating hypermedia-based literature into the curriculum to enhance vocabulary acquisition among university students. The study found that students who received hypermedia-based literature instruction showed significant improvement in their vocabulary skills compared to those who followed traditional vocabulary instruction methods. The researcher concluded that hypermedia-based instruction provides students with meaningful and contextualised exposure to vocabulary, leading to better retention and application of new words.

Literature can be defined as a collection of written and spoken works about human experiences which reflect the writers' imagination about human varieties of experiences. "Literature covers stories, novels, poems and plays, especially those that have the value of art and not just entertainment. It is the reflection of different aspects of a society and its cultural documents to understand a country or countries (Rahman and Arju, 2008). Using literary works

in the language classroom has valuable benefits for learners of English as a Second Language. They mention that teaching literature is fundamental to ESL students, as it offers a calm and meaningful setting to learn the language effectively. English literature provides learners with exposure to a wide range of vocabulary, including idiomatic expressions, figurative language, and nuanced vocabulary usage. According to them, reading literature helps learners to contextualise new words, understand their meanings, and observe their usage in authentic contexts. This exposure to diverse vocabulary enhances learners’ language proficiency and comprehension skills.

Alqahtani (2015) empirically states that there are great and varied definitions of hypermedia-based literature. Hypermedia-based literature is, as defined by the English dictionary is a genre of literature in which the words and expressions are the focal point and interact together in an aesthetic, energetic and unique way to convey feelings and thoughts. Hypermedia-based literature is a literary work which gives deep understanding about authors’ feelings and other cultures in a rhythmical way. He defines hypermedia-based literature as "a piece of writing in which words are arranged beautifully and rhythmically" (p. 21). “Hypermedia-based literature is embellished with rhythm, beautiful diction and elevated grammatical features. Hypermedia-based literature is a way of sharing experiences, telling a story, expressing feelings or ideas. Hypermedia-based literature appeals to the imagination throughout the form, rhythm and word choice that can create vivid visual images for the audience. Some teachers and students believe that hypermedia-based literature is a difficult genre of world. Teachers see that hypermedia-based literature is difficult to teach in classes, since it is above students’ levels’, while students claim that literature is hard to understand for it is full of difficult vocabulary and expressions. Alqahtani (2015) believes that hypermedia-based literature is valuable and effective source in enhancing English vocabulary and pronunciation of learners.

Antika (2017) mentions that exercise of literature with technological knowledge such as blogs and hypermedia with hypertexts to higher educational students commences with an outline and the alertness of methods and utilities of the language in the literary texts and this supports generate strong paths to familiarise to students simple aesthetic structures in the writings and to reflect their parts. Lastly, the linguistic ways recognised through language-based and stylistic methods may be used to advance focused reading which can enhance the quality of vocabulary enhancement in educational pathway.

Furthermore, it is known that the learners still experience difficulties in developing vocabulary, particularly in speaking as per the available situations. It creates problematic platform for the learners to understand the words, because this setting is used in institutes. According to the opinion of Webb (2012), he describes that the students’ vocabulary increment is due to poor involvement in real situations, poor supporting imaginations and poor contents. Meanwhile the greatest number of students becomes fatigue to new vocabulary identification. Also, students have negative thoughts and opinion towards word formations.

To win these complications, it is essential to track present styles in vocabulary development, to relate novelties within the lecture hall, to create vocabulary-related environments wherever students will feel freely using their imagination, and to modify students to accumulate word skills that they will use throughout their lives (Reiily, 2012). In this perspective, to overcome the problem, hypermedia-based literature learning suits an effective source for developing the highly needed vocabularies among students.

Song is a piece of literature in which words are set attractively and musically (Schander, 2013). In exact, Shen (2003) labelled song as a literature script which grants the writer's involvements, views and moods through a self-referential habit of language that produces a new understanding of the text for the listener and speaker. Simply defined, song is a resourceful literacy writing that arranged prettily and steadily to direct practices, thought and approaches. Writing song itself is an innovative and deep practising approach (Reiily, 2012). When integrating in language lecture halls, songs could deal chances for students to plan their feelings and emotions, thus nurturing own connection in learners since they deal with worldwide subjects and human concerns (Schander, 2013).

Staurt (2005) planned certain training ways such as song-based narrative practice and ginging drama. Those specialists approve that learning literature through technology based coaching brings worthy benefits for students and it was essentially done. It means that students' ability for their language acquisition can be expanded from learning literature. Reid (1995) linked learning literature with students' learning style growth. Shen (2003) expressed that literature sends a significant part of its feeling through the regular arrangement and sound of words.

It states that a number of studies have investigated the relationship between hypermedia-based literature learning with the song-based method and the performance in the vocabulary development reaching to the conclusion that there exists a positive correlation between these two variables. Hypermedia shows a vital part in the field of education, which essentially denotes to ease the learning process through the control of graphics, images, animation, sound, video and other multimedia information with the support of hypertext. Hypermedia is a combination of many types of media messages into teaching and learning process. Moreover, hypermedia is typical of innovation of information presentation and writing. Hypermedia permits learners to positively incorporate fresh knowledge into their original knowledge bases so that learners become decision makers in information processing with their syllabus contents. In this line of argument the hypermedia in literature with song based method can be effectively used for the development of vocabularies of students in higher educational institutions too.

Methodology

The purpose of the study was to find the connection between the hypermedia-based literature learning with nominated learning strategies and the enactment of the students in the terminology growth. Two groups of students were randomly taken from HNDE course with the directed subject writing skill from the Advanced Technological Institute - Sammanthurai under SLIATE under the Ministry of Education. 90 students from Higher National Diploma in English – class – first year - A were used as the experimental group and the same numbers of students from Higher National Diploma in English – class – first year - B were taken as the controlled group.

A pre-test was conducted for both the groups in vocabulary development and the mean differences were tested. When the pre-test was conducted for both the groups in vocabulary development, the mean differences were statistically tested. Later, the experimental group was instructed to pursue hypermedia-based literature learning on learning strategies such as Language Placard: a digitalized place to show the pats of speech from the genres of literature and Poetry Method: a digitalized screen to pronounce sentence types with rhythm for six months with sixty hours learning practices and the classes for the controlled group were conducted with

usual leaning practices. After six months a post-test was conducted for both the groups with the same word related questions in vocabulary development.

Hypothesis

In order to accomplish the aim of this research the following hypotheses were developed.

H_0: There is no impact of hyper-media based literature learning with learning strategies on the performance in the terminology growth.

H_1: There is an impact of hyper-media based literature learning with learning strategies on the performance in the terminology growth.

Results and Discussion

The data analysis and findings bring out the representation of data which were collected through pre-test for experimental group, pre-test for controlled group, post-test for experimental group, and post-test for controlled group. In this analysis, significant p value and mean difference were mainly considered with the support of Statistic Package for Social Science – version 23.

At this point, from the pre-test, the Table 1 below shows that mean value of the marks of group A was 10.2913 with the standard deviation of 2.03810 and group B took the mean of the marks as 11.1221 with the standard deviation of 3.22033. The mean deference between Group A and B is -0.844 in the independent sample test. The t statistics is -1.121 and associated p value was as 0.064. It means that the value is more than 0.05 and, therefore the null hypotheses H_0 is not rejected and it shows that the mean differences (- 0.84444) were found as to be negligible between both the groups.

Table 1: Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Pre-test	A	90	10.2913	2.03810	.21706
	B	90	11.1221	3.22033	.32996

Independent Samples Test (Pre-Test)									
	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	13.28	.000	-1.121	178	.064	-.8444	.3949	-1.6238	-.0650
Equal variances not assumed			-1.138	154	.064	-.8444	.3949	-1.6246	-.0642

The Table 2 below shows paired sample t test of group – B (pre and post). The mean of the marks is as 11.3141 with the standard deviation of 3.13861 in the post-test. The mean of the marks is as 11.2233 with the standard deviation of 3.13132 in the Pre-test. The mean deference

between pre and post-test of groups B is - 0.0908 and standard deviation is 3.6338 in the paired sample t test. The t statistics is -0.203 and associated p value was as 0.840. It means that it is more than 0.05 and, therefore the null hypotheses is not rejected and it shows that the mean differences were found as to be negligible between both the test and expound as there is no considerable improvement in the performance.

Table 2: Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
group – B	PreTest	11.2233	90	3.13132	.32996
	PostTest	11.3141	90	3.13861	.33094

Paired Samples Test

	Paired Differences					T	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
PreTest - PostTest	-.090	3.638	.3835	-.8399	.6843	-.203	89	.840

The Table 3 below shows paired sample t test of group – A (pre and post). The mean of the marks is as 11.4769 with the standard deviation of 2.0582 in the pre-test. The mean of the marks is as 14.2377 with the standard deviation of 1.9186 in the post-test. The mean deference between pre and post-test of groups A is – 2.761 and standard deviation is 1.8733 in the paired sample t test. The t statistics is -14.585 and associated p value was as 0.000. It means that it is less than critical alpha value 0.05 at 95% confidential level. Therefore, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is not rejected. It means that there is an impact of hypermedia-based literature learning with learning strategies on the performance in the terminology growth.

Table 3: Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
group – A	PreTest	11.4769	90	2.05820	.21706
	PostTest	14.2377	90	1.91867	.20223

Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
PreTest – PostTest	-2.761	1.873	.1972	-3.269	-2.4858	-14.585	89	.000

Conclusion

The students who continued hypermedia-based literature learning with learning strategies, as described in the methodology section for six months with sixty hours of learning

practices show a positive impact on the performance in the terminology growth of the learners for their all four skills in language. However, the students who followed usual learning practices, described in methodology section do not show an impact on the performance in the terminology growth.

Significance of the study

This research presents experimental evidence of the relationship of hypermedia-based literature learning on learning strategies and the performance in the terminology growth. The evidence presented in this research will essentially contribute to the body of existing literature, relating to research on hypermedia-based literature learning on learning strategies and the performance in the terminology growth. Further, the outcome of the research will make the learners deeply think of the usage of the hypermedia-based literature learning in the classroom activities as it supports the learners' thought and will bring the real experience to the learners. When the learners are aware of the usefulness of the hypermedia-based literature learning, the receptive skills and the productive skills of the learners will increase with the inclusion of standard level of attending, accepted level of interpretation, established level of communication and recognized level of writing.

Along with the direct investigation, the establishment of a correlation between the hypermedia-based literature learning with learning strategies and the performance in the terminology growth would assist in applying different policies in terms of English language learning in Sri Lanka and it will have a broader result in updating the policy makers in the educational field.

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ENHANCING PROBLEM-SOLVING SKILLS IN ARCHITECTURE STUDENTS THROUGH AUTHENTIC AND DIGITAL SIMULATIONS IN ENGLISH LANGUAGE TEACHING

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Annotation. *This study investigates the integration of authentic and digital simulations in English Language Teaching (ELT) to enhance problem-solving skills among architecture students. Through a systematic literature review, it analyzes global research on simulation-based learning, emphasizing its role in developing communicative and professional competencies. Findings indicate that combining authentic role-playing with digital tools like CAD and VR fosters immersive learning environments, improving linguistic proficiency, critical thinking, and technical skills. Challenges include resource constraints and assessment complexities. The study proposes a pedagogical framework and recommends interdisciplinary collaboration to optimize implementation, aligning with global educational trends.*

Keywords: *authentic simulations, digital simulations, English language teaching, problem-solving skills, architecture education, CAD, virtual reality, experiential learning.*

Annotatsiya. *Ushbu tadqiqot arxitektura talabalari orasida muammolarni hal qilish ko'nikmalarini oshirish uchun ingliz tili o'qitishda (ELT) autentik va raqamli simulyatsiyalarni integratsiyalashni o'rganadi. Tizimli adabiyotlar tahlili orqali simulyatsiya asosidagi ta'lim bo'yicha global tadqiqotlar tahlil qilinadi, uning kommunikativ va professional kompetensiyalarni rivojlantirishdagi roli ta'kidlanadi. Natijalar shuni ko'rsatadiki, autentik rol o'ynashni CAD va VR kabi raqamli vositalar bilan birlashtirish immersiv ta'lim muhitini yaratadi, lingvistik mahorat, tanqidiy fikrlash va texnik ko'nikmalarni yaxshilaydi. Muammolar resurs cheklovlari va baholash murakkabliklarini o'z ichiga oladi. Tadqiqot pedagogik asosni taklif qiladi va global ta'lim tendensiyalariga mos ravishda amalga oshirishni optimallashtirish uchun fanlararo hamkorlikni tavsiya etadi.*

Kalit so'zlar: *autentik simulyatsiyalar, raqamli simulyatsiyalar, ingliz tili o'qitish, muammolarni hal qilish ko'nikmalarni, arxitektura ta'limi, CAD, virtual haqiqat, tajribaviy ta'lim.*

Аннотация. *Исследование посвящено интеграции аутентичных и цифровых симуляций в преподавании английского языка (ELT) для повышения навыков решения проблем у студентов-архитекторов. Посредством систематического обзора литературы анализируются глобальные исследования по обучению на основе симуляций, подчеркивается их роль в развитии коммуникативных и профессиональных компетенций. Результаты показывают, что сочетание аутентичных ролевых игр с цифровыми инструментами, такими как CAD и VR, создает иммерсивные образовательные среды, улучшая языковые навыки, критическое мышление и технические способности. Проблемы включают ограниченность ресурсов и сложность оценки. Исследование предлагает педагогическую основу и рекомендует междисциплинарное сотрудничество для оптимизации внедрения, соответствующее мировым образовательным тенденциям.*

Ключевые слова: *аутентичные симуляции, цифровые симуляции, преподавание английского языка, навыки решения проблем, архитектурное образование, CAD, виртуальная реальность, экспериментальное обучение.*

Introduction

In the globalized architectural landscape, professionals require proficiency in English communication and robust problem-solving skills to address complex design challenges and collaborate internationally. For architecture students, mastering English is essential for articulating design concepts, interpreting technical documentation, and engaging in cross-cultural teamwork. Simultaneously, problem-solving is a core competency in navigating the iterative nature of architectural practice. This study explores the integration of authentic and digital simulations in English Language Teaching (ELT) to enhance problem-solving skills among architecture students, aligning with global educational trends and Uzbekistan’s focus on developing globally competitive professionals (Presidential Decree No. UP-5712, 2019). Further supporting this direction, Shokirov (2025) notes that "Several scientific studies are being conducted in Uzbekistan on the use of artificial intelligence in education" (Shokirov, 2025, p. 29), indicating a conducive environment for such technological integrations in education.

Global research underscores the efficacy of simulation-based learning in fostering communicative and professional competencies (Jones, 2018; Smith & Lee, 2020; Chen & Wang, 2019). Authentic simulations replicate real-world scenarios, while digital tools like Computer-Aided Design (CAD) and Virtual Reality (VR) provide immersive, interactive platforms. As Shokirov (2025) highlights, "The simulation strategy, on the contrary, involves students in language learning by simulating real-life situations in a classroom setting. This method helps to develop students’ language skills and also strengthens their knowledge in professional fields" (Shokirov, 2025, p. 748). However, there is a lack of integrated pedagogical frameworks specifically tailored for architecture education within ELT contexts (Marković, 2016). This study builds on foundational works by Jones (1982), Willis & Willis (2007), and Hubbard (2009), addressing the gap in combining authentic and digital simulations to simultaneously develop linguistic and cognitive skills.

Problem Statement

The challenge lies in designing ELT methodologies that concurrently enhance English proficiency and problem-solving skills in architecture students. Traditional curricula often separate language learning from professional training, limiting interdisciplinary skill development. This study addresses the need for a pedagogical framework that integrates

authentic simulations (e.g., role-playing client consultations) and digital simulations (e.g., CAD, VR) to create immersive learning environments. It aligns with Uzbekistan’s educational reforms emphasizing global competencies (Presidential Decree No. UP-5712, 2019) and tackles issues such as designing authentic scenarios, ensuring equitable access to digital tools, and developing assessments that evaluate both linguistic and cognitive outcomes. The integration of advanced technologies like Artificial Intelligence (AI) also presents its own set of considerations. For instance, "AI tools offer opportunities such as personalized learning, automated assessment, and increasing student engagement. However, there are also problems such as data privacy, teacher preparedness, and equal opportunities" (Shokirov, 2025, p. 604).

Methods

This study employs a systematic literature review methodology to synthesize research on the integration of authentic and digital simulations in ELT for architecture students. The review process followed these steps:

1. Search Strategy: Sources were retrieved from academic databases (Scopus, ERIC, Google Scholar) using keywords: “authentic simulations,” “digital simulations,” “ELT,” “architecture education,” and “problem-solving skills.”

2. Inclusion Criteria: Peer-reviewed articles and books from 2009–2025 addressing simulation-based learning in language acquisition or professional training were included (n=40).

3. Screening and Selection: Articles were screened for relevance to ELT and architecture education, resulting in 22 studies for in-depth analysis.

4. Data Analysis: Findings were synthesized using task-based language teaching (TBLT) frameworks (Willis & Willis, 2007) and experiential learning theory (Kolb, 1984) to evaluate simulation efficacy across linguistic, cognitive, and professional outcomes.

The methodology ensures replicability and accessibility for other researchers through transparent documentation of search, selection, and analysis processes.

Results and Discussion

The systematic review reveals that authentic simulations, such as role-playing client consultations or design reviews, significantly enhance communicative competence, motivation, and professional discourse (Jones, 2018; Smith & Lee, 2020; Marković, 2016). The motivational aspect is particularly noteworthy, as "According to Yoon’s (2014) research findings, simulations significantly increased students’ interest in the English language, served to make the learning process more interesting and enjoyable, encouraged students to study more independently, and generally helped to develop a positive attitude towards the English language" (Shokirov, 2025, p. 750). Digital simulations, including CAD, Building Information Modeling (BIM), and VR, provide interactive platforms that develop technical proficiency and linguistic skills in context (Hubbard, 2009; Godwin-Jones, 2011). AI tools, for example, "create a lot of opportunities, such as providing learning experiences for students on an individual basis" (Shokirov, 2024, p. 126). Furthermore, specialized platforms can aid in material creation; for instance, "Platforms like Diffit.me provide the opportunity to prepare quality educational materials in a short time without requiring complex technical knowledge" (Shokirov, 2025, p. 28). A proposed pedagogical framework integrates both approaches in a cyclical sequence:

1. Role-playing client interviews to gather design requirements in English.
2. Using CAD/BIM to create and manipulate digital models.
3. VR evaluation through virtual walkthroughs to assess designs.

4. Presenting designs to a panel for critique and iteratively refining solutions based on feedback.

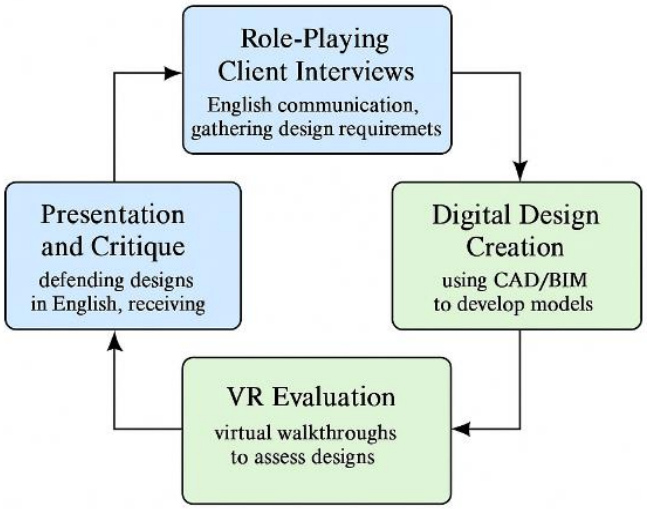
Table 1.

Comprehensive Comparison of Authentic and Digital Simulations in ELT for Architecture Students

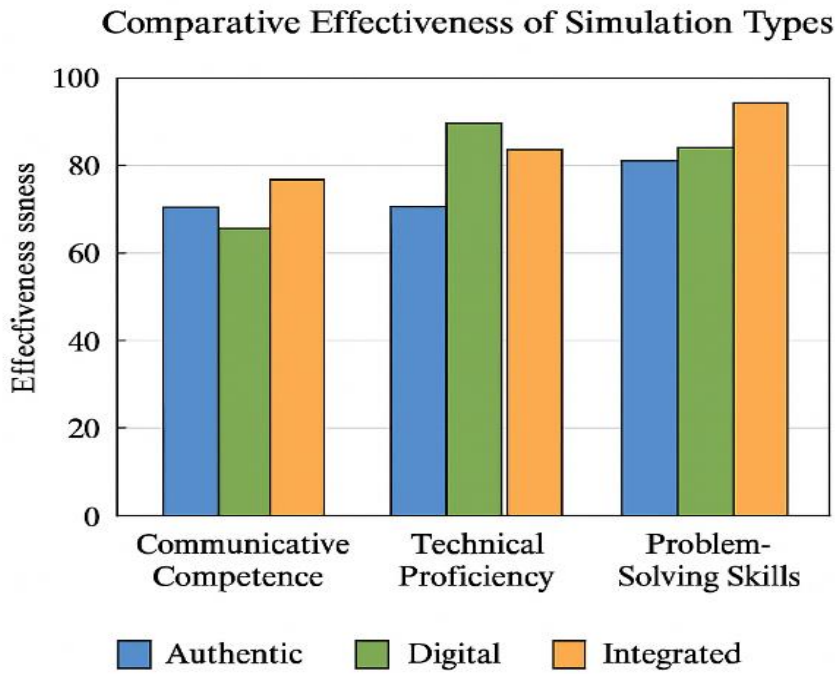
Criteria	Authentic Simulations	Digital Simulations	Integrated Approach
Definition	Role-playing real-world scenarios (e.g., client consultations, design reviews)	Interactive platforms using CAD, BIM, VR for design and analysis	Combination of role-playing and digital tools in a cyclical process
Learning Outcomes	Enhances communicative competence, professional discourse, confidence	Develops technical proficiency, spatial reasoning, linguistic precision	Improves linguistic, cognitive, and technical skills holistically
Student Engagement	High due to interactive, social nature (Smith & Lee, 2020)	High for digital natives, interactive feedback (Prensky, 2001)	Maximized through diverse, contextually relevant tasks
Scalability	Limited by instructor availability, classroom settings	Scalable with access to software and hardware	Requires investment in both human and technological resources
Challenges	Resource-intensive, requires trained instructors	High initial costs, technological barriers	Complex assessment design, cognitive load management
Industry Relevance	Mirrors professional communication (Marković, 2016)	Aligns with industry-standard tools (Chen & Wang, 2019)	Prepares students for global architectural practice
Assessment Methods	Rubrics for language accuracy, interpersonal skills	Metrics for design quality, technical accuracy	Combined rubrics for linguistic, cognitive, and technical outcomes

The cyclical pedagogical sequence is visually represented in Figure 1, illustrating how authentic and digital simulations are integrated to foster iterative learning and skill development in architecture students.

Figure 1. Pedagogical Sequence for Integrated Simulations



To further evaluate the effectiveness of these simulation types, Figure 2 compares Authentic, Digital, and Integrated approaches across key metrics, highlighting the integrated approach’s superior performance in fostering holistic skill development (Marković, 2016; Kolb, 1984).



Compared to traditional ELT, simulations align with architectural practice, fostering experiential learning (Rachwan & Nicolas, 2018). Challenges include resource constraints, faculty training, and designing assessments that balance linguistic and cognitive outcomes. The issue of faculty training is critical, "Today, the low level of competence of English language teachers in the effective use of artificial intelligence tools can reduce the quality of education" (Shokirov, 2024, p. 128). Therefore, "in order to maximize the potential benefits of AI technologies, it is also necessary for the educators to take a more proactive role in acquiring new

skills" (Shokirov, 2024, p. 126). Indeed, "Developing the competence to use AI tools is an important factor for the professional development of English language teachers" (Shokirov, 2024, p. 130). The findings support a scalable framework embedding language acquisition in professional tasks, enhancing relevance and preparing students for global practice.

Conclusion

This study confirms that integrating authentic and digital simulations in ELT significantly enhances problem-solving skills in architecture students. The proposed framework offers a practical, economically viable solution for interdisciplinary education, aligning with Uzbekistan’s educational goals. Benefits include improved linguistic proficiency, technical skills, and global competitiveness. Future research should empirically test the framework, leveraging AI-driven simulations and VR advancements. Interdisciplinary collaboration between language and architecture faculty is recommended to ensure effective implementation.

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“ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS”

HAYRAT UL-ABROR” DOSTONIDAGI OBRAZLARNING UMUMIY TAVSIFI VA TASNIFI

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Annotatsiya. *Mazkur maqolada Alisher Navoiyning “Hayratul-abror” dostonidagi obrazlar tasnifi va tavsifi haqida gap boradi. Navoiyning obraz yaratish mahorati o‘rganiladi, obrazlarining mazmun-mohiyati, badiiy vazifasi kabi masalalar o‘rtaga tashlanadi. Kuzatilgan masalalar bo‘yicha xulosalar qilinadi.*
Kalit so‘zlar: *Alisher Navoiy, “Hayratul-abror” dostoni, obrazlar tasnifi va tavsifi.*

Аннотация. *В данной статье рассматривается классификация и описание образов в эпической поэме Алишера Навои «Хайратул-аброр». Изучается мастерство Навои в создании образов, поднимаются такие вопросы, как содержание и сущность его образов, их художественная функция. Делаются выводы по рассмотренным вопросам.*
Ключевые слова: *Алишер Навои, эпическая поэма «Хайратул-аброр», классификация и описание образов.*

Abstract. *This article examines the classification and description of images in Alisher Navoi’s epic poem "Khairatul-Abror". Navoi’s mastery of creating images is studied, and questions such as the content and essence of his images, their artistic function are raised. Conclusions are made on the issues considered.*
Keywords: *Alisher Navoi, epic poem "Khairatul-Abror", classification and description of images.*

Kirish.

Alisher Navoiy "Xamsa" asarining ilk dostoni hisoblanadigan "Hayrat ul-abror" dostoni Xamsadagi qolgan to‘rt dostonning barchasi uchun boshlanma hisoblanib, o‘zida juda katta ma’naviy xazinani jamlagan. Undagi hikoyat va maqolatlar mavzusi faqatgina ma’lum hudud yoki davr uchungina bo‘lmasdan, makon va zamon tanlamaydi. Insoniyat bor ekan doim shunday bir asarga ehtiyoj sezaveradi. Uni o‘qish orqali odamzod o‘zini isloh qiladi, komillikka tomon intiladi. Biz beshlikdagi birinchi dostondagi obrazlar tizimini o‘rganamiz, tasniflaymiz va tavsif etamiz.

Tahlil va mulohazlar. Alisher Navoiy o‘z asarlariga jumladan "Hayrat ul-abror"dostoniga ham Qur’oni Karimni dasturilamal qilib olganligi ham (buning isbotidur)u zotning yutug‘idir.

“Hayrat ul-abror”ning asosiy g‘oyaviy yo‘nalishi – bu insonni komil fazilatlar sari yetaklash, qalb pokligi, tafakkur musaffoligi va axloqiy barkamollikka chaqirishdir. Navoiy insonni moddiy va ruhiy jihatdan yetuk bo‘lishi lozim bo‘lgan mavjudot sifatida ko‘radi. U deydi:

Gavhar andin barkamol ermas hech,

Aql anga paykaru jamol ermas hech. [1. Alisher Navoiy. “Hayrat ul-abror” – Toshkent: Tamaddun nashriyoti, 2021. 392 b.]

Bu bayt – insonning chinakam gavhari faqat komillikda ekanligini ifoda etadi. Navoiy uchun komillik nafaqat ilmda, balki axloqda, iymon va ma’rifatda namoyon bo‘ladi. Alisher Navoiyning aynan “Hayrat ul-abror” dostoni nafaqat turkiy xalqlar orasida balki jahonda ham mashhur. Bertels "Hayrat ul-abror"ni Alisher Navoiyning ijodiy kamolot bosqichi deb baholaydi. Uning fikricha, bu asar garchi an’anaviy masnaviy shaklida yozilgan bo‘lsa-da, Navoiy unda chuqur falsafiy va axloqiy muammolarni ilgari suradi. U ayniqsa, diniy-tasavvufiy qarashlarni ijtimoiy-siyosiy qarashlar bilan uyg‘unlashtirgan holda yuksak badiiyatda bayon eta olganini yuqori baholaydi.

[2. Bertels E. E. S. 95–98.]

Turkiyalik olim R. R. Arat (Reşid Rahmeti Arat) Navoiy ijodini chuqur tadqiq qilgan ilk turkiy olimlardan biri bo‘lib, “Hayrat ul-abror”ni turkiy adabiyotda diniy-tasavvufiy g‘oyalarni yuksak poetik darajada ifodalagan muhim asar sifatida ko‘radi. U Navoiyning ushbu doston orqali Nizomiy va Jomiy kabi ustozlariga ergashganini, ammo shu bilan birga o‘zbek xalqining ma’naviy-estetik dunyoqarashini badiiy ifodalaganini ta’kidlaydi.

[3. Arat R. R. 1991. — S. 212–215.]

Mashhur nemis sharqshunosi Annemarie Shimmel tasavvufiy adabiyot bo‘yicha yozgan asarlarida “Hayrat ul-abror”ni tilga olib, uni islomiy mistitsizmning badiiy timsollar orqali ifodalangan yuksak namunasi deb ataydi. U Navoiyning asardagi obrazlar orqali inson va Haq o‘rtasidagi munosabatni ruhiy kamolot pog‘onalari sifatida yoritganini yuqori qadrlaydi.

[4. Schimmel A.. P-381]

Turkiyalik adabiyotshunos M. Akkuş Navoiyning diniy-axloqiy qarashlarini tahlil qilar ekan, “Hayrat ul-abror” asarida insoniy komillikka yetishish, ilohiy muhabbat, va axloqiy poklik g‘oyalari o‘ta teran va ramziy shaklda aks ettirilganini aytadi. U bu asarni axloqiy-tarbiyaviy yondashuvlar bilan boyitilgan tasavvufiy didaktik poema deb ataydi.

[5. Akkuş M. 2006. — S. 127–131]

E. G. Browne, ingliz sharqshunosi, Navoiy ijodini tahlil qilarkan, uni forsiy adabiyot darajasiga ko‘tarilgan o‘zbek adabiyotining poydevorchisi deb ataydi. “Hayrat ul-abror”ni esa bu adabiyotda didaktik ruhdagi o‘ziga xos uslub va mazmun yondashuvi bilan ajralib turuvchi doston deya ta’riflaydi. U Navoiy orqali Sharq falsafasi G‘arbga yetib kelganini tan oladi.

[6. Browne E. G. — P. 446–448.]

Alisher Navoiy “Hayrat ul-abror” dostonida obraz yaratish orqali insoniyatning eng oliy orzulari — adolat, ma’naviy poklik va komillikka intilish g‘oyalarini ifodaladi. Dostonda keltirilgan har bir obraz o‘z zamonasi ijtimoiy, axloqiy va diniy muammolariga badiiy javob bo‘lib xizmat qiladi. Epik asar sifatida “Hayrat ul-abror” dostonidagi obrazlar bir necha qatlamli ma’noga ega. Bunda, birinchi qatlam — tarixiy shaxslar orqali aniq bir davr hodisalarini eslatish,

ikkinchi qatlam — tasavvufiy oriflar timsolida ma’naviy-ruhiy yetuklikni ko‘rsatish, uchinchi qatlam esa ramziy obrazlar orqali umumlashgan falsafiy xulosalar chiqarishga xizmat qiladi.

Adabiyotshunoslikda obraz — voqelikni badiiy aks ettirishning markaziy tushunchalaridan biridir. Obraz orqali ijodkor o‘zining estetik qarashlarini, dunyoqarashini, ijtimoiy-falsafiy va axloqiy qarorlarini ifoda etadi. U nafaqat tasvir vositasi, balki adibning ideal timsollarini gavdalantiruvchi badiiy shakldir.

Obraz tushunchasini talqin etishda turli nazariy yondashuvlar mavjud. G‘arb adabiyotshunosligida bu tushuncha “personaj”, “karakter”, “simvolik timsol” kabi jihatlarda tahlil qilinadi. Rus formalistlari esa obrazni syujetdagi funksiya asosida baholaydi (V. Propp, B. Tomashevskiy).

Sharq adabiyotshunosligi va tasavvufiy tafakkurda esa obraz ko‘proq “majoziy ramz”, “haqiqatga eltuvchi timsol” sifatida qaraladi. Xususan, sufiylikda har bir obraz – ichki ma’rifat yo‘lini ko‘rsatadigan ramziy belgidir. Najmiddin Komilov bu borada shunday deydi:

“Tasavvufda har bir obraz tashqi shakldan ko‘ra, ma’no yuklovchi vositadir. U orqali nafaqat syujet harakati, balki ruhiy yuksalish bosqichlari bayon etiladi”

[7. Komilov N., “Tasavvuf”, 48-bet].

Shuningdek, O‘zbek adabiyotshunosligida ham obraz tushunchasi chuqur o‘rganilgan. Akademik G‘.G‘ulomov obraz haqida shunday deydi: “Obraz san’atkorga xos bo‘lgan bir ijtimoiy umumlashtirish shaklidir. U orqali yozuvchi hayotda mavjud hodisa va shaxslarni umumlashtiradi”[8. G‘ulomov G‘., 1983, 75-bet]. Obraz vositasida adib o‘z zamonasi, jamiyati, axloqiy mezonlari haqida fikr bildiradi.

Adabiyotshunos N.Shukurov esa obrazni “badiiy tafakkurning o‘ziga xos shakli” deb ataydi va uning tasviriylik, badiiylik va estetik ta’sir kuchiga egaligini ta’kidlaydi [9.Shukurov N. – 64-b.].

Shunday qilib, obraz adabiy asarning asosiy estetik birligi bo‘lib, unda muallifning dunyoqarashi, maqsad-muddaosi, ruhiy kechinmalari mujassam bo‘ladi. Obraz orqali adib o‘z davrining ijtimoiy, axloqiy va falsafiy masalalariga munosabat bildiradi.

Ular orqali shoir dostoniga keng g‘oyaviy mazmun, ma’naviy qatlam va didaktik yo‘nalish beradi.

Obrazning badiiy vazifasi — doston g‘oyasini yetkazish, shoirning ideal jamiyat haqidagi qarashlarini badiiy shaklda aks ettirishdir. Bu obrazlar orqali Navoiy zamonaxoh jamiyatining muammolarini tanqid qiladi, adolat, ilm-ma’rifat, or-nomus kabi qadriyatlarni ulug‘laydi. Misol uchun, Shoh G‘oziy obrazida adolatli podsho ideali gavdalanadi. Uning shaxsiyatidagi odillik, insoniylik va xalqparvarlik sifatlari orqali Navoiy adolatning davlat boshqaruvida qanchalik muhimligini ta’kidlaydi. Chunki adolat buyuk ish hisoblanib, adolat qilishga hammada ham qudrat yetmaydi. Negaki insonlar adolat qilayotganlarida o‘z xohish-istaklarini va eng asosiysi o‘z nafslarini unutishlari kerak. Ayniqsa xalq rahnamosi hisoblangan davlat hukmdori adolatli bo‘lsa yurt tinch, xalq farovon va baxtli bo‘ladi. Navoiy Bahrom obrazidan siyosiy va axloqiy saboq chiqarish maqsadida foydalangan. Bu obraz axloqiy didaktika vazifasini bajaradi. Nushirvoni Odil obrazida esa No‘shiravonning yuksak hayo sohibi bo‘lib, uning adolati zamirida aynan shu sifati borligi ta’kidlangan. U hayo va axloqiy poklikning ramzi sifatida keltirilgan.

Obrazlarning g‘oyaviy yuklamasi dostonda muhim o‘rin tutadi. Har bir tarixiy shaxs yoki diniy orif siymosi ma’lum bir axloqiy fazilatni targ‘ib etadi. Tasavvufiy obrazlar — Bahouddin Naqshband, Xoja Ahror, Imom Roziy va boshqalar orqali ruhiy kamolot, ilohiy muhabbat, tariqatga sadoqat g‘oyalari ilgari suriladi.

Obrazlar tizimi o‘z ichiga jamlangan ijtimoiy, ma’naviy va axloqiy qadriyatlar orqali dostonda mukammal bir ijtimoiy-falsafiy modelni taqdim etadi. Shoir o‘zining didaktik vazifasini obrazlar orqali o‘ta badiiy va ta’sirchan tarzda amalga oshiradi.

Adabiy obraz haqidagi ilmiy qarashlarga ko‘ra (B.V.Tomashevskiy, V.V.Vinogradov va O‘zbek adabiyotshunoslari fikrlariga tayanib), badiiy obraz hayot haqiqatining o‘ziga xos badiiy talqini bo‘lib, unda estetik, falsafiy va ijtimoiy ma’no mujassam bo‘ladi. Navoiy dostoni obrazlarining badiiy sifatlari aynan shunday kompleks yondashuv asosida yaratilgan.

Doston obrazlari orqali faqat o‘z zamonasi emas, balki barcha davrlar uchun dolzarb bo‘lgan umumiy insoniy qadriyatlar targ‘ib etiladi. “Hayrat ul-abror” dostonidagi obrazlar — zamonasining ruhiy-falsafiy holatining badiiy ifodasi sifatida ham qadrlidir.

"Hayrat ul-abror" dostonida obrazlar murakkab va ko‘p qatlamli tasnifga ega. Navoiy dostondagi obrazlarni shunchaki tarixiy ma’lumotlar asosida emas, balki o‘zining falsafiy va axloqiy idealiga muvofiq tarzda tanlagan va yaratgan. Asarda tarixiy va diniy-tasavvufiy obrazlar o‘zaro aloqador va uyg‘un holda tasvirlanadi.

Tarixiy obrazlar — dostonning asosiy badiiy vositalaridan biridir. Bu obrazlar orqali Navoiy qadimgi sharq va islom tarixidagi eng mashhur adolatli podsholar va qahramonlar timsolida axloqiy fazilatlarni targ‘ib etadi. Shoh G‘oziy, Nushirvoni Odil, Bahrom Cho‘bin, Iskandar kabi tarixiy shaxslar dostonda adolat, jasorat, donishmandlik va siyosiy yetuklik timsoli sifatida gavdalanadi.

Masalan: Shoh G‘oziy — adolat va xalq manfaatiga xizmat qilishning namunasi sifatida tasvirlangan;

No‘shiravoni Odil — tarixiy adolat ramzi;

Bahrom Cho‘bin — vatanparvarlik va jasorat timsoli;

Iskandar — ilm, tafakkur va dunyoqarashni kengaytirgan shoh sifatida keltirilgan.

Navoiy ushbu tarixiy shaxslarni badiiy talqinda ideal tarzda ifodalaydi. Bu bilan shoir o‘z zamonasining siyosiy-ijtimoiy hayotida adolat, ma’rifat va donishmandlik kabi qadriyatlarning ustuvorligini targ‘ib qiladi.

Diniy-tasavvufiy obrazlar esa dostonda inson ma’naviyatining eng oliy qirralarini ifoda etadi. Bahouddin Naqshband, Xoja Ahror, Imom Roziy, Abdulloh Muborak kabi oriflar timsolida ruhiy poklanish, tariqat ahkomlariga sodiqlik va ilohiy muhabbat g‘oyalari ilgari suriladi.

Bahouddin Naqshband — sobitqadamlik va kamtarinlik ramzi,

Xoja Ahror — nafsni yengish va tariqat yo‘lida xizmat qilish timsoli,

Imom Roziy — ilm va hikmatni qadrlash namunasi,

Abdulloh Muborak — taqvo va samimiylik namunasi.

Diniy-tasavvufiy obrazlar asosan inson ruhining yetukligi, Allohga muhabbat va tariqatda sobitqadamlik g‘oyalarini o‘zida mujassamlashtiradi. Ular orqali Navoiy o‘z o‘quvchisini nafaqat tashqi amallar, balki ichki poklik va haqiqatga sadoqat sari yetaklaydi.

Tarixiy va diniy-tasavvufiy obrazlarning tasnifi dostonning ichki tuzilmasini ham belgilaydi. Asarda tarixiy siymolar odatda dunyoviy adolat va siyosiy hikmat timsoli sifatida tasvirlansa, diniy-tasavvufiy siymolar esa ruhiy kamolot va ma’naviy kamolot sari yetaklovchi ramzga aylangan.

"Hayrat ul-abror" dostonidagi obrazlar tizimi shoirning ijtimoiy, axloqiy va diniy-falsafiy g‘oyalarini badiiy ifodalash vositasi sifatida xizmat qiladi. Har bir obraz o‘zining badiiy

xususiyati, g‘oyaviy yuklamasi va falsafiy ma’nosi bilan dostonning umumiy ideallarini mustahkamlab beradi.

Dostondagi tarixiy obrazlar orqali shoir adolat, donishmandlik, jasorat kabi insoniy fazilatlarni ulug‘laydi. Shoh G‘oziy, Nushiravoni Odil, Bahrom Cho‘bin, Iskandar kabi shaxslar o‘z davrining ijtimoiy ehtiyojlariga javob beruvchi namunaviy obrazlar sifatida tasvirlangan. Ular orqali Navoiy adolatli jamiyat, ilm-ma’rifatga asoslangan davlat va vatanparvarlik kabi g‘oyalarni ilgari suradi.

Diniy-tasavvufiy obrazlar esa insonning ruhiy kamolotga intilishi, tariqatdagi sobitqadamlik, Allohga muhabbat va ichki poklik g‘oyalarini badiiy shaklda ifodalaydi.

Bahouddin Naqshband, Xoja Ahror, Imom Roziy, Abdulloh Muborak kabi siymolar o‘zining hayoti va faoliyati orqali insonni ma’naviy kamolot sari yetaklovchi ramzga aylangan.

Xulosa. "Hayrat ul-abror"dagi obrazlar tizimi o‘zaro uyg‘un va izchil tarzda tashkil etilgan. Har bir obrazning o‘z o‘rni, vazifasi va g‘oyaviy ahamiyati mavjud. Bu tizim dostonda umumiy badiiy yaxlitlik va falsafiy asosni ta’minlaydi.

Doston obrazlar tizimining asosiy xususiyatlari:

Har bir obraz ijtimoiy va axloqiy qadriyatlarning badiiy ifodachisi;

Tarixiy va diniy obrazlar uyg‘un holda jamiyat idealini ifodalaydi;

Obrazlar orqali shoir o‘z zamonasining vaqti-vaqti bilan unutilgan qadriyatlarini qayta tiklaydi.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

ELIMINATING BUREAUCRACY AND REVITALIZING ENGLISH LANGUAGE TEACHING IN UZBEKISTAN

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Abstract. *This article examines the challenges posed by bureaucratic inefficiencies in Uzbekistan's educational system, particularly in English language teaching. It highlights how excessive paperwork detracts from teachers' focus on instruction, leading to demotivated students and outdated teaching methods. The proposal advocates for a paperless system to reduce administrative burdens and suggests curriculum reforms, including the adoption of Communicative Language Teaching (CLT), to enhance student engagement and communicative competence. Key recommendations involve government intervention to digitize documentation and revise teaching materials, with the aim of improving educational quality and efficiency.*

Keywords*: bureaucracy, paperless system, English language teaching, Communicative Language Teaching (CLT), curriculum reform, teacher workload, student motivation.*

Annotatsiya. *Ushbu maqolada O'zbekiston ta'lim tizimidagi, xususan, ingliz tilini o'qitishdagi byurokratik samarasizliklar keltirib chiqarayotgan muammolar ko'rib chiqiladi. Unda ortiqcha qog'ozbozlik o'qituvchilarning o'qitishga bo'lgan e'tiborini susaytirishi, o'quvchilarning motivatsiyasini pasaytirishi va o'qitish usullarining eskirishiga olib kelishi ta'kidlangan. Taklif ma'muriy yukni kamaytirish uchun qog'ozsiz tizimni qo'llab-quvvatlaydi va o'quvchilarning faolligi va muloqot kompetensiyasini oshirish uchun o'quv dasturlarini isloh qilishni, jumladan, kommunikativ tillarni o'qitishni (CLT) joriy etishni taklif etadi. Asosiy tavsiyalar ta'lim sifati va samaradorligini oshirish maqsadida hujjatlarni raqamlashtirish va o'quv materiallarini qayta ko'rib chiqish bo'yicha davlat aralashuvini o'z ichiga oladi.*

Kalit so'zlar: *byurokratiya, qog'ozsiz tizim, ingliz tilini o'qitish, Kommunikativ tillarni o'qitish (CLT), o'quv dasturini isloh qilish, o'qituvchilarning ish yuki, talabalar motivatsiyasi.*

Аннотация. *В этой статье рассматриваются проблемы, вызванные бюрократической неэффективностью в образовательной системе Узбекистана, особенно в преподавании английского языка. В ней подчеркивается, как чрезмерная бумажная работа отвлекает учителей от сосредоточенности на обучении, что приводит к демотивации учеников и устаревшим методам обучения. В предложении*

предлагается безбумажная система для снижения административного бремени и предлагаются реформы учебных программ, включая принятие коммуникативного обучения языку (CLT), для повышения вовлеченности учащихся и коммуникативной компетентности. Основные рекомендации включают вмешательство правительства для оцифровки документации и пересмотра учебных материалов с целью повышения качества и эффективности образования.

Ключевые слова: *бюрократия, безбумажная система, преподавание английского языка, коммуникативное обучение языку (CLT), реформа учебных программ, нагрузка учителей, мотивация учащихся.*

Bureaucracy is no longer applicable in today’s many countries as it causes complexity and inefficiency in educational organizations. That’s why the world today is moving to paperless system. For example, Estonia reduced teacher paperwork by 90% after digitizing records in 2015. Uzbekistan could adopt similar e-governance tools. In the renewed Uzbekistan, comprehensive reforms have covered all spheres of life of society and the state without exception. First of all, they are aimed at ensuring the constitutional rights of a person, raising his status, creating favorable conditions for the comprehensive development of the younger generation. In this perspective, one of the strategic goals is the training of young specialists with high potential, modern knowledge, creative thinking, and fluent in foreign languages.

Reforms in this area began in Uzbekistan back in 2012 with the adoption of the decree of the head of state "On measures to further improvement of the system of studying foreign languages". A system of continuous teaching of foreign languages, primarily English, was introduced, starting from the first grade of school.

The relevant ministry and the British Council in Uzbekistan jointly developed a reform of English language teaching in the national education system. The main reason for this is the rapid integration of Uzbekistan into all international processes, the constantly growing number of English speakers and the richest base of scientific, educational, popular and other publications in this language. Unfortunately, in Uzbekistan, document transportation and such laborious tasks are still available despite the decree of the President of Uzbekistan “ On measures to further reduce bureaucratic barriers and introduce modern management principles in the activities of state bodies and organizations” .

However, bureaucracy still remains a significant barrier to progress in many educational systems of Uzbekistan. Mostly teachers at school are suffering and complaining about time-consuming paperwork, so such kind of outdated bureaucratic work hinders educational growth as well because teachers have to concentrate on documental stuff rather than focusing on teaching pupils. Therefore, pupils also have no interest and motivation towards English classes for the reason that these classes are not conducted well by those overloaded teachers.

Except this, another problem to mention is that the “**balance of theory and practice”** which started from the 2022/2023 academic year, accordfing to it students of pedagogical universities, starting from the second year, undergo systematic practice in the "4 + 2" format. Classes are held four days a week at universities, and the remaining two days - at general secondary educational institutions. If properly organized, this approach is effective in training future practitioners.

However, as it turned out in practice, there are shortcomings and rough edges in the organization of this process. Initially, it was assumed that universities would organize the assignment of small groups of students to experienced teachers as practice leaders. However, it should be taken into account that practice hours are not included in the teacher’s academic workload within the school curriculum. Thus, participation in it represents an additional obligation and burden for teachers. In many cases, on practice days, university mentors also conduct classroom classes, which limits their ability to attend the practice site. As a result, the 4+2 format of training is not fully implemented, which is due to the lack of adequate control by experienced teachers and incomplete provision of methodological recommendations.

In addition, many schools are reluctant to accept students for practical training or do not effectively use their potential. The 4+2 format of training future teachers should imply the conclusion of relevant agreements between the school and the university. It is advisable to develop a memorandum of understanding between the Ministry of Higher Education, Science and Innovation and the Ministry of Preschool and School Education as a fundamental document for such interaction. This will establish a clear procedure for conducting student practice within the framework of the 4+2 model, and determine the responsibilities and rights of the competent parties.

“Prepare not for exams, but for life”

This is the principle that Finnish teachers follow, who have earned recognition throughout the world thanks to their educational system. Finland’s advanced experience is now being actively studied and implemented in Uzbekistan.

Using this and other modern trends, it is our duty to reform the curricula in pedagogical universities. Currently, a significant portion of students studying in them are limited to solving only theoretical problems obtained during midterm or final exams. However, such an approach cannot serve as an adequate indicator of the professional competence of students.

In this regard, it seems reasonable to introduce a two-stage state certification of graduates of pedagogical programs in the following sequence: assessment of theoretical knowledge based on the materials learned - development and presentation of a presentation on a specific topic in order to demonstrate the pedagogical potential of the graduate. Experienced teachers who demonstrate best practices in the educational process should participate in the assessment of presentations. After the presentation, the graduate is given a task related to a problematic educational situation that he may face in the future, and the solution proposed by him is assessed from the point of view of scientific validity and effectiveness.

The problems of learning foreign languages in Uzbekistan are enormous, but solvable. Having successfully overcome the above obstacles, the country will be able to achieve significant success in improving language education. This will open up truly inexhaustible opportunities for the youth of New Uzbekistan.

The following problem which I observed is that pupils’ problems are neglected to be solved because of having no time to organize contact hours with teachers. Such educational issues can be seen obviously in the school № 270 , which is located in Chilanzar district of Tashkent city. Pupils are demotivated to learn foreign languages, especially English language, they come to school only to register their attendance. This is because of outdated English language learning curriculum which has been used for many years without no any improvements. Teachers only use ready- made materials for implementing during the lesson and also they use outdated Teaching Methods like Grammar Translation Method (GTM) despite

global shifts toward Communicative Language Teaching (CLT) and this is due to lack of training and resources.

Considering these problems, this proposal suggests such objectives:

- ✓ To make the education system go paperless and by doing teachers are not overloaded further, this enables to increase productivity and quality of the education.
- ✓ To make the pupils motivated and encouraged to English classes by applying new methods and techniques, especially, CLT (Communicative Language Teaching), modifying school curriculum.
- ✓ To organize Teacher Training Programs: to be partners with international organizations (e.g., British Council, TESOL) to provide subsidized CLT workshops, emphasizing student-centered learning.
- ✓ To improve digital Infrastructure: Advocate for government-funded platforms (e.g., Google Classroom or local equivalents) to streamline document management and lesson sharing.

To address the abovementioned problems, it is important to invest in educational programs for foreign language teachers that focus on advanced methods. As part of a special project of the Ministry of Preschool and School Education, teachers in the regions have been trained in internationally recognized TESOL and TEFL programs for teaching English. They have demonstrated high efficiency and importance in the methodological aspect, providing teachers with the tools and skills necessary for successful teaching of English as a foreign language.

Thanks to methods focused on the specific needs of students and an in-depth study of pedagogical technologies, TESOL and TEFL program participants become competent and confident teachers. They are able to create stimulating and interactive lessons that ensure effective language acquisition by students of all ages and levels. It is advisable to conduct such lessons on a regular basis, using a cascade method, in which trained teachers pass on their knowledge to others.

Cooperation with linguists and foreign language experts can also contribute to the development of modern curricula adapted to different learning styles and communicative needs. Teaching methodology should be reviewed, creating a balance between grammar and communication. The use of modern language resources, applications, online platforms and other advanced technologies will complement this balanced approach, making the learning process more interesting.

As a recommendation, teachers must create their own syllabus or helpful materials in accordance with the needs of their pupils. Brown (1995) stated about that “ To insure EFL curriculum success, local teachers and other stakeholders must be involved in setting the objectives so they feel a strong sense of ownership”. One more thing, even high grade pupils can hardly speak in English and this shows that lesson objectives and expectations are not achieved, lessons are conducted only in Grammar Translation method using native language rather than using Communicative Language Teaching. However, I knew from the article of Hasanova & Shadiyeva (2007) that in the late 1990s CLT was promoted and started to be implemented in Uzbek education system and Uzbek teachers came across such new method as a first time but this method was unsuccessful because of financial support and inefficient teacher training.

For tackling these issues, government must remove some of inefficient document transportation and this may enable teachers to work on themselves or go to top-rated teacher

training courses in order to strengthen their teaching skills rather than dealing with unnecessary paperwork. Instead, I suggest to eliminate paperwork system or digitize paper documents , they should be stored in a digital format or flash drives this would create much conveniences. For instance, teachers don’t exposure editing and printing problems. Moreover, electronic forms of documents are time-consuming and cheaper. As this central proposal is expected to be accomplished in a macro level, government and The Ministry of Higher and Secondary Specialized Education of Uzbekistan are the major actors to introduce law regarding the abovementioned issue and this process needs one month and for execution of this government must support both financially and politically.

Another related but not central proposal is revising and changing school curriculum including the latest updated teaching methods and techniques, especially applying CLT in order to increase the communicative competence of the pupils. As a fact, Vietnam’s 2020 English curriculum reform, which mandated CLT, improved student fluency by 25% in two years (Hanoi University, 2021). Likewise, target language for classroom usage is English and aspects of this target language like vocabulary, grammar and pronunciation should be mainly focused to enhance. Apart from this, English textbook “Fly High” should be enriched with more productive and content-based activities, because it lacks topic-based activities for young learners and instructions are not clear and direct for pupils.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

MA'NAVIYAT CHAROG'BONLARI

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Annotatsiya. *Ushbu maqolada XIX-XX asrlar oralig'ida o'lkamizga yoyilgan jadidchilik harakati, uning paydo bo'lish sabablari, maqsad va vazifalari haqida atroflicha mulohaza yuritilgan. Millat ziyolilarining madaniyatimiz tarixidagi tutgan o'rni, til, adabiyot, san'at sohasidagi qarashlari, birdamligi va shu yo'ldagi mashaqqatli mehnatlari bayon qilingan.*
Kalit so'zlar: *o'lka, jadidchilik harakati, millat, birdamlik.*

Abstract. *This article provides a comprehensive discussion of the Jadidism movement in our country during the 19th and 20th centuries, its causes, objectives, and functions. It highlights the role of ur nation's intellectuals in the history of our culture, thir views on language, literature, and art, their unity, and the hardships they endured in this path.*
Keywords*: country, jadidism movement, nation, unity.*

XIX asrning oxiri XX asrning boshlarida butun Turkiston o'lkasiga yoyilgan jadidchilik harakati o'zbek tili, adabiyoti va san'ati rivojlanishiga, millatning uyg'onishiga turtki bo'ldi. Jadidlar o'lka aholisini ilmli, ma'rifatli, shuningdek, hurfikrli bo'lishini istab, maktab, maorif, adabiyot va san'at sohalarida katta islohotlarni amalga oshirishni maqsad qilib oldi. Xalqning madaniy va ma'rifiy jihatdan ongini o'stirishga, dunyoqarashini rivojlantirishga bor e'tiborini qaratdi. Bu borada xalq orasidan chiqqan millat ziyolilari mulkdorlar qatlamining bir qismi jadidchilik harakatining tayanchi bo'ldilar. Bular qatorida Mahmudxo'ja Behbudiy, Abdulla Avloniy, Fayzulla Xo'jayev, Said Ahmad Vasliy, Sadriddin Ayniy, Muhammadsharif So'fizoda, Abdulla Badriy, Abdurahim Yusufzoda, Hoji Muin, G'ozi Yunus, Elbek, G'ulom Zafariy, Abdulla Qodiriy, Tavallo, Abdulhamid Cho'lpon, Mirmuhsin Shermuhammedov, Akmal Ikromov, Miskin Usmonxo'ja To'xtaxo'jayev kabi xalqning barcha tabaqa vakillari bor edi. Jadidlar orasidan yetuk olimlar, madaniyat arboblari, sanoat va ziroatchilik sohasining zamonaviy bilimdon mutaxassislari yetishib chiqib, yurtni obod, vatanni mustaqil ko'rishni istadilar va shu yo'lda sobitqadam bo'lib kurashdilar. Ularning eng oliy maqsadlari, ezgu g'oyalari quyidagilar edi:

-Turkiston o'lkasini qoloqlik va diniy xurofotdan ozod etish
-xalqqa ma'rifat tarqatish
-Turkistonda muxtoriyat hukumatini barpo etish uchun kurash
-shariatni isloh qilish
-maktab, maorifni isloh qilish va hokazo

Yuqoridagi ulug‘ maqsad va g‘oyalar atrofida birlashgan jadid harakati a’zolari tezkorlik, aniqlik va albatta, adolatni o‘zlariga mayoq deb bildilar.

Xalq ongini tarbiyalash, uni qoloqlik botqog‘idan chiqarish, millatni ma’naviyat sari yetaklash maqsadida harakati vakillari ilg‘or va tezkor o‘qitish usullari bilan qurollangan maktablar tashkil eta boshladilar. Bunday maktablarda millat bolalari bir yilcha savod chiqarib, o‘qish va yozishni o‘zlashtirib, xat-savod chiqarardi. Bu maktablarda diniy va dunyoviy bilimlar uyg‘unlashgan holda o‘qitilar edi. O‘quvchilar maktab partalarida o‘tirib, diniy va dunyoviy bilimlarni o‘zlashtirishga kirishar “Qur’oni Karim” va “Hadisi Sharif” sahifalari nurlaridan bahramand bo‘lish barobarida matematika, jug‘rofiya, til-adabiyot, rus tili, arab tillarini, shuningdek, ashula va jismoniy tarbiya kabi fanlarni o‘rganishardi. Maktabni tugatgan yoshlar zamonaviy va diniy bilimlarni mukammal egallab, jadid maktablarida o‘qituvchilik, masjidlarda imomlik qilish imkoniyatiga ega bo‘lar edi.

Millatning ma’naviyatini rivojlantirish uchun bel bog‘lagan ziyolilar maktablar uchun dastur, darslik va qo‘llanmalarni o‘zlari yozganlari barchamizga ayon. Munavvarqori Abdurashidxonovning “Adibi avval”, “Adibi soniy”, “Tajvid”, “Usuli hisob”, “Tarixi islom” Abdulla Avloniyning “Turkiy guliston yoxud axloq”, “Birinchi muallim”, “Ikkinchi muallim”, Behbudiyning “Qisqacha umumiy geografiya”, “Bolalar maktubi” va boshqalar shular jumlasidandir. Bobolarimizning bu kabi harakatlari millatni qoloqlik, xurofot botqog‘idan olib chiqish uchun qilingan ishlarning amaliy ko‘rinishidir. Ma’rifat, bilim, yuksak ma’naviyat orqali rivojlanishga yuz tutish ularning oliy maqsadi edi. Ma’naviylik shundan iborat ediki, ular ozodlikka, mustaqillikka turli nizolar, qon to‘kilishlarga olib keluvchi to‘polon-u qirg‘inbarot urushlar bilan emas, aholining savodini chiqarish, ma’naviyatini yuksaltirish orqali har qanday qaramlikni keltirib chiqaruvchi omillarni yo‘qotishga harakat qildilar.

Yuqorida aytganimizdek, jadidchilik harakatining maqsadi xalqni ma’rifat tomon yetaklash, ular ongini milliy ozodlik g‘oyalarini singdirish, yoshlarni har sohada ilg‘or va hurfikrli ko‘rish edi. Ammo jadidchilik harakati oqibatlari juda qimmatga tushdi. Millatimiz yoshlarini zamon bilan hamnafas yashashga, bilim olish, chet tillarni o‘rganish, dunyo ko‘rishga chorlagan jadidlarimizning taqdiri afsuski, ayanchli bo‘ldi. Ularning aksariyati qamaldi, qatag‘on qilindi, Yosh umrlari Maskov hibsxonalarida xazonga aylandi.

Fojiali yakuniga qaramasdan jadidlar asos solgan milliy o‘zlikni anglash yo‘lidagi milliy ozodlik harakatlari xalqning ruhiyatiga yangiliklar olib kirdi. Yillar o‘tib, ularning ma’rifatparvarlik g‘oyalari bilan oziqlangan millat orasidan haqiqiy va fidoyi farzandlar yetishib chiqdi.

Xurofot va qoloqlik botqog‘idan chiqishning eng samarali yo‘li ma’rifat ekanligini targ‘ib qilgan jadidlarimizning bu g‘oyalari yillar, zamonlar o‘tib ham o‘z qadr-qimmatini yo‘qotgan emas. Ma’naviyat -har qanday yovuzlikkka qarshi tura oladigan, oqni qoradan ajrata olishda asqatadigan, hayotda to‘g‘ri yo‘lni ko‘rsata oladigan mayoqdir.

Hozirgi farovon kunlarimizda ham Prezidentimiz ta’kidlaganidek “…ma’naviyat, ma’rifatni targ‘ib qilish har bir ziyolining vijdon ishidir. Ma’rifatchi fidoyi bo‘lmog‘i, o‘zidan kechmog‘i kerak”. Bu yo‘lda jadid ajdodlarimizdan har qancha o‘rnak olsak arziydi.

O‘zining bilimi, aql-zakovati, imon-e’tiqodini, butun hayotini o‘zbek xalqining milliy ozodligi Vatanimizning milliy mustaqilligi va baxtli kelajagi uchun safarbar etgan jadidlar harakatining g‘oyalari zoye ketmadi. Ular Vatanimiz mustaqilligi tufayli hozirgi kunda to‘la ravishda amalga oshdi, nomlari tiklandi, asarlari chop etildi. Qatag‘on qurbonlari muzeyi va shahidlar maydoni tashkil etildi.

Yosh avlodning qadriyatlarga sodiq, g‘ururli o‘zbek farzandlari ta’lim-tarbiyasi uchun millati tarixi, tili imlosi, urf-odatlari haqida bilim beruvchi fanlarning ahamiyati katta. Buni to‘g‘ri anglagan jadidlar XX asrning boshidayoq Turkistonda 9 oylik maktablarni tashkil qilgan. XIX asrning 80- yillaridan boshlab, ma’naviy uyg‘onish sari yuz tutgan turkiy xalqlar millat ko‘zgusi, taraqqiyot omili bo‘lgan til masalasiga jiddiy e’tibor berdi. Nashr ishlarining shakllanishi, matbuotning yuzaga kelishi, maktab va maorifga bo‘lgan e’tiborning ortishi natijasida imlo va til masalalari birinchi o‘ringa chiqdi. Ma’rifatparvar adab Fitrat boshchiligidagi millatparvarlar Turkistonda ilk bora o‘zbek tilini o‘rganishga kirishdilar. Til qoidalari, arab va rus grammatikasi qoidalari, ularning ichki tuzilishi o‘rganib chiqildi. Ular alifbo va imlo muammolarini o‘rganib, turkiy tillar grammatikasini tuzdilar. Shu jarayon sabab o‘zbek tili grammatikasiga oid asarlar yaratildi. Til bilan birgalikda adabiyot va san’atga ham e’tibor kuchaydi. Chunki adabiyot va san’at millat ma’naviyatining rivojlanishida muhim omil hisoblanadi. Abdulhamid Cho‘lpon o‘zining “Adabiyot nadur?” nomli maqolasida shunday deydi: “Har bir millatning hisli ko‘ngul tarixining eng qorong‘u xonalarida maishat (tirikchilik) ning ketishiga qarab har xil tusda va rangda yetishgan, fayzli til birla taqdir etila olmaydurg‘on bir guldir. Ushbu yashadigimiz muhit doirasinda aning to‘lquni odamning har xil maishatiga qarab o‘zgaradur”. Bu borada Cho‘lpon bilan hamfikr maslakdoshlari, hurfikrli jadidlarimiz, millatni har tomonlama yetuk ko‘rishni istab, hozirgi kunda ham o‘z qadr-qimmatini yo‘qotmagan, noyob adabiyot durdonalarini xalqqa taqdim etdilar. Fitratning “Abulfayzxon”, “Shaytonning tangriga isyoni”, “Munozara”, Behbudiyning “Padarkush” dramasi, Cho‘lponning “Kecha va Kunduz” romani, “Turkistonli qardoshlarimga” she’ri, “Qurboni jaholat”, “Do‘xtir Mahammadyor” kabi bir qator asarlarni misol keltirsak bo‘ladi. Ular taraqqqiyot ilm-fanga bog‘liq ekanligini o‘z asarlari bilan targ‘ib qildilar

Ma’rifatparvarlik g‘oyalari bilan o‘z davridayoq xalq nazariga tushgan Zokirjon Xolmuhammad o‘gli Furqat shunday deydi:

Jahon basti kushodu ilm birla,
Nodur dilni murodi ilm birla.
Ko‘ngularni sururi ilmdandur,
Ko‘rar ko‘zlarning nuri ilmdandur.
Kerak har ilmdin bo‘lmoq xabardor,
Bo‘lar har qaysi o‘z vaqtida darkor.

Ma’rifatni mayoq qilgan jadidchilar xalqning ongini rivojlantirish uchun millatni milliy birlikka chaqirdi. Chunki har qanday g‘oyani amalga oshirish uchun birlik, hamjihatlik kerak bo‘ladi. Milliy birlikning vujudga kelishi esa taraqqiyotga sabab bo‘ladi.

O‘zbekiston Respublikasi Prezidenti Sh, Mirziyoyev adabiyotimizga alohida e’tibor qaratar ekan, milliy uyg‘onish adabiyotining yirik vakili Abdulla Avloniyning o‘rni beqiyos ekanligini ta’kidlab o‘tadi. Darhaqiqat, maktab va maorif sohasida Avloniyning alohida mehnati, alohida nomi bor U “Adabiyot yoxud milliy she’rlar” to‘plamida Vatan va millat dardini o‘z tanasida his etib, bu dardni millat bolalari bilan bo‘lishadi. Vatan va millat taqdiri, yoshlar tarbiyati haqida qayg‘uradi,

“Na millat yodi moziying vor,
Na istiqloling ummidi
Vujuding panjayi vahshat ichinda
Tor-u mor o‘lmish” deya qayg‘uradi.

Millatning “tor-mor” bo‘lishini esa bilimsizlikda deb xulosalaydi. Fikrimizcha, bu ahvolga tushishda millatning o‘zi aybdor. Chunki millat ma’rifatdan, bilimdan yuz o‘girdi, jaholatni tanladi. Bu yo‘l esa xalqni, millatni bir necha yillar ma’rifatsiz, ma’naviyatsiz yashashga mahkum etdi.

Jadid bobolarimiz xalqni ma’naviyat, ma’rifat bo‘stonlariga chorlash maqsadida badiiy va ilmiy adabiyotlar, darsliklar, gazeta va jurnallar nashr ettirdilar. Xalqni adabiyotga, san’atga yaqinlashtirish uchun sahnaga mo‘ljallangan asarlar yaratdilar. Teatr truppalari tashkil etib, shu yo‘l orqali xalqqa “dard” larini dasturxon qildilar, xalq dardini tingladilar. Asarlar orqali millat dunyoqarashini, ongini yangilashga harakat qildilar. Shu orqali millatga o‘zlikni anglatish yo‘lini tutdilar. Har narsa ustida fikr qilib, to‘g‘ri xulosa chiqarishga, ezguliklardan ibrat olishga chaqirdilar. Va umid qildilarki,

Adolat bog‘ida gulhoyi
tarbiyat bitar bir kun
Ochib g‘uncha dahonin shodlig‘
izhor yetar bir kun

Bugun bobolarimiz orzu qilgan, armon qilgan dorilomon kunlar keldi.

Shukurlar bo‘lsinki, yurtimizga mustaqillik shabadalari esa boshlagan kundan boshlab, vatanimiz, millatimiz ozodligi, hamjihatligi yo‘lida fido bo‘lgan, ma’naviyati, tili, adabiyoti va san’ati rivojiga, yangilanishiga, asrlar osha bezavol umr ko‘rishiga jonbozlik ko‘rsatgan va shu yo‘lda yosh umrlarini xazon qilgan ajdodlarimiz Vatanimiz tarixiga sharaf bilan yorqin ranglarda bitib qo‘yildi.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

TEACHING FIRST-YEAR GEN-Z STUDENTS: CHALLENGES AND EFFECTIVE APPROACHES

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Abstract. *This study examines the challenges and effective teaching approaches for first-year Gen-Z students majoring in Economics, Fintech, and Management at the Tashkent Institute of Management and Economics. The paper explores the unique characteristics of Gen-Z learners, their learning preferences, and how traditional teaching methods fail to engage them. Given their reliance on digital trends, short-form content, and entertainment-based learning, a new pedagogical framework is required. The study highlights the importance of integrating social media trends, interactive learning, and personalized content into Business English courses to enhance engagement and effectiveness. The article concludes by emphasizing the need for educators to adapt to Gen-Z's evolving learning styles to maximize their academic and professional development.*

Keywords*: Gen-Z students, Business English, digital learning, interactive teaching, social media trends, engagement strategies.*

Annotatsiya. *Ushbu tadqiqot Toshkent Menejment va Iqtisodiyot institutida iqtisodiyot, fintech va menejment yo'nalishida tahsil olayotgan birinchi kurs Gen-Z talabalarini o'qitishdagi muammolar va samarali yondashuvlarni o'rganadi. Tadqiqot Gen-Z o'quvchilarining o'ziga xos xususiyatlari, ularning o'rganish uslublari va an'anaviy o'qitish metodlari ularga qanchalik mos kelmasligini tahlil qiladi. Ular raqamli trendlar, qisqa shakldagi kontent va o'yin-kulgiga asoslangan o'rganish usullariga bog'liq bo'lganligi sababli, yangi pedagogik yondashuv zarur. Ushbu maqolada ijtimoiy media trendlarini, interaktiv o'rganishni va shaxsiylashtirilgan kontentni Business English kurslariga integratsiya qilish muhimligi ta'kidlanadi. Maqola, shuningdek, o'qituvchilar Gen-Z talabalarining rivojlanayotgan ta'lim uslublariga moslashishlari kerakligini ta'kidlaydi.*

Kalit so'zlar*: Gen-Z talabalari, Business English, raqamli o'rganish, interaktiv ta'lim, ijtimoiy media trendlari, jalb qilish strategiyalari.*

Аннотация. *В данном исследовании рассматриваются проблемы и эффективные методы обучения первокурсников поколения Z, обучающихся по специальностям «Экономика», «Финтех» и «Менеджмент» в Ташкентском институте менеджмента и*

экономики. Исследование анализирует уникальные характеристики студентов поколения Z, их предпочтения в обучении и то, почему традиционные методы преподавания неэффективны для них. Учитывая их зависимость от цифровых тенденций, короткого контента и развлекательных форм обучения, необходима новая педагогическая структура. В статье подчеркивается важность интеграции тенденций социальных сетей, интерактивного обучения и персонализированного контента в курс «Бизнес-английский» для повышения вовлеченности и эффективности обучения. В заключении делается вывод о необходимости адаптации преподавателей к эволюционирующим стилям обучения поколения Z для максимального развития их академического и профессионального потенциала.

***Ключевые слова**: студенты поколения Z, бизнес-английский, цифровое обучение, интерактивное преподавание, тренды социальных сетей, стратегии вовлеченности.*

Introduction

The rapid technological advancements and pervasive digital culture have significantly altered the way younger generations, especially Generation Z (born between 1997 and 2012), engage with information, learn, and interact with their surroundings. These changes have profound implications for education, particularly in higher education settings where students’ expectations and learning habits are continually evolving. For first-year students, especially those majoring in fields like Economics, Fintech, and Management at the Tashkent Institute of Management and Economics, traditional pedagogical approaches—relying heavily on textbooks, lectures, and passive learning—fail to captivate their interests. Instead, these students expect learning experiences that are more dynamic, interactive, and directly connected to the digital landscapes they navigate daily.

Gen-Z students are often characterized by their proficiency with technology, constant connectivity, and short attention spans, which have led researchers to question whether traditional teaching methods are suitable for engaging this cohort. Prensky (2001) coined the term "digital natives" to describe individuals who have grown up surrounded by technology, differentiating them from "digital immigrants," who must adapt to the ever-changing digital landscape. This distinction emphasizes how Gen-Z students, who have always been exposed to the internet, social media, and mobile technology, process information differently from previous generations. They prefer learning that is visually rich, fast-paced, and highly interactive, as opposed to more traditional, lecture-heavy methods (Brown, 2020).

These students are accustomed to receiving information in bite-sized formats through social media platforms such as Instagram, YouTube, and TikTok, where they engage with content that is often entertaining and easily digestible. According to Smith and Jones (2019), the growing influence of social media on Gen-Z’s daily lives has created an expectation that academic content should also be fast, engaging, and tailored to their personal preferences. As a result, they are less likely to respond positively to long lectures or static textbooks. Researchers argue that the digital age demands a rethinking of teaching methods in higher education, particularly for students in fields like Business English, where communication skills must be contextualized within the fast-paced, globalized business world.

The modern classroom, therefore, must evolve to meet the needs of Gen-Z learners. Brown (2020) argues that this cohort thrives in environments that incorporate gamification,

social learning, and real-world applications. Business English, traditionally taught through rote memorization and passive learning, must shift towards more interactive, multimedia-rich formats. Kolb (2015) emphasizes that experiential learning, which allows students to learn through real-world experiences, has a significant impact on retention and engagement.

A crucial element in meeting these needs is the integration of technology into the learning environment. Tools such as online simulations, AI-driven learning platforms, and adaptive learning systems can tailor educational experiences to individual learning styles and paces. Robinson and Taylor (2022) highlight the effectiveness of these digital tools in customizing learning experiences, allowing students to engage with content at their own pace and providing immediate feedback. This is particularly important for Gen-Z students, who prefer learning that is personalized and tailored to their specific interests and goals.

At the same time, educators are faced with the challenge of balancing the demands of traditional academic rigor with the need for engagement and flexibility. As first-year students, many of whom are financially independent or managing part-time work alongside their studies, they are particularly focused on acquiring practical skills that can be immediately applied in the professional world. According to Chen (2021), this pragmatism often translates into a preference for courses that offer direct real-world applications, such as business simulations, internships, and project-based learning.

In this context, the Tashkent Institute of Management and Economics, with its diverse student body and emphasis on career-oriented education, presents a unique setting for exploring the integration of digital tools, interactive learning methods, and real-world applications in Business English courses. The students in this study are not only pursuing academic success but are also motivated by the prospect of applying their learning in their future careers, whether in economics, fintech, or management.

This paper examines the challenges faced by educators in teaching first-year Gen-Z students and explores effective pedagogical strategies for engaging them in Business English courses. By analyzing classroom observations, student feedback, and educational interventions, this study aims to provide insights into how instructors can adapt their teaching methods to align with Gen-Z’s preferences and maximize their academic and professional development.

Ultimately, the findings of this study aim to contribute to the broader discourse on the evolution of teaching methods in higher education, particularly in the context of a rapidly changing digital landscape. As Gen-Z continues to reshape the future of education, educators must adapt their approaches and methodologies to ensure that students are equipped with the skills and knowledge they need to thrive in an increasingly digital and globalized world.

Methodology

This study investigates the challenges and effective approaches for teaching first-year Gen-Z students majoring in Economics, Fintech, and Management at the Tashkent Institute of Management and Economics. The primary aim is to explore the efficacy of Project-Based Learning (PBL) and Gamification as teaching methods for Business English courses, particularly considering Gen-Z students’ preferences for interactive, engaging, and technology-enhanced learning. A mixed-method approach was employed to gather comprehensive data through classroom observations, student feedback, and teaching interventions conducted over one academic semester. The following key research areas were examined:

1. **Preferred Learning Formats (Lectures vs. Interactive Sessions)**
2. **Effectiveness of Social Media-Inspired Activities in Engagement and Retention**

3. **Impact of Gamification and Real-Life Simulations on Learning Outcomes**

A blend of qualitative and quantitative data collection methods was used to assess the effectiveness of these approaches. The methodology was structured as follows:

Project-Based Learning (PBL) Implementation

Project-Based Learning (PBL) was incorporated into the Business English curriculum to provide students with an opportunity to engage in hands-on, real-world tasks that align with the core principles of experiential learning. Kolb’s (2015) theory of experiential learning, which emphasizes learning through doing, was the guiding framework for integrating PBL into the course design. The projects involved were designed to mimic the challenges students might face in their future careers in economics, fintech, and management, making the learning experience more relevant and applicable.

Project Design and Structure:

The projects were divided into weekly segments where students worked in groups to complete tasks such as drafting business reports, creating marketing strategies, and conducting market research. These tasks required them to use Business English terminology and principles while developing practical skills. For instance, one of the projects involved creating a business pitch for a startup idea, where students had to research market trends, identify target audiences, and present their findings in both written and spoken forms. This simulated a real-world business scenario, allowing students to apply what they had learned in a contextualized manner.

Data Collection:

Student performance in these projects was assessed using both formative and summative evaluation methods. Formative assessments were conducted throughout the semester, focusing on peer feedback, self-assessments, and instructor observations during group work. Summative assessments involved the final presentation of the project, where students were required to present their business ideas in front of a panel (which included both faculty members and external business professionals).

Impact and Results:

Initial results indicated that students found the PBL activities highly engaging and relevant to their future careers. The peer-driven collaboration allowed them to practice English in authentic business contexts, enhancing both their language proficiency and problem-solving skills. Moreover, PBL encouraged critical thinking, communication, and teamwork—skills that are highly valued in the fields of economics, fintech, and management (Chen, 2021). The integration of real-world tasks into the Business English curriculum not only increased student engagement but also provided them with a deeper understanding of the professional applications of language skills.

However, the challenges in implementing PBL included the time constraints in a semester-based system and the varying levels of commitment from students in group work. To address these issues, instructors ensured clear role assignments, provided regular check-ins to track progress, and implemented structured rubrics to ensure accountability and equitable participation.

Gamification Methods

Gamification, defined as the application of game-design elements in non-game contexts (Deterding et al., 2011), was used to enhance engagement and motivation among Gen-Z learners. Drawing on the principles of motivation theory (Deci & Ryan, 2000), gamification leverages

elements such as competition, reward systems, and achievement levels to make learning more interactive and enjoyable.

Gamified Activities and Design:

The core gamified elements in the Business English course included point-based systems, leaderboards, badges, and role-playing simulations. One of the most effective gamified activities was a *Shark Tank-style pitch competition*, where students presented business ideas to a panel of "investors" (faculty members and business professionals). Students were given points based on the creativity, feasibility, and clarity of their pitches, as well as their ability to use Business English effectively. This activity was designed to foster friendly competition and to simulate a high-pressure business scenario where language skills were tested in a real-world context.

Another gamified element involved quizzes and flashcards that students could complete for points. These were designed to reinforce key Business English vocabulary and concepts in a fun, competitive manner. Additionally, students could earn badges for achievements such as completing vocabulary challenges, participating in class discussions, or submitting assignments early. A digital leaderboard displayed individual and team rankings, motivating students to stay engaged with the course content.

Data Collection:

To assess the impact of gamification, both qualitative and quantitative data were collected. Surveys were administered to gather student opinions on the enjoyment and effectiveness of the gamified elements. In addition, engagement metrics such as participation rates, time spent on tasks, and quiz performance were tracked. This data was then compared with previous semesters, where traditional lecture-based methods were used.

Impact and Results:

The results showed a significant increase in student participation and enthusiasm when gamified elements were introduced. The *Shark Tank-style pitch competition* proved to be particularly successful in boosting confidence and fluency in Business English. According to survey feedback, 80% of students reported that the competition helped them improve their presentation and public speaking skills. Additionally, 70% of students expressed that the gamified quizzes and challenges made the learning process more engaging and easier to retain.

However, some challenges were noted, particularly in balancing the fun aspects of gamification with academic rigor. Some students initially viewed the competitive elements as too playful for an academic course, expressing concerns that they detracted from the seriousness of the subject matter. To address these concerns, instructors ensured that the gamified elements were closely aligned with course objectives and that the rewards and competitions were framed as part of the learning process rather than distractions.

Combination of PBL and Gamification

The integration of Project-Based Learning with Gamification offered a synergistic approach to engage Gen-Z students. PBL provided students with real-world challenges that required collaboration and critical thinking, while Gamification added a layer of fun and motivation through competition and rewards. This combination was particularly effective in maintaining high levels of student involvement throughout the semester.

To assess the combined impact of PBL and Gamification, students were surveyed at the end of the semester about their learning experiences. The majority (85%) indicated that the use of real-world projects and gamified activities made the Business English course more engaging and relevant to their professional goals. Additionally, 75% of students felt more confident in

their ability to use Business English in practical business scenarios after participating in these interactive methods.

Analysis and results

The implementation of Project-Based Learning (PBL) and Gamification in the Business English curriculum aimed to address key challenges faced by Gen-Z learners, such as low engagement in traditional lecture-based classes and the need for more interactive, real-world learning experiences. The analysis of the results focuses on several key areas: student engagement, academic performance, skill development, and overall satisfaction with the course. Data was collected from a combination of surveys, classroom observations, project assessments, and engagement metrics.

1. Student Engagement

One of the main objectives of this study was to assess how PBL and Gamification influenced student engagement. Given the Gen-Z students’ affinity for technology and interactive learning, these methods were expected to significantly increase participation and enthusiasm for learning.

Quantitative Data:

- **Survey Results:** A post-course survey revealed that 85% of students reported a noticeable increase in their engagement levels when participating in PBL and Gamified activities compared to traditional lectures. Specifically, 72% of students stated they felt more involved in class activities, and 68% noted that they participated more frequently in discussions and group work during PBL sessions.
- **Classroom Observations:** During PBL sessions, instructors observed a marked increase in student activity. Group discussions were more animated, and students showed greater initiative in completing tasks, often seeking out additional resources to improve their work. Gamified tasks such as quizzes and role-playing activities further encouraged active participation, with students frequently engaging in competitive yet collaborative interactions.

Qualitative Data:

- **Student Feedback:** Many students expressed that the hands-on nature of PBL and the competitive elements of gamification kept them motivated. One student mentioned, "The project work made me feel like I was solving real problems that I could encounter in my future career. It wasn’t just theory—it was a challenge, and I enjoyed it." Another student highlighted, "The quizzes were fun, and I liked seeing how I stacked up against others in the class. It made me study more."

The combination of project-based tasks and game-like elements helped create a dynamic learning environment where students felt more invested in their learning process.

Conclusion

Teaching first-year Gen-Z students in Business English courses demands a fundamental shift in pedagogical approaches. Gen-Z’s preference for interactive, technology-driven, and entertainment-based learning necessitates the integration of social media trends, gamification, and short-form content. By leveraging these tools, educators can foster greater engagement, retention, and real-world application of Business English skills.

This study suggests that adopting personalized, adaptive learning strategies—such as microlearning, peer collaboration, and AI-based platforms—will help meet Gen-Z’s diverse learning needs. The future of education lies in continuously evolving teaching methods to remain

relevant to this dynamic generation. As Gen-Z’s professional and personal aspirations continue to shape their learning experiences, educators must remain adaptable and innovative to ensure their success.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

ИСКУССТВЕННЫЙ ИНТЕЛЛЕКТ В ОБРАЗОВАНИИ: СТИМУЛИРУЕТ ИЛИ ПОДАВЛЯЕТ КРЕАТИВНОСТЬ?

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Аннотация. *Искусственный интеллект (ИИ) в образовании вызывает споры: способствует ли он креативности учащихся или ограничивает её? Сторонники ИИ утверждают, что технологии, такие как адаптивные платформы (**Quizlet**, **ChatGPT**), стимулируют творческое мышление, предоставляя персонализированные задания и подсказки для письма или решения задач. Однако критики, такие как Моран и Уилкинсон (Moran & Wilkinson, 2025)[1], предупреждают, что чрезмерная зависимость от ИИ может подавлять критическое мышление и оригинальность, приводя к шаблонным результатам. Риски включают утрату самостоятельности и усиление алгоритмической предвзятости, что может ограничить уникальность идей. В статье рассматривается роль искусственного интеллекта в образовании, который набирает популярность среди педагогов. Автор считает что ИИ не препятствует креативности, если используется как инструмент поддержки, а не замена человеческой инициативы.*

Ключевые слова*: креативность, искусственный интеллект, навыки творческого мышления.*

Abstract. *Artificial intelligence (AI) in education is a controversial topic: does it enhance or limit students' creativity? AI proponents argue that technologies such as adaptive platforms (Quizlet, ChatGPT) stimulate creative thinking by providing personalized assignments and prompts for writing or problem solving. However, critics such as Moran and Wilkinson (2025) [1] warn that overreliance on AI can stifle critical thinking and originality, leading to formulaic results. Risks include loss of autonomy and increased algorithmic bias, which can limit the uniqueness of ideas. The article discusses the role of artificial intelligence in education, which is gaining popularity among teachers. The author argues that AI does not hinder creativity if it is used as a tool to support rather than replace human initiative.*

Keywords: *creativity, artificial intelligence, creative thinking skills.*

Введение

В современном мире креативность необходима для разработки инновационных решений, поскольку она позволяет решать сложные проблемы и выходить за рамки привычного мышления. Педагоги сталкиваются со значительными трудностями при

развитии креативности учащихся. Искусственный интеллект выступает важным союзником в этом процессе. Благодаря технологиям ИИ исследователи могут разрабатывать персонализированные образовательные программы, учитывающие сильные стороны и интересы каждого учащегося, что делает процесс развития креативности более эффективным.

Адаптивные образовательные платформы, работающие на основе ИИ, являются ключевым инструментом для развития креативности учащихся. Такие платформы анализируют поведение и модели обучения учащихся, адаптируя образовательный процесс к их индивидуальным потребностям. Это позволяет учащимся эффективнее развивать навыки творческого мышления благодаря персонализированной обратной связи и рекомендациям.

Исследователи также изучают технологии виртуальной (VR) и дополненной реальности (AR) на основе ИИ как инновационные способы стимулирования креативности. Эти иммерсивные технологии позволяют учащимся взаимодействовать с учебным материалом интерактивно, способствуя практическому обучению и вдохновляя на творческое мышление. Разработка ИИ-инструментов для творческого письма направлена на развитие навыков повествования и совершенствование письменной речи учащихся. Обратная связь по грамматике, стилю и структуре помогает учащимся раскрывать свой творческий потенциал и эффективнее выражать идеи в письменной форме.

Обзор литературы

Технологии ИИ трансформируют образование, обеспечивая персонализированное обучение, автоматизацию административных задач и поддержку преподавателей. С помощью таких инструментов ИИ, как чат-боты, интеллектуальное создание контента и аналитика данных, педагоги могут использовать данные об успеваемости учащихся для индивидуализации обучения. ИИ предоставляет обратную связь о прогрессе учащихся, позволяя преподавателям адаптировать свои методы для максимальной поддержки. Кроме того, технологии ИИ автоматизируют оценку заданий, отслеживание достижений и диагностику учебных трудностей, упрощая образовательный процесс для всех участников.

Лакин, Р. (Luckin, R.), 2016, в своём выступлении на конференции по ИИ в образовании подчёркивала важность интеграции аналитики обучения и систем ИИ в классах [2]. Она считает, что интеллектуальные компьютерные системы обладают различными способами «видения» мира, включая распознавание речи и голоса, а также интеллектуальное использование информации для достижения целей. Лакин (Luckin) утверждает, что ИИ должен фокусироваться на преобразовании необработанной информации в структурированные знания, избегая компонентов, которые могут привести к сбоям системы. В академических дискуссиях о роли искусственного интеллекта (ИИ) в образовании одной из центральных тем является его влияние на творческие способности учащихся. Сторонники ИИ утверждают, что технологии, такие как адаптивные образовательные платформы (**Quizlet**, **ChatGPT**), способствуют развитию креативности, предоставляя персонализированные учебные траектории и инструменты для генерации идей. Например, платформы вроде **Storybird** создают визуальные подсказки, стимулирующие повествовательное творчество, а **Canva Magic Write** поддерживает разработку оригинальных текстов, поощряя учащихся к экспериментам и нестандартным подходам.

Однако ряд исследователей, включая Морана, Э. и Уилкинсона, Б. (Moran, A. & Wilkinson, B., 2025), выражают озабоченность, что чрезмерная зависимость от ИИ может подавлять критическое мышление и снижать оригинальность, приводя к шаблонным решениям. Блоджетт, С. Л. и Мадайо, М. (Blodgett, S. L. & Madaio, 2021) подчёркивают риски алгоритмической предвзятости и утраты самостоятельности, которые могут ограничивать творческий потенциал.

Тем не менее большинство сторонников ИИ уверены что ИИ не является препятствием для креативности, если применяется как вспомогательный инструмент под руководством педагогов, обеспечивающих баланс между технологической поддержкой и развитием независимого мышления учащихся.

Методы

В последние годы искусственный интеллект всё активнее интегрируется в различные сферы жизни, включая образование. Несколько стран мира признали потенциал ИИ в изменении подходов к обучению учащихся и преподаванию. Рассмотрим некоторые страны, эффективно внедряющие ИИ в свои образовательные системы.

Китай занимает лидирующие позиции в применении ИИ в образовании. Правительство страны инвестирует значительные средства в технологии ИИ для улучшения образовательного опыта учащихся. Персонализированные платформы на основе ИИ используются для адаптации учебных планов и предоставления индивидуальной обратной связи. Кроме того, ИИ применяется для совершенствования программ подготовки педагогов и выполнения административных задач в школах.

Финляндия, известная своей высококлассной системой образования, также активно использует ИИ. Анализ данных об успеваемости учащихся помогает выявлять области, требующие дополнительной поддержки, и создавать персонализированные траектории обучения. Инструменты ИИ также помогают педагогам разрабатывать увлекательные планы уроков и оценивать прогресс учащихся.

В США ИИ используется для расширения доступа к качественному образованию. Интеллектуальные системы тьюторов предоставляют дополнительную поддержку учащимся, испытывающим трудности в определённых предметах, адаптируясь к их темпу обучения и предоставляя обратную связь в реальном времени. Кроме того, ИИ помогает разрабатывать образовательный контент, соответствующий интересам и потребностям учащихся.

ОАЭ также активно внедряют ИИ в образование. Чат-боты на основе ИИ обеспечивают круглосуточную академическую поддержку, отвечая на вопросы и предоставляя рекомендации по различным темам. ИИ также используется для отслеживания посещаемости и вовлечённости учащихся, позволяя педагогам своевременно реагировать на признаки отчуждения.

Перечисленные страны — лишь несколько примеров успешного использования ИИ в образовании. Применение технологий ИИ позволяет этим странам предоставлять персонализированный образовательный опыт, повышать эффективность работы педагогов и улучшать общее качество образования. По мере развития ИИ ожидается появление ещё более инновационных решений, которые принесут пользу как учащимся, так и преподавателям.

Однако ряд исследователей и педагогов выражают обеспокоенность по поводу интеграции ИИ в образование. Их опасения связаны с потенциальным влиянием на

критическое мышление и этическими аспектами. Проф. Моран, Э. (Moran, A.) и д-р Уилкинсон, Б. (Wilkinson, B.) в статье «Использование ИИ студентами знаменует конец критического мышления» утверждают, что растущая зависимость от инструментов ИИ может подорвать навыки критического мышления, снижая уровень сложных мыслительных процессов. Блоджетт, С. Л. (Blodgett, S. L.) и Мадайо, М. (Madaio, M.) в работе «Риски фундаментальных моделей ИИ в образовании»[3] обсуждают потенциальные угрозы крупных ИИ-моделей, включая усиление предвзятости и причинение вреда учащимся. Булут, О. (Bulut, O.) и соавторы в статье «Рост искусственного интеллекта в образовательных измерениях: возможности и этические вызовы» рассматривают вопросы валидности, надёжности, прозрачности, справедливости и равенства, подчёркивая необходимость этических норм для предотвращения неравенства[4]. Опрос **Forbes Advisor** среди 500 педагогов США выявил смешанные чувства: несмотря на признание преимуществ ИИ, многие обеспокоены этическими последствиями, предвзятостью и влиянием на традиционные методы преподавания[5].

По мере интеграции ИИ в классы учащиеся, преподаватели и образовательные учреждения должны научиться использовать его ответственно. Появление чат-ботов, таких как **ChatGPT**, возродило дискуссии о возможном содействии ИИ мошенничеству или дезинформации. Также поднимаются вопросы конфиденциальности данных, алгоритмической предвзятости и неравенства доступа. Педагоги опасаются роста списывания и сокращения человеческого взаимодействия в классах.

Несмотря на эти проблемы, большинство педагогов оптимистично настроены в отношении использования ИИ[6]. Ожидается, что его применение в образовании будет расширяться, и многие преподаватели уже интегрировали инструменты ИИ в свою повседневную практику.

Искусственный интеллект и развитие мышления учащихся

Искусственный интеллект трансформирует образование, совершенствуя навыки мышления учащихся. Хотя некоторые считают, что ИИ может привести к интеллектуальной лени, при правильном использовании он стимулирует критическое мышление, креативность и навыки решения проблем.

Одним из ключевых вкладов ИИ является предоставление персонализированного обучения. Адаптивные платформы на основе ИИ анализируют прогресс учащихся и адаптируют контент к их потребностям, что способствует более глубокому вовлечению и развитию критического мышления.

ИИ также развивает навыки решения проблем через интеллектуальные системы тьюторов, которые предоставляют мгновенную обратную связь, направляя учащихся к поиску решений, а не просто предоставляя ответы. Это помогает развивать логическое мышление и аналитические способности[7].

Креативность, ещё один важный аспект мышления, также поддерживается ИИ. Инструменты, такие как генераторы подсказок, программное обеспечение для создания идей и языковые модели, побуждают учащихся к мозговому штурму и исследованию различных перспектив. Взаимодействие с системами ИИ помогает учащимся совершенствовать свои идеи и развивать инновационное мышление.

Кроме того, ИИ поддерживает совместное обучение, позволяя учащимся участвовать в дискуссиях с ровесниками по всему миру. Платформы на основе ИИ способствуют дебатам, анализируют аргументы и предоставляют идеи, укрепляя

способность учащихся оценивать различные точки зрения и формировать обоснованные мнения[8].

Хотя опасения по поводу чрезмерной зависимости от ИИ существуют, правильная интеграция гарантирует, что он остаётся инструментом интеллектуального роста, а не заменой человеческого мышления. Преподаватели играют ключевую роль в обучении учащихся ответственному использованию ИИ, обеспечивая его усиление, а не замещение когнитивных способностей[9].

В заключение, ИИ является мощным инструментом для развития навыков высшего порядка. При продуманной интеграции он может вдохновлять любопытство, решать проблемы и развивать креативность, подготавливая учащихся к сложностям современного мира.

Результаты

ИИ трансформирует образование, персонализируя обучение, автоматизируя административные задачи и развивая креативность через интерактивные инструменты. В классах английского языка платформы на основе ИИ, такие как чат-боты (например, **ChatGPT**), имитируют разговорную практику, а генеративные инструменты (например, **Canva Magic Write**) помогают учащимся генерировать идеи или улучшать черновики. Адаптивные системы анализируют успеваемость, адаптируя уроки к индивидуальным потребностям, чтобы никто не остался позади. ИИ также предоставляет обратную связь по грамматике и лексике в реальном времени, позволяя преподавателям сосредоточиться на развитии критического мышления и креативности. Например, инструменты, такие как **Storybird**, используют ИИ для создания визуальных подсказок, вдохновляющих учащихся на совместное написание рассказов. Автоматизируя рутинные задачи (оценка тестов), ИИ позволяет педагогам разрабатывать проекты, приоритет которых — инновации, а не механическое заучивание.

Существует несколько платформ ИИ, которые можно использовать в повседневных занятиях для повышения эффективности преподавания. Например, **ScribeSense** использует ИИ для мгновенной обратной связи по письменным заданиям, позволяя преподавателям быстро выявлять области, требующие дополнительной поддержки.

Quizlet создаёт персонализированные учебные планы на основе индивидуальных потребностей учащихся, помогая им лучше усваивать информацию и позволяя преподавателям отслеживать прогресс.

Платформы, такие как **Brainly** и **Edmodo**, используют ИИ для организации онлайн-сотрудничества, позволяя учащимся задавать вопросы, делиться ресурсами и работать над заданиями совместно. Это не только повышает вовлечённость, но и создаёт чувство общности в классе.

В целом, платформы ИИ способны радикально изменить подходы к обучению и преподаванию. Интеграция этих инструментов создаёт более персонализированный и увлекательный образовательный опыт[10]. Педагогам важно быть в курсе последних технологий ИИ и быть готовыми адаптировать свои методы, чтобы использовать их потенциал.

Заключение

Исследователи, изучающие роль ИИ в развитии креативности учащихся, лидируют в образовательных инновациях. Используя технологии ИИ, педагоги могут создавать персонализированные образовательные программы, развивающие творческое мышление,

поощряющие решение проблем и подготавливающие учащихся к будущим вызовам. ИИ способен трансформировать образовательный ландшафт, предлагая неограниченные возможности для развития креативности и вовлечённости.

Однако, несмотря на огромный потенциал, существуют вызовы, которые необходимо преодолеть для успешной интеграции ИИ. Ограничения инфраструктуры, вопросы конфиденциальности данных, сопротивление изменениям и регуляторные препятствия остаются значительными барьерами. Кроме того, важно учитывать потенциальные недостатки ИИ, такие как его влияние на критическое мышление, межличностные навыки и доступ к качественному образованию. Непродуманное внедрение ИИ может привести к чрезмерной зависимости от технологий и снижению способности к независимому решению проблем.

Таким образом, педагоги и политики должны найти баланс между использованием преимуществ ИИ и сохранением ключевых навыков, необходимых для успеха в сложном и взаимосвязанном мире. Преодолевая эти вызовы и продуманно интегрируя ИИ, мы можем создать более инновационную, инклюзивную и эффективную образовательную среду, которая вдохновляет новое поколение творческих мыслителей.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

MILLIY TA'LIM DASTURI VA UNING AHAMIYATI

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Annotatsiya. *Ushbu maqolada milliy ta'lim dasturining jamiyatdagi ahamiyati, uning yosh avlodni tarbiyalashdagi roli, milliy madaniyatni rivojlantirishdagi o'rni va mamlakatning iqtisodiy, siyosiy va ijtimoiy rivojlanishiga qanday ta'sir ko'rsatishi ko'rib chiqiladi. Shuningdek, milliy ta'lim dasturining zamonaviy talablarga javob beradigan tarzda takomillashtirilishi zarurligi ham ta'kidlanadi. Bunday dasturlarni yaratish va amalga oshirish nafaqat ta'lim tizimini yaxshilash, balki mamlakatning kelajakdagi rivojlanishiga asos bo'lishi mumkin.*
Kalit so'zlar: *Kreativ va tanqidiy fikrlash, zamonaviy ta'lim standartlari, milliy qadriyatlar, milliy ta'lim dasturi, ilmiy tadqiqotlar, normativ-huquqiy hujjatlar.*

Аннотация. *В данной статье рассматривается важность национальной образовательной программы в обществе, ее роль в воспитании молодежи, влияние на развитие национальной культуры, а также воздействие на экономическое, политическое и социальное развитие страны. Также подчеркивается необходимость совершенствования национальной образовательной программы в соответствии с современными требованиями. Создание и реализация таких программ может не только улучшить систему образования, но и стать основой для дальнейшего развития страны.*
Ключевые слова: *Креативное и критическое мышление, современные образовательные стандарты, национальные ценности, национальная образовательная программа, научные исследования, нормативно-правовые документы.*

Abstract. *This article discusses the importance of the national education program in society, its role in the upbringing of the youth, its impact on the development of national culture, and its influence on the economic, political, and social development of the country. It also emphasizes the need to improve the national education program to meet modern requirements. The creation and implementation of such programs can not only improve the education system but also serve as a foundation for the future development of the country.*
Keywords: *Creative and critical thinking, modern educational standards, national values, national education program, scientific research, normative and legal documents.*

Kirish. Milliy ta'lim dasturi har bir mamlakatning ta'lim tizimini rivojlantirish va takomillashtirish yo'lidagi eng muhim strategik hujjatlaridan biri hisoblanadi. U jamiyatning

ijtimoiy, madaniy va iqtisodiy taraqqiyotiga hissa qo‘shuvchi asosiy vosita bo‘lib, yoshlarga sifatli ta’lim berish, ularni milliy qadriyatlar va madaniyatga asoslangan holda tarbiyalashni maqsad qiladi. Milliy ta’lim dasturining ahamiyati nafaqat ta’lim tizimini takomillashtirishda, balki butun jamiyat hayotini yaxshilashda ham muhim o‘rin tutadi.

Bugungi kunda globallashuv va texnologik taraqqiyot davrida ta’lim tizimi oldida turgan vazifalar yanada murakkablashmoqda. Shunday sharoitda milliy ta’lim dasturi faqat o‘quvchilarga bilim berish bilan cheklanmasdan, ularning ijtimoiy mas’uliyatini oshirish, kreativ va tanqidiy fikrlash qobiliyatini rivojlantirish, zamonaviy dunyo bilan muvaffaqiyatli integratsiyalashish imkoniyatlarini yaratish maqsadini ham ko‘zda tutadi. Bu jarayonda dastur jamiyatning ehtiyojlari, milliy va mintaqaviy xususiyatlari, shuningdek, zamonaviy ta’lim standartlari bilan uyg‘unlashtirilishi lozim.

Milliy ta’lim dasturi milliy madaniyatni rivojlantirishda ham asosiy omillardan biridir. Ta’lim tizimi orqali milliy o‘zlikni anglash, madaniy merosni avloddan-avlodga yetkazish va global madaniyat oqimida milliylikni yo‘qotmaslik muhim vazifa sifatida belgilangan. Bu borada dastur yosh avlodga nafaqat bilim, balki yuksak axloqiy qadriyatlarni singdirish orqali ularni har tomonlama rivojlangan, ma’naviy yetuk shaxslar qilib tarbiyalashga qaratilgan.

Mazkur maqolada milliy ta’lim dasturining mohiyati, uning ijtimoiy va iqtisodiy rivojlanishga ta’siri, shuningdek, zamonaviy talablarga mos ravishda takomillashtirish yo‘llari haqida so‘z yuritiladi. Shu bilan birga, milliy ta’lim dasturining global talablarga javob beradigan, lekin milliy qadriyatlarni saqlab qoladigan ko‘rinishda amalga oshirilishi jamiyatning barqaror rivojlanishi uchun naqadar muhim ekani tahlil qilinadi.

Adabiyotlar tahlili va metodlar. Milliy ta’lim dasturi va uning jamiyat taraqqiyotidagi ahamiyatini o‘rganish uchun turli adabiyotlar, ilmiy tadqiqotlar, normativ-huquqiy hujjatlar va xalqaro tajriba tahlil qilindi. Milliy ta’lim dasturining mazmuni va ahamiyatini ochib berishda O‘zbekiston Respublikasining “Ta’lim to‘g‘risida”gi qonuni, Kadrlar tayyorlash milliy dasturi, Prezident farmonlari, qarorlar va davlat strategiyalari asosiy manba sifatida foydalanildi. Ushbu hujjatlar ta’lim tizimining qonunchilik bazasini, maqsad va vazifalarini aniqlashga yordam berdi.

Milliy va xorijiy olimlarning ta’lim tizimini rivojlantirish bo‘yicha amalga oshirgan ilmiy tadqiqotlari o‘rganildi. Jumladan, mahalliy olimlardan A. Avloniy, H. Yo‘ldoshev, R. Rasulov, xalqaro olimlardan J. Dewey, Paulo Freire kabi mutaxassislarning ta’limga oid nazariy ishlanmalari tahlil qilindi. Ularning ilmiy yondashuvlari milliy ta’lim dasturining umumiy xususiyatlari va ularning xalqaro standartlarga mosligini baholashda asos bo‘ldi.

Xalqaro ta’lim tizimlarining muvaffaqiyatli modellarini, jumladan, Finlandiya, Yaponiya, Germaniya va Janubiy Koreya tajribalarini o‘rganish orqali milliy ta’lim dasturining zamonaviy talablarga javob berish darajasi tahlil qilindi. Ushbu tajribalar milliy ta’lim dasturini takomillashtirish bo‘yicha innovatsion takliflarni ishlab chiqishda foydalanildi. Milliy ta’lim dasturining mazmunini aniqlashda xalq og‘zaki ijodi, milliy an’analar, A. Navoiy, Z. Bobur kabi mutafakkirlarning tarbiya va ta’limga oid qarashlari tahlil qilindi. Ushbu adabiyotlar dasturga milliy mazmun va madaniy qadriyatlarni singdirishga xizmat qildi.

Tadqiqot metodlari:

1. **Tahliliy metod**. Adabiyotlar va hujjatlar tahlil qilinib, milliy ta’lim dasturining mazmuni va mohiyati o‘rganildi. Shu orqali dasturga bo‘lgan ehtiyoj, uning jamiyatda tutgan o‘rni aniqlab berildi.

2. **Taqqoslash metodi**. Xalqaro ta’lim tizimlarining tajribasi bilan milliy ta’lim dasturini taqqoslab, uning afzalliklari va kamchiliklari aniqlandi. Shuningdek, milliy dasturga global standartlarni moslashtirish yo‘llari taklif etildi.
3. **Sotsiologik tadqiqotlar**. Mahalliy maktablar, oliy ta’lim muassasalari va o‘quv markazlarida amalga oshirilgan sotsiologik tadqiqotlar orqali milliy ta’lim dasturining amaliyotga joriy etilishi va uning ta’siri haqida ma’lumot yig‘ildi. O‘qituvchilar va o‘quvchilarning fikrlari inobatga olinib, dasturda mavjud kamchiliklar tahlil qilindi.
4. **Tarixiy metod**. Ta’lim tizimining o‘zbek xalqining tarixiy rivojlanishidagi o‘rni, uning bosqichlari va hozirgi holati tarixiy nuqtai nazardan tahlil qilindi. Bu metod milliy ta’lim dasturining bugungi kundagi ahamiyatini chuqurroq tushunishga imkon berdi.
5. **Innovatsion texnologiyalarni o‘rganish**. Zamonaviy ta’lim texnologiyalari va raqamli platformalarning dasturga integratsiyasi tahlil qilindi. Bu orqali milliy ta’lim dasturini rivojlantirish bo‘yicha amaliy tavsiyalar ishlab chiqildi.

Muhokama va natijalar. Milliy ta’lim dasturi davlatning ta’lim sohasidagi strategik rejalarini, xalqning intellektual salohiyatini rivojlantirish maqsadlarini belgilovchi hujjat sifatida muhim ahamiyatga ega. Ushbu dastur jamiyat hayotining barcha sohalariga ta’sir ko‘rsatib, ta’lim tizimini takomillashtirish orqali mamlakatning umumiy rivojlanishini ta’minlaydi. Tadqiqot natijalari shuni ko‘rsatadiki, milliy ta’lim dasturi nafaqat yosh avlod tarbiyasida, balki jamiyatning iqtisodiy, ijtimoiy va madaniy rivojlanishida ham hal qiluvchi ahamiyatga ega.

Milliy ta’lim dasturi zamonaviy talablar va xalqaro standartlarga javob beradigan tizimni yaratishga qaratilgan. Bu jarayon quyidagi omillar orqali amalga oshiriladi:

- **Innovatsion texnologiyalar joriy etilishi:** Ta’lim jarayoniga zamonaviy axborot-kommunikatsiya texnologiyalarining keng joriy etilishi o‘quv jarayonining samaradorligini oshiradi. Elektron darsliklar, raqamli platformalar va interaktiv o‘qitish usullari o‘quvchilarning bilim olishga bo‘lgan qiziqishini oshiradi.
- **Ilmiy-tadqiqot faoliyati:** Ta’lim muassasalarida ilmiy-tadqiqot ishlarini kuchaytirish orqali yoshlarning analitik fikrlash qobiliyati rivojlantiriladi, bu esa ularning kelajakda yuqori malakali mutaxassis bo‘lib shakllanishiga yordam beradi.

Milliy ta’lim dasturi har bir xalqning madaniyati, tarixi va milliy qadriyatlarini saqlab qolish va kelgusi avlodlarga yetkazish uchun muhim vositadir. O‘zbek xalqi o‘zining boy madaniy merosi, asrlar davomida shakllangan an’analari va ulkan adabiy-ilmiy yutuqlari bilan jahon sivilizatsiyasiga munosib hissa qo‘shgan. Bu merosni avaylab-asrash va zamonaviy talablar bilan uyg‘unlashtirish milliy ta’lim tizimining eng muhim vazifalaridan biridir. Milliy ta’lim dasturi o‘zbek xalqining boy madaniyati va tarixiy merosini asrab-avaylashda muhim o‘rin tutadi. Dasturga quyidagilar kiritilgan:

- **Milliy ma’naviyat darslari:** O‘quvchilarga milliy qadriyatlar, tarixiy shaxslar, adabiyot va san’atning o‘rganilishi ta’minlanmoqda. Bu yosh avlodda milliy g‘urur va vatanparvarlik hissini shakllantiradi.
- **Turli tillar va madaniyatlarni o‘rganish:** Ta’lim tizimida o‘zbek tili bilan bir qatorda boshqa tillarni ham o‘rgatish imkoniyati kengaytirilgan. Bu xalqaro madaniy integratsiyani kuchaytiradi.

Milliy ta’lim dasturi har bir mamlakatning iqtisodiy va ijtimoiy taraqqiyotiga bevosita ta’sir ko‘rsatadigan muhim omillardandir. Zamonaviy dunyoda iqtisodiy o‘sish va jamiyatning ijtimoiy rivojlanishi bevosita inson kapitalining darajasiga bog‘liq. Ta’lim esa ushbu kapitalni shakllantirishning asosiy manbai hisoblanadi. Shuning uchun milliy ta’lim dasturi mamlakatning

kelajakdagi rivojlanish strategiyasida muhim o‘rin egallaydi. Milliy ta’lim dasturi mamlakat iqtisodiy va ijtimoiy taraqqiyotiga bevosita ta’sir qiladi. Ushbu yo‘nalishda quyidagilar kuzatildi:

- **Kadrlar tayyorlash tizimi:** Dastur bo‘yicha yetuk kadrlar tayyorlash orqali sanoat, texnologiya va qishloq xo‘jaligi sohalari rivojlanmoqda.
- **Ishsizlik darajasini pasaytirish:** Ta’limning kasbiy yo‘nalishlarga moslashtirilishi natijasida bitiruvchilar mehnat bozorida talabgir bo‘lib, bu ishsizlik darajasini kamaytirishga xizmat qiladi.
- **Ijtimoiy barqarorlik:** Ta’lim jarayonida inson huquqlari, tenglik va ijtimoiy mas’uliyat kabi qadriyatlar o‘rgatilib, ijtimoiy barqarorlikka hissa qo‘shiladi.

Milliy ta’lim dasturi jahonning ilg‘or ta’lim tizimlari tajribasidan foydalanadi. Jumladan:

- Finlandiya va Janubiy Koreya kabi davlatlarning muvaffaqiyatli ta’lim modellaridan olingan innovatsiyalar milliy dasturga moslashtirildi.
- Xalqaro hamkorlikni rivojlantirish, jumladan, chet el oliy o‘quv yurtlari bilan almashinuv dasturlarini tashkil etish orqali mahalliy o‘quv tizimining global raqobatbardoshligi oshirilmoqda.

Milliy ta’lim dasturi har bir davlatning kelajagini shakllantiruvchi asosiy omillardan biri hisoblanadi. Ta’lim insonning intellektual va ma’naviy rivojlanishiga, shaxsning ijtimoiylashuviga va jamiyatda o‘z o‘rnini topishiga xizmat qiladi. Shu sababli, ta’lim tizimining sifati va samaradorligini oshirish har bir mamlakat uchun dolzarb vazifadir. O‘zbekiston Respublikasida ta’lim tizimini rivojlantirishga qaratilgan davlat dasturlari va islohotlar yosh avlodni har tomonlama yetuk shaxs sifatida shakllantirishga qaratilgan. Tadqiqot davomida milliy ta’lim dasturining samaradorligini oshirish uchun quyidagi tavsiyalar ishlab chiqildi:

- **Moliya va resurslarni kengaytirish:** Ta’limga ajratiladigan mablag‘larni ko‘paytirish orqali maktablar va oliy o‘quv yurtlarining moddiy-texnik bazasi mustahkamlanadi.
- **O‘qituvchilar malakasini oshirish:** Pedagogik kadrlar uchun muntazam treninglar va malaka oshirish dasturlarini joriy etish kerak.
- **O‘quv dasturlarini takomillashtirish:** Zamonaviy ilm-fan yutuqlarini milliy dasturga integratsiya qilish orqali o‘quvchilarning bilim darajasi oshiriladi.
- **Hududiy tenglikni ta’minlash:** Shahar va qishloq ta’lim tizimi o‘rtasidagi tafovutni kamaytirish uchun hududlarda zamonaviy ta’lim infratuzilmasini rivojlantirish lozim.

Milliy ta’lim dasturi davlatning strategik ahamiyatga ega bo‘lgan sohalaridan biri sifatida jamiyatning har tomonlama rivojlanishini ta’minlaydi. Ushbu dastur orqali ta’lim sifati oshiriladi, yosh avlodning intellektual salohiyati rivojlantiriladi va milliy madaniyat asrab-avaylanadi. Ta’lim tizimining zamonaviy talablar asosida takomillashtirilishi mamlakatning ijtimoiy-iqtisodiy barqarorligi va xalqaro maydondagi raqobatbardoshligini ta’minlaydi. Shu bois, milliy ta’lim dasturini uzluksiz rivojlantirish va zamon talablariga moslashuvchan holda takomillashtirish dolzarb vazifa bo‘lib qolmoqda.

Xulosa. Milliy ta’lim dasturi har bir davlatning ta’lim sohasidagi strategik rejasini aks ettiruvchi muhim hujjat bo‘lib, uning ahamiyati mamlakatning kelajakdagi rivojlanishi bilan uzviy bog‘liq. Ushbu dastur jamiyatni bilimli, madaniyatli va ma’rifatli avlod bilan ta’minlash orqali ijtimoiy barqarorlikni mustahkamlash, iqtisodiy taraqqiyotga erishish va milliy madaniyatni saqlab qolishga xizmat qiladi. Ta’lim dasturining asosiy maqsadi jamiyat ehtiyojlariga mos keladigan intellektual salohiyatga ega avlodni tarbiyalashdir.

Milliy ta’lim dasturi quyidagi muhim jihatlarni o‘zida mujassam etadi:

1. **Ta’lim sifatining oshirilishi:**

- Zamonaviy texnologiyalar va o‘qitish usullaridan foydalanish orqali ta’lim jarayoni yanada samarali tashkil etiladi.
- Yangi pedagogik texnologiyalar joriy etilib, o‘quvchilarning ijodiy fikrlash va mustaqil qaror qabul qilish qobiliyatlari rivojlantiriladi.
- Milliy va xalqaro standartlarga mos ravishda o‘quv dasturlari shakllantiriladi.

2. **Milliy qadriyatlarni targ‘ib qilish:**
   - Ta’lim jarayonida milliy madaniyat, urf-odatlar, tarixiy meros va ma’naviy qadriyatlar o‘rgatilishi yosh avlodda milliy g‘urur va vatanparvarlik hissini shakllantiradi.
   - Badiiy, tarixiy va diniy asarlarni o‘rganish milliy madaniyatni asrab-avaylash va uni yanada rivojlantirishga xizmat qiladi.
3. **Ilmiy-tadqiqot faoliyatining rivojlanishi:**
   - O‘quvchilarning ilm-fanga bo‘lgan qiziqishini oshirish uchun ta’lim dasturlariga zamonaviy ilmiy yondashuvlar kiritiladi.
   - Innovatsion va ilmiy ishlanmalar orqali yosh avlodning ilmiy salohiyatini rivojlantirish uchun shart-sharoitlar yaratiladi.
4. **Kadrlar tayyorlash tizimi:**
   - Milliy ta’lim dasturi ijtimoiy-iqtisodiy ehtiyojlarga mos ravishda yuqori malakali mutaxassislarni tayyorlashni ko‘zda tutadi.
   - O‘qituvchilar malakasini oshirish va ularni zamonaviy talablarga moslashtirish milliy ta’lim dasturining asosiy vazifalaridan biridir.
5. **Xalqaro hamkorlik va tajriba almashish:**
   - Ta’lim tizimini rivojlantirishda xalqaro hamkorlikni kuchaytirish muhimdir. Jahonning ilg‘or ta’lim tizimlari tajribasini o‘rganish va milliy tizimga moslashtirish orqali ta’lim sifatini yangi bosqichga olib chiqish mumkin.
6. **Ijtimoiy barqarorlikka ta’siri:**
   - Ta’lim jarayonida ijtimoiy tenglik, inson huquqlari va demokratiya qadriyatlarini targ‘ib qilish orqali jamiyatda ijtimoiy barqarorlik ta’minlanadi.
   - Ta’lim darajasini oshirish orqali ishsizlik darajasi pasayadi, bu esa jamiyatda ijtimoiy va iqtisodiy barqarorlikni ta’minlaydi.

Milliy ta’lim dasturi davlatning ijtimoiy va iqtisodiy rivojlanishi uchun mustahkam poydevor bo‘lib xizmat qiladi. Ta’lim sifati va mazmunini uzluksiz yaxshilash orqali jamiyatning har bir a’zosi uchun ta’lim olish imkoniyati kengayadi. Ushbu dastur milliy qadriyatlarni asrab-avaylash va xalqaro miqyosda raqobatbardosh avlodni shakllantirishga qaratilgan. Shu sababli, milliy ta’lim dasturini yanada takomillashtirish va zamonaviy ehtiyojlarga moslashtirish dolzarb vazifa hisoblanadi.

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18.00.00 – ARCHITECTURAL SCIENCES

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18.00.00 - ARXITEKTURA FANLARI

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18.00.00 – АРХИТЕКТУРА

"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

ADVANCING THE BUILT ENVIRONMENT: A COMPREHENSIVE ANALYSIS OF ARCHITECTURAL PRINCIPLES IN CONTEMPORARY CIVIL ENGINEERING

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Abstract. *This comprehensive report explores the critical significance of integrating architectural principles with civil engineering practices in shaping the built environment. Traditionally, civil engineering has prioritized safety, functionality, and economic efficiency. However, modern infrastructure demands a holistic approach that also incorporates architectural elements such as aesthetics, human-centered design, and social impact. The report traces this interdisciplinary relationship from ancient civilizations, where the roles were often unified, through periods of divergence in the Renaissance and Industrial Revolution, to the contemporary era's imperative for collaboration.*

The integration yields substantial benefits, including enhanced project outcomes, improved efficiency and cost-effectiveness, increased safety and resilience, greater sustainability, and positive social, cultural, and economic impacts. Despite these advantages, challenges persist, such as communication breakdowns, conflicting design visions, traditional legal frameworks, and educational gaps. Looking ahead, technological advancements like Building Information Modelling (BIM), Artificial Intelligence (AI), and digital twins, alongside human-centered design philosophies and Integrated Project Delivery (IPD) models, are poised to revolutionize this collaboration. Educational reforms are crucial to prepare future professionals for this integrated landscape, fostering a new generation capable of creating infrastructure that is not only structurally sound but also aesthetically inspiring and socially enriching.

Keywords: *Architectural Principles, Civil Engineering, Integrated Design, Interdisciplinary Collaboration, Sustainable Infrastructure, Resilient Design, Human-Centered Design, Aesthetics, Structural Integrity, Project Management, Building Information Modeling (BIM), Parametric Design, Artificial Intelligence (AI), Digital Twins, Construction Technology, Urban Planning, Historical Architecture, Industrial Revolution, Renaissance Architecture, Educational Reforms.*

I. Introduction

Civil engineering, a foundational discipline, is intrinsically linked to the development of the built environment. Its scope encompasses the meticulous planning, innovative design, robust construction, and diligent maintenance of critical infrastructure, ranging from towering buildings and expansive bridges to intricate road networks, subterranean tunnels, and vital water management systems. Traditionally, the core focus of civil engineering has been anchored in ensuring the safety, structural integrity, functional efficiency, and economic viability of these projects. However, in an increasingly complex and interconnected world, there is a growing recognition that the mere fulfilment of these technical requirements is insufficient. The integration of architectural principles into civil engineering is no longer a peripheral consideration but a fundamental necessity for creating structures that transcend mere utility. This holistic approach aims to produce infrastructure that is not only structurally sound and functionally adept but also aesthetically compelling, socially enriching, environmentally sustainable, and economically beneficial in the long term.

This comprehensive report delves into the profound significance of this interdisciplinary integration. It will meticulously trace the historical evolution of the relationship between architecture and civil engineering, highlighting periods of convergence and divergence. Furthermore, it will explore the multifaceted benefits derived from an integrated design approach, encompassing enhanced project outcomes, improved efficiency, increased safety and resilience, greater sustainability, and positive social, cultural, and economic impacts. The report will also critically examine the inherent challenges in fostering seamless interdisciplinary collaboration, including communication barriers, conflicting design visions, and limitations within existing legal and educational frameworks. Finally, it will project future trends, emphasizing the transformative role of technology and the imperative for educational reforms to cultivate a new generation of professionals equipped to navigate the complexities of modern infrastructure development.

II. Defining Architectural and Civil Engineering Principles

The successful integration of architectural and civil engineering principles hinges on a clear understanding of each discipline’s core tenets and their complementary nature. While often perceived as distinct, their fundamental objectives are deeply intertwined in the creation of the built environment.

A. Architectural Principles

Architectural principles serve as guiding statements of intent that inform the design process and provide a qualitative framework for evaluating a structure’s aesthetic and experiential qualities. These principles extend beyond mere visual appeal, influencing how a building interacts with its users, its surroundings, and its broader cultural context. They are the artistic and philosophical underpinnings that transform a functional structure into a meaningful space.

Balance: In architecture, balance refers to the harmonious distribution of visual weight within a design, ensuring a sense of stability, order, and equilibrium. This balance can be achieved through various compositional strategies:

Symmetrical Balance: This involves mirroring elements on either side of a central axis, creating a formal and often monumental appearance. Many classical buildings and cathedrals employ symmetrical balance to convey grandeur and stability.

Asymmetrical Balance: Achieved by arranging different elements with similar visual weight to create equilibrium without identical mirroring. This approach often results in a more dynamic and less formal composition, frequently seen in vernacular designs that still aim for order.

Radial Balance: A less common form in vertical facades but often found in floor plans, where elements are arranged around a central point, radiating outwards. Balance is not merely visual; it is also sensory, influencing how individuals experience and perceive a space, contributing to feelings of comfort or discomfort.

Emphasis: This principle involves creating focal points or dominant elements within a design to draw attention to specific features. The goal is to highlight what is most important, whether it’s a grand entrance, a central architectural feature, or a unique detail. Techniques for achieving emphasis include:

Contrasting Colors or Materials: Using distinct colors or textures to make certain areas stand out. For example, a bright red front door on a muted facade immediately draws the eye.

Strategic Lighting: Employing lighting to illuminate specific architectural elements, creating a dramatic effect and guiding the viewer’s gaze.

Ornamentation and Detail: Applying a higher level of intricacy or craftsmanship to establish the importance of an element, such as a richly detailed door frame signifying an important room.

Proportion: Proportion defines the harmonious relationships between the elements within a design, and crucially, between spaces and the human user. A well-proportioned space feels comfortable and inviting, designed with the human experience in mind. Architects throughout history, from Da Vinci to Le Corbusier, have studied the connection between human proportion and built scale. This often involves:

Human Scale: Designing elements and spaces that are appropriately sized relative to the human body, ensuring comfort and functionality.

Geometric Relationships: Utilizing geometric patterns, ratios, and concepts like the golden ratio or sacred geometry to create visually pleasing and harmonious proportions in floor plans and elevations.

Rhythm: In architecture, rhythm refers to the repetition of elements in a design, creating a sense of movement, flow, and visual cadence, much like a beat in music. This principle has both aesthetic and practical value. Structurally, regular spacing of elements can simplify calculations and construction. Rhythm can be achieved through:

Repetition of Forms: Repeating windows, columns, or structural bays to create a predictable and pleasing pattern.

Layers of Detail: Moving from large to small scales, adding different types and levels of detail to create visual interest and depth.

Material and Texture Variation: Using materials with natural variations, such as wood or stone, to bring a sense of life and movement to the experience.

Movement: While not explicitly listed as a separate principle in all architectural theories, the concept of "movement" is often intertwined with rhythm and refers to how a design guides the eye or the body through a space. This can be achieved through the arrangement of elements, the play of light and shadow, and the progression of spaces, influencing the user’s journey and perception within the built environment.

These principles collectively contribute to the overall form and visual appeal of a structure, which is its overall shape, appearance, and arrangement. This form conveys the building‘s purpose, evokes emotions, and significantly enhances the user experience, making a structure not just functional but also captivating and inspiring.

B. Civil Engineering Principles

Civil engineering is the application of scientific and mathematical principles to the design, construction, and maintenance of the physical and naturally built environment, Civil engineers are fundamentally responsible for ensuring the structural integrity, safety, and long-term durability of projects. Their work underpins the very fabric of modern society, providing the essential infrastructure that supports human activity.

Civil engineering encompasses a wide array of specializations, each contributing to different facets of infrastructure development:

Building Engineering: Also known as architectural engineering or building services engineering, this field focuses on the technical aspects of designing, constructing, and maintaining buildings. It integrates structural, mechanical, and electrical engineering to optimize building performance, energy management, HVAC systems, plumbing, electrical systems, and fire safety.

City Engineering (Urban Engineering): This specialization involves the planning, design, and management of urban infrastructure and services. City engineers address the challenges of urbanization by developing transportation networks (roads, bridges, public transit), water supply and distribution, waste management, stormwater management, public spaces, and utilities, aiming to create sustainable and livable urban environments.

Construction and Management Engineering: This area combines technical engineering knowledge with project management skills to oversee construction projects from inception to completion. Professionals in this field are responsible for planning, coordinating, and supervising construction activities to ensure projects are completed on time, within budget, and to required quality standards.

Consulting Civil Engineering: Consulting civil engineers provide expert advice and specialized solutions to complex engineering problems for both public and private sector clients. Their roles include analyzing project requirements, conducting feasibility studies, developing design solutions, and providing guidance on construction and maintenance practices, ensuring projects are technically sound and compliant with regulations.

Design Engineering: This specialization focuses on creating detailed plans and specifications for various engineering projects, involving the conceptualization, development, and refinement of designs for structures, systems, and components. Design engineers use mathematical models, simulations, and technical drawings to ensure projects meet functional, safety, and regulatory requirements.

Earthquake Engineering: This field applies engineering principles to design and construct buildings and structures capable of withstanding seismic activity. Earthquake engineers analyze the impact of seismic forces and develop solutions like base isolators and shock absorbers to enhance resilience and minimize damage.

Geotechnical Engineering: Geotechnical engineers ensure the safety and stability of foundations for streets, buildings, and other structures by understanding the interaction between these objects and the earth, including soil and rock.

Structural Engineering: Structural engineers design and assess major projects such as buildings, bridges, and dams to ensure their strength, stability, and durability. They calculate loads, select appropriate materials, and adhere to building codes to guarantee safety and performance.

Transportation Engineering: Transportation engineers plan, design, and maintain essential transportation infrastructure, including streets, highways, airports, mass transit systems, and harbors.

C. The Interplay of Disciplines

The relationship between architecture and civil engineering is inherently symbiotic. While architects are primarily concerned with the aesthetic vision, spatial organization, and functional programming of a building, civil engineers provide the critical structural and infrastructural solutions that make that vision a tangible, safe, and enduring reality. The ideal scenario involves civil engineers providing structural solutions that seamlessly integrate with the architect’s design concepts, avoiding situations that necessitate significant changes to the architectural vision.

This interplay is crucial because a building‘s success is not solely measured by its beauty or its structural integrity in isolation. A beautiful building that fails structurally, or a structurally sound building that is aesthetically unappealing or dysfunctional, represents a partial failure. The goal is to achieve a "perfect fusion" where the visual appeal harmoniously aligns with the intended purpose and practicality. This requires architects to consider structural realities and engineers to appreciate design intent, leading to a cohesive end product where the engineering is so well integrated that it becomes "invisible" to the end-user, allowing attention to focus on the whole.

III. Historical Evolution of Integration

The relationship between architecture and civil engineering has evolved significantly throughout history, marked by periods of close integration and distinct specialization. Understanding this historical trajectory reveals the enduring necessity of their collaboration.

A. Ancient Civilizations

In ancient societies, the roles of architect and engineer were often indistinguishable, embodied by a single figure known as the "Builder". This individual possessed the comprehensive knowledge required for both the conceptual design and the practical execution of monumental structures. Ancient civilizations, driven by the need for shelter, defence, and religious expression, produced engineering marvels that were also profound architectural statements.

Egyptian Pyramids: Early examples of this integrated role can be seen in ancient Egypt, where master builders like Imhotep were responsible for the design and construction of the pyramids, demonstrating an advanced understanding of geometry, logistics, and structural stability.

Greek Architecture: Ancient Greek architects, known for their pursuit of precision and excellence, ensured that every component of a building was integral to its overall structure. The Parthenon, for instance, exemplifies a fixed arrangement of forms unified by principles of symmetry and harmony, where the architect oversaw every aspect from stone selection to the final placement of blocks, reinforced by metal clamps to resist earthquakes. The Doric, Ionic, and later Corinthian orders were not just aesthetic choices but also structural systems.

Roman Engineering: The Romans were unparalleled masters of engineering, whose innovations profoundly shaped the built environment. They developed the semi-circular arch to overcome the limitations of post-and-lintel construction, enabling the creation of vast interior spaces and monumental infrastructure.

Aqueducts: The Roman aqueduct system, a testament to their sophisticated understanding of hydraulics, transported fresh water over immense distances using gravity, often spanning valleys with towering arches. The Aqua Appia (312 BC) and Aqua Claudia are prime examples, some elements of which still function today.

Roads: The Romans constructed an extensive network of paved roads, totaling over 50,000 miles by 200 A.D. These roads, built with layers of dirt, gravel, and volcanic rock, included drainage systems and were so durable that many remain in use.

Concrete: The Roman development of concrete revolutionized construction, allowing for the creation of structures like the Pantheon, which boasts the largest unreinforced concrete dome in the world, demonstrating the material’s strength and adaptability.

Bridges and Sewers: Roman engineers also excelled in bridge building, favoring semicircular arches and developing techniques like cofferdams for constructing piers in riverbeds. Their vast sewer systems, like the Cloaca Maxima, significantly improved public health. These ancient feats underscore a period where architectural vision and engineering prowess were inextricably linked, driven by practical needs and a desire for enduring monuments.

B. The Renaissance

The Renaissance period (roughly 1350-1750) marked a significant philosophical shift, with a conscious return to classical Roman architecture and a gradual divergence between the roles of "architect" and "builder". This era saw the emergence of the architect as a distinct professional who conceived a building‘s form, separate from the builder who executed it. Despite this growing specialization, significant integration of design and construction principles persisted.

Philosophical Shift and Specialization: The rejection of Gothic forms in favour of classical ideals led to a renewed emphasis on symmetry, proportion, geometry, and regularity in design. Architects like Filippo Brunelleschi, Leon Battista Alberti, and Andrea Palladio became central figures, studying ancient ruins to inform their new designs.

Engineering Innovations: Even with the emerging distinction, Renaissance architects often possessed profound engineering knowledge. Filippo Brunelleschi’s iconic dome of the Florence Cathedral (Santa Maria del Fiore) is a prime example. Built without traditional wooden formwork, it employed an innovative double-shelled design with stone ribs and horizontal tie rings of stone and oak timbers to resist outward thrust. This required extensive drawings and mathematical modeling.

Revival of Roman Techniques: The Renaissance saw the recovery and improvement of Roman technologies, including timber trusses for roofs, as seen in Giorgio Vasari’s Uffizi and Christopher Wren’s Sheldonian Theatre. The development of clear glass in Venice also marked a significant material advancement.

Emphasis on Harmony and Proportion: Renaissance architecture emphasized orderly arrangements of columns, pilasters, and lintels, semicircular arches, and hemispherical domes. The integration of design elements was crucial, with architects aiming to use classical orders as

an integrated system, as demonstrated in Brunelleschi’s Old Sacristy. Notable examples include St. Peter’s Basilica, the Church of Santo Spirito, and the Basilica of Sant’Andrea.

C. The Industrial Revolution

The Industrial Revolution (18th-19th centuries) brought about radical transformations in construction, fundamentally reshaping the relationship between architecture and civil engineering. The mass production of new materials and the development of advanced machinery led to an exponential growth in infrastructural projects, solidifying the civil engineer as a distinct and indispensable profession.

New Materials and Techniques: The most significant impact was the widespread availability and economic viability of new building materials:

Cast Iron and Steel: Mass production made iron and, later, steel economically plausible building materials. Steel, with its high strength-to-weight ratio and ductility, revolutionized building design, enabling taller, lighter, and more open structures, including early skyscrapers and long-span bridges. Iconic examples include the Home Insurance Building in Chicago (1885) and the Rand McNally Building (1890).

Reinforced and Prestressed Concrete: The combination of concrete’s compressive strength with steel’s tensile strength allowed for new architectural forms, greater structural spans, and the construction of high-rise buildings with more open floor plans.

Glass: Mass-produced glass enabled larger windows and more transparent facades, fundamentally altering architectural aesthetics and interior environments.

Industrialized Construction:

Mass Production and Standardization: Techniques like assembly lines and specialized machinery led to the rapid and cost-effective production of standardized building components (e.g., bricks, structural elements), increasing efficiency and accessibility of materials.

Prefabrication and Modular Construction: Manufacturing standardized components off-site for quick assembly on-site gained traction. Joseph Paxton’s Crystal Palace (1851) is a groundbreaking example, showcasing the potential for rapid construction using prefabricated cast iron and glass components, and influencing industrialized building practices.

Mechanization: The use of machinery (e.g., steam-powered saws, mechanical hoists) replaced manual labor, significantly increasing productivity and speeding up construction times.

Iconic Structures: The Industrial Revolution gave rise to structures that were both engineering marvels and architectural statements:

The Eiffel Tower (1889): A lattice structure of prefabricated wrought iron components, it demonstrated the potential for lightweight yet strong frames capable of withstanding wind loads and temperature changes, becoming a global symbol of engineering prowess.

Bridges: The development of railway networks spurred innovation in bridge design, with structures like the Eads Bridge (1874) and the Brooklyn Bridge (1883) showcasing the potential of steel cables and becoming iconic symbols of modern engineering, [], [].

Divergence of Professions: While the exponential growth in technology and infrastructure contributed to the rise of civil engineering as a distinct discipline, a philosophical shift in training and practice also played a role in separating the architect from the engineer. This period saw engineers focusing on the technical and structural aspects, while architects increasingly emphasized aesthetic and spatial design, sometimes leading to a "throwing work over the fence" approach.

D. Modern Era

In the modern era, the relationship between architects and civil engineers has become characterized by increasing complexity, interdependence, and a renewed emphasis on collaboration. While their roles are clearly defined—architects focusing on vision and aesthetics, and engineers on safety and buildability—effective collaboration is paramount for successful projects.

Modern projects, driven by global challenges such as climate change, rapid urbanization, and the demand for sustainable development, necessitate a highly integrated approach. The traditional siloed approach, where disciplines work in isolation, often leads to costly redesigns, project delays, and suboptimal outcomes. The need for interdisciplinary collaboration is recognized as essential for fostering innovation and creating holistic solutions that address not only technical requirements but also environmental, social, and economic considerations. This era emphasizes a symbiotic relationship where the "creative conflict" between differing perspectives can lead to more beautiful and holistic solutions than those derived from a single discipline.

IV. Benefits of Integrated Architectural and Civil Engineering Design

The deliberate integration of architectural and civil engineering principles yields a multitude of benefits that extend across the entire project lifecycle, from conceptualization to long-term operation and societal impact. This collaborative approach transforms potential conflicts into opportunities for innovation and value creation.

A. Enhanced Project Outcomes

Integrated design fosters early and continuous collaboration between architectural and engineering teams, leading to a more cohesive vision and superior project outcomes.

Aligned Visions and Minimized Redesigns: By involving both disciplines from the conceptual phase, design and structural elements are aligned from the outset. This proactive approach prevents costly redesigns and rework that often arise when teams work in isolation and discover limiting factors later in the process. For example, MEP engineers can integrate building systems like HVAC and plumbing into the architectural layout early, rather than trying to fit them into an existing design.

Optimized Solutions and Value Creation: Joint architectural and engineering teams bring diverse expertise to solve complex challenges. Architects offer critical design skills, while engineers provide technical aptitude in structural integrity, energy use, acoustics, lighting, and resource efficiency. This leads to enhanced problem-solving, improved design outcomes, and increased value for all stakeholders, including clients and end-users.

Proactive Planning and Reliable Commitments: Integrated Project Delivery (IPD) models, which embody this collaborative spirit, break down traditional silos, enabling early integration of key stakeholders. This results in more informed decision-making, proactive planning, and reliable commitments throughout the project lifecycle, ensuring that the entire team remains focused on the end goal and client needs.

B. Improved Efficiency and Cost-Effectiveness

Collaboration from the project’s inception significantly enhances efficiency and leads to substantial cost savings by identifying and resolving potential issues early, before they escalate into major problems during construction.

Reduced Cycle Times and Optimized Resource Allocation: Streamlined communication and collaborative decision-making processes accelerate project delivery. This "Lean thinking"

approach reduces the waste associated with traditional "throwing work over the fence" methods, where design packages are completed in isolation, often leading to delays and rework. It optimizes resource allocation, ensuring that time, money, and human effort are used efficiently.

Quantifiable Cost Savings: Building Information Modelling (BIM) is a prime example of technology facilitating this efficiency. BIM centralizes project data, enhances collaboration, and improves overall efficiency, leading to a high return on investment. Studies indicate that BIM can reduce design errors and optimize processes, leading to average cost savings of $41,000 and a reduction of 49 days in project duration during the design stage. In the construction stage, the impact is even more pronounced, with reported savings of over $710,000 and a reduction of 89 to 104.5 days in project duration due to reduced rework and dynamic resource management.

Prevention of Costly Rework and Delays: Poor communication and lack of coordination are major contributors to rework, duplicate work, and project delays, which significantly inflate costs. Integrated design, by fostering open communication and early detection of issues, prevents these problems from causing major financial and schedule impacts during construction.

C. Increased Safety and Resilience

Integrating engineering principles ensures that designs meet rigorous safety standards, structural integrity, and functionality requirements, while also building resilience against unforeseen events,

Structural Integrity and Safety Standards: Structural engineers perform detailed analyses to predict how structures will behave under various loads and environmental conditions, ensuring designs hold up over time. This involves calculating loads, selecting appropriate materials, and conducting simulations and stress tests. Adherence to building codes and regulations is non-negotiable, protecting public safety and minimizing legal risks.

Resilient Design Principles: Resilience in infrastructure design aims to enhance a structure’s ability to prevent, absorb, recover from, and transform after disruptions caused by hazards, Key principles include:

Strong Framing Systems and Flexible Connections: Incorporating features like strong framing systems, flexible connections, and reinforced elements to withstand forces from earthquakes, high winds, and other hazards. Techniques such as base isolation and structural damping can significantly boost resilience by allowing buildings to move independently during seismic events or absorb energy.

Durable Material Selection: Choosing materials capable of enduring harsh environmental conditions, resisting moisture, corrosion, and decay, and maintaining structural integrity over time.

Anticipating a Dynamic Future: Resilient design anticipates interruptions and a changing climate, incorporating strategies for flood-resistant construction, earthquake-resistant structures, and aerodynamic shapes to reduce wind pressure.

Redundant and Flexible Systems: Designing with backup systems for essential services like electricity and water and incorporating flexible solutions that can adapt to changing conditions [].

Integration of Passive Design: Utilizing passive design strategies like proper orientation, natural ventilation, and shading devices to enhance energy efficiency and climate resilience without heavy reliance on mechanical systems.

Accessibility and Inclusivity: Integrated design prioritizes accessibility from the outset, ensuring that spaces are usable by individuals of all ages, abilities, and backgrounds. This

includes thoughtful consideration of features like ramps, elevators, wide doorways, clear signage, and tactile paving, promoting independence and participation for people with disabilities. This "universal design" approach benefits everyone, including parents with strollers or individuals with temporary injuries.

D. Greater Sustainability and Environmental Impact Reduction

Integrated design is crucial for promoting sustainable practices, optimizing energy efficiency, reducing environmental impact, and encouraging the use of renewable resources throughout a project’s lifecycle.

Lifecycle Approach: Sustainable structural design considers a project’s entire lifecycle, from planning and material selection to construction, use, demolition, and recycling. This holistic approach aims to minimize waste, conserve resources, and reduce the ecological footprint.

Energy Efficiency and Renewable Resources: This includes implementing passive solar design, natural ventilation, efficient insulation, and incorporating renewable energy systems like solar panels and wind power. Sustainable buildings can reduce energy consumption by up to 50%, leading to substantial cost savings.

Sustainable Materials and Waste Reduction: Emphasis is placed on using durable, low-maintenance, and environmentally preferable materials, including reclaimed wood, recycled aggregates, low-carbon concrete, and bio-based materials. Waste management plans, on-site sorting, and deconstruction techniques are employed to maximize material recycling and proper disposal.

Water Conservation and Pollution Prevention: Strategies include rainwater harvesting, greywater systems, and efficient water supply and distribution systems to reduce consumption and protect water resources. Civil engineers also design waste management systems that prioritize recycling and waste reduction, and implement measures to prevent water pollution from construction activities.

Innovative Green Solutions: Examples of civil engineering contributions to environmental sustainability include the development of plastic roads using waste plastic as a construction material, which can help manage plastic waste and create permeable surfaces for stormwater management. Green roof systems are another innovation, reducing thermal fluctuations, capturing rainwater, and boosting air quality.

E. Enhanced Aesthetics and Public Perception

A well-designed structure, achieved through the harmonization of aesthetics and functionality, creates a profound positive impact on users and the broader environment.

Visual Appeal and Emotional Impact: Visually pleasing structures captivate and inspire, creating a connection between the built environment and human experience. They can evoke positive emotions like tranquillity, inspiration, or excitement, enhancing the overall user experience.

Building Public Trust and Civic Pride: Thoughtful design signals to the public that they are valued and considered. When infrastructure is well-maintained and aesthetically pleasing, it fosters a sense of pride among residents, encouraging greater community involvement and stewardship. Iconic structures, like the Eiffel Tower or the Sydney Opera House, become symbols of human progress, national pride, and civic identity.

Improved Functionality and Wayfinding: Aesthetics also play a functional role. A visually pleasing design can positively influence how users engage with a structure, improving

wayfinding, promoting intuitive navigation, and optimizing usability through thoughtful consideration of colour, lighting, and spatial arrangements.

Contextual Harmony: Aesthetic design ensures that structures reflect, complement, and suit their physical, cultural, and urban surroundings. This contextual approach ensures designs are appropriate for the local environment, respect historical influences, and interact harmoniously with neighbouring structures, making them more likely to gain planning approval.

F. Positive Social and Cultural Impact

Well-designed public spaces, a direct result of integrated architectural and civil engineering principles, serve as vital hubs for social interaction, cultural exchange, and community engagement, profoundly shaping urban life.

Fostering Community Engagement and Cohesion: Parks, plazas, and pedestrian-friendly streets encourage diverse social interactions, breaking down social barriers and building trust. Features like amphitheatres, communal seating, and open plazas support activities such as performances, protests, and celebrations, fostering a sense of belonging and promoting mental well-being.

Enhancing Accessibility and Inclusivity: Public spaces designed with universal design principles ensure usability for individuals of all ages, abilities, and backgrounds. This includes features like ramps, wide pathways, accessible restrooms, multilingual signage, and child-friendly play areas, promoting equitable participation in urban life.

Cultural Reflection and Identity: Architecture serves as a tangible manifestation of a society’s cultural values, traditions, and aspirations. Incorporating art into public projects, often through early collaboration between artists and architects, can create memorable landmarks and foster civic pride, reflecting the city’s identity and sense of belonging.

Psychological Well-being: The built environment significantly affects psychological well-being. Well-designed urban areas with green spaces, natural light, and reduced noise pollution can foster a sense of community, reduce stress, anxiety, and isolation, and improve overall mood and cognitive function. Conversely, poorly planned environments with high population density, traffic, and abstract forms can contribute to mental fatigue and stress.

G. Economic Benefits

Beyond direct cost savings during construction, integrated design contributes to long-term economic vitality and sustainability.

Long-Term Cost Reduction: Sustainable designs, a hallmark of integrated approaches, reduce energy consumption and maintenance costs over the lifespan of buildings, increasing their longevity and reducing the need for costly repairs and replacements.

Economic Growth and Investment: Aesthetic appeal in urban design can significantly boost tourism, attract businesses, and enhance property values, contributing to local economic growth. Well-designed infrastructure and public spaces attract investments, driving economic activity and creating vibrant urban centres.

Reduced Economic Displacement: While beautification efforts can sometimes lead to gentrification, an integrated approach prioritizes inclusive development, ensuring that aesthetic projects align with the economic needs of the community, focusing on multifunctional spaces that generate economic activity and affordable housing.

Innovation and Market Advantage: Interdisciplinary design research (IDR) leverages algorithmic and computational techniques to integrate principles from various disciplines,

including business and whole lifecycle costs. This approach saves valuable time, resources, and cost while maximizing the quality and value of the end-product, providing a market advantage. IPD models, by aligning financial interests and promoting innovation, can also lead to measurable results and savings that can be leveraged across multiple projects.

V. Challenges in Fostering Interdisciplinary Collaboration

Despite the clear benefits, achieving seamless integration between architectural and civil engineering disciplines is fraught with challenges rooted in historical practices, differing professional cultures, and existing frameworks.

A. Communication Barriers and Siloed Workflows

One of the most significant obstacles to effective integration is the pervasive issue of poor communication and traditional siloed workflows within the Architecture, Engineering, and Construction (AEC) industry.

Lack of Early and Continuous Communication: Historically, projects often follow a linear "throwing work over the fence" approach, where architects finalize designs before engineers provide input, or engineers make structural changes without considering design intent. This lack of early and continuous communication leads to misunderstandings, misinterpretations, and costly redesigns and rework during later stages.

Fragmented Information Exchange: The reliance on outdated communication methods like email, in-person meetings, PDFs, and hard-copy documents hinders efficient data exchange and real-time collaboration. Disjointed spreadsheets and tools mean not everyone has access to the latest information, causing confusion, duplicate work, and project delays.

Differing Professional Languages and Mindsets: Architects and engineers often speak different professional languages and possess distinct design mindsets. Engineers may use overly technical jargon, while architects may not clarify design intentions in a way that considers structural realities. This lack of mutual understanding can lead to frustration and a persistent failure to prioritize user needs in the design of public services.

Hierarchical Barriers: Traditional hierarchies within project teams can inadvertently limit the exchange of ideas and hinder the involvement of junior team members, impeding collaborative problem-solving.

B. Conflicting Design Visions and Priorities

The inherent differences in the core objectives of architects and civil engineers can lead to conflicting design visions and priorities, posing significant challenges to integration.

Aesthetics vs. Structural Feasibility: Architects prioritize aesthetics, form, and spatial experience, often envisioning intricate designs, unconventional forms (e.g., curved facades, cantilevered structures), and innovative shapes. Engineers, conversely, focus on structural feasibility, safety, and functionality, ensuring the building can withstand loads and environmental forces. This can create tension, such as balancing open floor plans with structural stability, or lightweight, transparent materials (like glass) with the inherent strength of traditional materials (like concrete and steel).

Cost Constraints and Building Codes: Balancing aesthetic ambition with structural safety often increases costs due to the need for advanced materials and complex engineering solutions. Adhering to evolving building codes and regulations further complicates the integration of innovative architectural forms with structural safety, requiring careful budget management without compromising quality.

Differing Approaches to Innovation: While architects are often seen as bringing creativity and vision, engineers’ interest in innovation can sometimes be reduced, with a focus on established solutions rather than creative visions. This can lead to frustration when architects lack structural understanding or engineers have fewer creative design ideas.

C. Legal and Contractual Frameworks

Traditional legal and contractual frameworks within the construction industry often exacerbate challenges by encouraging siloed operations and individual interests rather than collaborative goals.

Fragmented Contracts and Risk Allocation: The conventional design-bid-build (DBB) model, where the owner has separate contracts with designers and builders, creates a fragmented environment. This can lead to conflicts, finger-pointing, and disputes when issues arise, as each party focuses on optimizing its own silo rather than the project as a whole.

Lack of Early Contractor Involvement: Traditional methods often do not allow for early contractor involvement, which is crucial for influencing innovation, cost, and schedule. This can lead to difficulties or increased expenses during construction if plans are difficult or expensive to execute.

Challenges with Integrated Project Delivery (IPD): While IPD models aim to overcome these barriers by joining key parties under a single agreement with shared risks and rewards, their widespread adoption faces significant hurdles.

Legal Complexity: Drafting and negotiating multi-party contracts can be legally complex, requiring careful consideration to protect and align all parties’ interests.

Cultural Barriers: IPD requires a high level of trust, transparency, and a cultural transformation from traditional adversarial mindsets to a collaborative one, which takes time to build.

Resource Intensity: Implementing IPD often requires significant time and resources to educate teams on Lean principles and drive implementation.

Regulatory Restrictions: In some sectors, like federal agencies in the US, statutory restrictions (e.g., the Competition in Contracting Act of 1984) mandate competitive pricing, limiting the use of collaborative delivery methods that are considered best practices in the private sector.

D. Educational and Training Gaps

Historically, architecture and civil engineering have been taught as separate disciplines, leading to a lack of mutual understanding and appreciation between students and professionals.

Siloed Curricula: Engineering education traditionally focuses on technical, scientific, and mathematical skills, often overlooking the crucial role of creative thinking and artistic perspectives. This rigid, technical focus leaves little room for interdisciplinary learning, particularly in the arts. Conversely, architects may lack structural understanding.

Emphasis on Hard Skills over Soft Skills: Universities often prioritize the development of technical skills over essential soft skills such as communication, teamwork, empathy, and problem-solving, which are crucial for effective interdisciplinary collaboration in the construction industry. Surveys indicate that while graduates excel in hard skills, they often fall short in communication and teamwork.

Limited Exposure to Real-World Collaboration: Students may have limited opportunities for hands-on, project-based learning that requires them to apply knowledge from various subjects

in real-world scenarios, hindering their ability to face interdisciplinary challenges early in their careers.

Lack of Institutional Support: Many engineering schools may lack institutional support and resources for integrating art into the curriculum, including access to art-related courses or extracurricular activities.

VI. Future Trends and Educational Imperatives

The future of the built environment demands an even deeper integration of architectural and civil engineering principles, driven by technological advancements, evolving design philosophies, and a critical need for educational reforms.

A. Technological Advancements

Technology is rapidly transforming the AEC industry, fostering greater integration, efficiency, and innovation across disciplines.

Building Information Modelling (BIM): BIM continues to be the industry standard, centralizing project data and enhancing collaboration by allowing architects and engineers to work from a shared 3D model. This reduces misunderstandings, spots conflicts early, and significantly improves cross-departmental collaboration efficiency and information transparency, minimizing rework and optimizing project management. BIM also supports the integration of parametric design and computational design.

Parametric Design and Computational Design: These advanced tools enable designers to investigate various geometrical options, optimize designs for parameters like weight or solar heat gain, and gain early understanding of structural behaviour, visual appearance, and sustainability issues. They facilitate the creation of complex geometries and efficient structures that were once thought unattainable. Computational design, in particular, allows for the exploration of complex problems and the generation of innovative solutions.

Artificial Intelligence (AI) and Digital Twins: AI is increasingly being used in civil engineering for tasks like predictive maintenance, optimizing designs, and analysing sensor data from smart infrastructure. Digital twins create virtual replicas of structures for real-time monitoring, predictive maintenance, and scenario simulations, enhancing resilience and efficiency throughout a building‘s lifecycle. AI can also be used to generate building designs that optimize natural light and ventilation based on site-specific conditions.

3D Printing and Advanced Materials: 3D printing allows for the creation of intricate bridge structures and custom components, reducing material waste and enabling complex geometries. Advanced materials like ultra-high-performance concrete (UHPC) and fiber-reinforced polymers (FRP) offer enhanced durability, strength, and corrosion resistance, extending lifespans and reducing maintenance needs. Bio-concrete and green concrete are emerging materials that utilize biological resources for self-repair and reduced environmental impact.

Cloud Computing and Collaboration Software: Cloud-based platforms and project management tools facilitate virtual collaboration, streamline data, and ensure all parties have access to the latest information, improving communication and workflow, especially in complex projects. Tools like Bluebeam and Autodesk’s Forma enhance collaboration and contextual data analysis. Virtual reality (VR) and 3D modelling allow for real-time visualization and adjustments before construction begins.

B. Human-Centered and Contextual Design

The future of infrastructure design increasingly prioritizes human-centered principles, focusing on the needs, experiences, and well-being of end-users and the harmonious integration with the surrounding environment.

Human-Centered Design (HCD): This approach puts real people at the center of each design phase, from planning to operation. Key principles include:

Empathy and User Involvement: Gaining deep insights into the experiences, needs, emotions, and aspirations of the target audience through surveys, feedback loops, and direct engagement. This involves co-creation with the people the services are intended to benefit.

Accessibility and Inclusivity: Designing spaces that are usable by individuals of all ages, abilities, and backgrounds, incorporating features like ramps, wide doorways, tactile paving, and clear signage. This ensures that public services are functionally accessible and do not undermine trust.

Psychological Well-being: Recognizing the profound impact of urban design on mental health, aiming to create environments that foster community, reduce stress, and provide connection with nature. This includes providing green spaces, reducing noise and air pollution, and creating legible urban forms that do not overwhelm users.

Contextual Design: This involves designing structures in response to the literal and abstract characteristics of their environment. It ensures designs are appropriate for the local environment, respect historical influences, and interact harmoniously with neighboring structures.

Physical Context: Considering geographical and environmental aspects like climate conditions, topography, sunlight exposure, and wind patterns to create solutions better suited to their surroundings and minimize environmental impact, [].

Cultural and Urban Context: Acknowledging traditions, historical influences, and societal values, and ensuring the building interacts harmoniously with neighboring structures and public spaces, []. Examples like the Louvre Pyramid and the High Line in New York City demonstrate successful contextual integration.

Data-Driven Contextualization: Utilizing contextual data from GIS, satellite imagery, and open data platforms, often integrated with AI models, to create innovative solutions tailored to specific environments.

C. Integrated Project Delivery (IPD) and Collaborative Models

IPD is gaining increasing traction as a project delivery method that brings key parties together under a single agreement, fostering continuous communication and collaboration from the outset.

Core Principles: IPD relies on multi-party agreements, shared risks and rewards, early involvement of key participants (owner, designer, builder), collaborative decision-making, and fiscal transparency. This model aims to decrease waste, increase efficiency, and align financial interests among all stakeholders.

Benefits: IPD promotes innovation by involving all project members throughout the process, decreases change orders, eliminates waste (both material and intangible), and removes the owner as a communication go-between. It fosters an environment of mutual respect and trust, crucial for effective information and knowledge sharing.

Requirements for Success: Successful IPD projects require an engaged and collaborative owner, complete buy-in from all parties, a desire to innovate, a value-driven mentality, and resources for continuous education on IPD processes and Lean methods. It demands strong

leadership and flexibility from team members, moving away from traditional management behaviors.

D. Educational Reforms

To prepare future professionals for this integrated and technologically advanced landscape, significant educational reforms are crucial.

Interdisciplinary Curricula: Developing programs that teach architecture and civil engineering simultaneously, or that integrate aspects of both, is essential to foster mutual understanding and appreciation from an early stage. Architectural engineering programs are examples of this, though care must be taken not to narrow the artistic and social aspects of architectural education.

Emphasis on Soft Skills: Curricula must integrate the development of critical soft skills such as communication, teamwork, empathy, and problem-solving. These are foundational for interdisciplinary work and are often identified as gaps in traditional engineering education, [].

Project-Based and Experiential Learning: Implementing problem-based and project-based learning experiences that require students to apply knowledge from various subjects in real-world scenarios is vital. This hands-on approach helps students develop critical thinking, creative skills, and an understanding of real-world applications.

Continuous Learning and Professional Development: Encouraging professionals to stay updated with advancements through workshops, conferences, online resources, and collaboration with experts is paramount. This includes training professionals to prioritize sustainability and promoting knowledge sharing across disciplines.

Integration of Art and Creativity: Incorporating art education into engineering programs can foster more well-rounded graduates equipped with both technical and creative skills, promoting creative problem-solving and a holistic understanding of design and user experience. The STEAM (Science, Technology, Engineering, Art, and Mathematics) approach is gaining traction to promote interdisciplinary learning and enhance creative capacities.

VII. Conclusion

The integration of architectural principles in civil engineering is not merely an enhancement but a fundamental imperative for shaping a built environment that is truly fit for the 21st century and beyond. From the unified vision of ancient "Builders" to the complex, collaborative demands of modern mega-projects, the synergy between these two disciplines has consistently driven innovation and societal progress.

By embracing a holistic approach, the AEC industry can unlock a multitude of benefits: projects will be delivered with enhanced efficiency and cost-effectiveness, ensuring optimal resource allocation and minimizing costly rework. Structures will exhibit increased safety and resilience, capable of withstanding environmental challenges and adapting to dynamic conditions. Crucially, this integration fosters greater sustainability, reducing environmental impact through conscious material selection, energy-efficient designs, and waste reduction strategies. Beyond the tangible, well-designed infrastructure, infused with architectural sensitivity, will enhance aesthetics and public perception, fostering civic pride and trust. It will create public spaces that are not just functional but also socially vibrant, culturally expressive, and conducive to human well-being. Furthermore, the economic benefits extend beyond immediate project savings, contributing to long-term urban vitality and attracting investment.

However, realizing this integrated future requires overcoming persistent challenges. Communication barriers, conflicting design priorities, and traditional legal frameworks often

impede seamless collaboration. To bridge these gaps, the industry must champion technological advancements like BIM, AI, and digital twins, which provide shared platforms for design, analysis, and real-time monitoring. Equally vital are human-centered and contextual design philosophies, ensuring that infrastructure serves the diverse needs and experiences of its users while harmonizing with its surroundings.

Ultimately, the most profound transformation must occur in education. Cultivating a new generation of professionals who possess both rigorous technical expertise and a deep appreciation for design, aesthetics, and social impact is paramount. This necessitates interdisciplinary curricula, an emphasis on soft skills, and project-based learning that mirrors real-world collaborative environments. By fostering a culture of continuous learning and mutual respect, civil engineers and architects can collectively address the complex global challenges of urbanization, climate change, and societal well-being. The future of our built environment depends on this convergence—where the art of architecture and the science of engineering unite to create lasting value, inspiring structures, and thriving communities worldwide.

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19.00.00 – PSYCHOLOGICAL SCIENCES

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19.00.00 - PSIXOLOGIYA FANLARI

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19.00.00 – ПСИХОЛОГИЧЕСКИЕ НАУКИ

"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

THE ROLE OF MEDIATION IN PREVENTING CONFLICT IN PUBLIC RELATIONS

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Abstract. *The article analyzes the role of mediation as a means of conflict prevention in public relations. It reveals the importance of mediation methods in identifying social conflicts, mitigating them, and building constructive dialogue. It substantiates the relevance of the integration of PR and mediation in strengthening mutual trust between state bodies and the public, reducing the consequences of negative information, and ensuring social stability. The study examines the factors of effectiveness of information and mediation based on communication theories, mediation approaches, and practical experience.*
Keywords: *public relations, information, social network, information communication, mediation, social conflict, crisis strategy, mediation, audience, mediator.*

Annotatsiya. *Maqolada jamoatchilik bilan aloqalarda nizolarni oldini olish vositasi sifatida mediatsiyaning roli tahlil qilinadi. Unda mediatsiya usullarining ijtimoiy mojarolarni aniqlash, ularni yumshatish va konstruktiv muloqotni shakllantirishdagi ahamiyati ochib berilgan. Davlat organlari va jamoatchilik o'rtasidagi o'zaro ishonchni mustahkamlash, salbiy axborot oqibatlarini kamaytirish hamda ijtimoiy barqarorlikni ta'minlashda PR va mediatsiya o'zaro integratsiyasining dolzarbligini asoslagan. Tadqiqotda kommunikatsion nazariyalar, mediatsion yondashuvlar hamda amaliy tajribalar asosida axborot va vositachilikning samaradorlik omillari ko'rib chiqilgan.*
Kalit so'zlar: *jamoatchilik bilan aloqalar, axborot, ijtimoiy tarmoq, axborot kommunikatsiyasi, mediatsiya, ijtimoiy nizo, krizis strategiyasi, vositachilik, auditoriya, mediator.*

Аннотация. *В статье анализируется роль медиации как средства предупреждения конфликтов в общественных отношениях. Раскрывается значение методов медиации в выявлении социальных конфликтов, их смягчении и построении конструктивного диалога. Обосновывается актуальность интеграции PR и медиации в укреплении взаимного доверия между государственными органами и общественностью, снижении последствий негативной информации, обеспечении социальной стабильности. В исследовании рассматриваются факторы эффективности информации и медиации на основе теорий коммуникации, подходов к медиации и практического опыта.*

***Ключевые слова**: связи с общественностью, информация, социальные сети, информационные коммуникации, медиация, социальный конфликт, кризисная стратегия, посредничество, аудитория, медиатор.*

Introduction.

In modern socio-political society, the institution of public relations is becoming an integral part of public administration, civil society, and the mass communication system. Especially in an era of increasing openness and transparency, the development of mass media and communication technologies is sharply increasing the strategic importance of public relations activities. The President of the Republic of Uzbekistan, in his Address to the Oliy Majlis of December 29, 2020, drew attention to this issue, saying, in particular: “Over the past four years, we have been gradually learning to live and work in an atmosphere of transparency and openness, freedom of speech in our society. Critical statements by impartial and fair journalists and bloggers point out the shortcomings in the activities of leaders who work in the old-fashioned way, forcing them to change their work style and increase their responsibility. From now on, it is necessary and obligatory for every government agency to establish close dialogue and cooperation with the media in its daily activities[12].”

Today, the rational use of mediation tools in the process of managing the flow of information and shaping public opinion not only ensures compromise, but also serves to strengthen an atmosphere of trust between government agencies, civil society institutions, and the general public.

The word "mediation" is derived from the Latin word "mediare" and means to mediate, to intervene in order to reconcile[13]. Therefore, in legal literature, the concepts of mediation and conciliation are considered synonymous. The Law of the Republic of Uzbekistan "On Mediation" (No. 482 of July 3, 2018), which regulates the situations related to mediation, the rights and obligations of mediators and the parties conducting mediation, as well as the prevention of possible disputes, was adopted[14]. This Law consists of 4 chapters and 34 articles.

The uniqueness of mediation is that it is based on the equality and voluntariness of the parties. Coercion is not allowed in mediation. Mediation is based on equality[15]. That is, each party is given equal opportunities to express their opinion, ask questions, be heard, and propose ways to solve the problem.

Literature review. The concept of public relations has evolved since the end of the 20th century from a simple activity of disseminating information to a complex system aimed at building trusting relationships between an organization and the public. Richard Cohen, a British publisher and author of the book “A Commentary on Mediation,” defined mediation as follows: “In mediation, a third party enters the process, the purpose of which is to help the first two parties reach an agreement[16].” John Paul Lederach, an American sociologist, director of the Joan B. Kroc Institute for International and Peace Studies, and author of the book “From Conflict to

[12] Address of the President of the Republic of Uzbekistan Shavkat Mirziyoyev to the Oliy Majlis - 2020.// https://president.uz/uz/lists/view/4057
[13] https://cyberleninka.ru/article/n/mediatsiya-va-uning-vazifalari/viewer
[14] The Law of the Republic of Uzbekistan "On Mediation"// https://lex.uz/docs/-3805227
[15] Law of the Republic of Uzbekistan "On Mediation", Article 5// https://lex.uz/docs/-3805227
[16] https://classic.austlii.edu.au/au/journals/WkoLawRw/1995/5.html?utm_source=chatgpt.com

Reconciliation[17],” interprets mediation as “conflict transformation” and evaluates it as a means of achieving social reconciliation. Morton Deutsch, an American psychologist and professor emeritus at Columbia University, divides conflict into constructive and destructive forms, and includes mediation among the constructive approaches[18].

Also, the book “Mediation: A Comprehensive Guide to Resolving Conflicts Without Litigation (1984)” written by one of the leading experts in the field of mediation, American lawyer, mediator and professor, Dean of the University of San Francisco School of Law Jay Folberg, and American social worker, mediator, founder and head of Workplace Solutions Alison Taylor, is an important source in the field of mediation. In this work, mediation is presented as an alternative method of resolving disputes, in which the parties reach an agreement that suits their needs and interests with the help of a neutral mediator[19].

In a word, mediation is a neutral intermediary, that is, a process that helps the parties in conflict find a mutually acceptable solution.

Research methodology. This study analyzes the importance of using mediation in public relations and its role in its development. At the same time, the role of mediation in the public relations system as a means of ensuring the reliability of information and resolving conflicts through communication is considered from a scientific and theoretical point of view. The main goal of this study is to determine how mediation can be effectively used in public relations activities, to study the role of mediation in mitigating social conflicts, strengthening trust and cooperation. Object of research. Mechanisms for information exchange and resolving social conflicts that arise in the process of organizing communication activities in the public relations system. Subject of research. Integration of information communication and mediation approaches into public relations strategies, their interaction and role in ensuring social stability. The topic covers the fields of information theory, sociology, communication, journalism, and legal mediation. The scientific novelty of the study is the mutual integration of information communication and mediation in the public relations system, and the role of PR in fulfilling the mediation function is considered from a theoretical and practical perspective.

Analysis and results. In public relations, mediation is an effective tool for resolving disputes and establishing mutually beneficial relationships between stakeholders. Through mediation, organizations can use it to mitigate conflicts with the public, media, partners or government agencies and maintain their reputation. Internationally, the United Nations and other international organizations use online mediation methods to resolve conflicts that arise on social networks. These methods allow for quick and effective resolution of conflicts[20]. In France, there is a practice of resolving conflicts that arise on the Internet through online mediation services[21]. Through these services, users have the opportunity to resolve their disagreements before going to court. The causes of conflict situations in public relations were analyzed. The analysis showed that the problems observed in the public relations system are mainly related to the following factors:

-Insufficient consideration of the opinions and proposals of the population by government organizations;

-One-sidedness of communication between government agencies and citizens;

[17] https://www.johnpaullederach.com/2023/03/conflict-transformation/?utm_source=chatgpt.com
[18] https://books.google.co.uz/books/about/The_Resolution_of_Conflict.html?id=WZ4_EAAAQBAJ&redir_esc=y
[19] https://repository.law.umich.edu/cgi/viewcontent.cgi?article=2906&context=mlr
[20] https://peacemaker.un.org/en/thematic-areas/digital-technologies?utm_source=chatgpt.com
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-Failure to adhere to the principles of transparency and reliability in the dissemination of information;
-Factors such as lack of citizen participation in the decision-making process lead to conflict and distrust in public relations.

Conclusion/Recommendations. The public relations system has become an integral part of modern social management. In order to increase the effectiveness of this system, the accuracy, timeliness and reliability of information communication play an important role. However, it is becoming necessary today to organize social dialogue, not limited to the delivery of information, but to introduce methods of resolving conflicts through mediation. Nowadays, in the modern communication environment, there is a need to ensure reliable communication between the community, government agencies and representatives of civil society. Organizations should consider mediation principles (openness, trust, honesty in bias) as a key element in their communication policies and integrate them into their work programs. Mediation in public relations is a highly effective tool that saves both time and money for the parties. Its widespread use as an effective tool for establishing mutually beneficial relationships will lead to the full realization of the interests of both parties, helping organizations mitigate disagreements with the public, media, partners, or government agencies, maintain their reputation, and prevent unnecessary conflicts.

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"ADVANCED JOURNAL OF UNIVERSITY SCIENCE AND CREATIVE INNOVATIONS"

COMPARATIVE AND STRUCTURALIST METHODOLOGIES IN PHILOSOPHICAL ANTHROPOLOGY

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Abstract. *This article analyzes key anthropological concepts—selfhood, moral agency, and transcendence—through comparative and structuralist methods across Eastern and Western traditions. Drawing on P. T. Raju's approach, it promotes intercultural philosophy, while structuralism reveals deep symbolic oppositions that define human nature.*
Key words: *structuralism, comparative philosophy, anthropology, intercultural, Raju.*

Anotatsiya. *Ushbu maqolada qiyosiy va strukturalistik metodologiyalar orqali falsafiy antropologiyadagi muhim tushunchalar — shaxs, axloqiy agentlik va transsendentlik — sharq va g'arb an'analarida tahlil qilinadi. P. T. Raju yondashuvi asosida madaniyatlararo falsafa ilgari suriladi. Strukturalizm esa bu modelni chuqurlashtirib, inson tabiatini belgilovchi ramziy qarama-qarshiliklarni ochib beradi.*
Kalit so'zlar: *strukturalizm, qiyosiy falsafa, antropologiya, madaniyatlararo, Raju.*

Philosophical research in Uzbek academic tradition needs to address the epistemological restrictions of single-cultural approaches in philosophical anthropology during contemporary times. The prevalent Eurocentric dominance in philosophical history requires new methodology to integrate non-Western knowledge traditions into worldwide intellectual exchanges. The emergence of comparative philosophy together with intercultural philosophy serves as effective solutions to address this need. The philosophy disciplines maintain strong interest in pluralistic philosophy while providing systematic methods to research diverse human frameworks within different cultural frameworks. The methodological study of philosophical traditions and systems and ideas functions through comparative analysis between different cultural approaches. Philosophical problems regarding human existence along with personhood and consciousness and moral agency receive examination from this approach through multiple cultural viewpoints. Research on culturally conditional human being models through this method deepens philosophical anthropology while protecting against universalistic simplifications. Comparative thinking originated from ancient civilizations where the first seeds of such methodology appeared. During the classical era of China the Mohist school used comparison (bi 比) as a tool to analyze logical differences. Researcher C. Alieva explains that Hui Shi and Gongsun Long took different philosophical positions regarding "sameness and difference" (tong 同 / yi 異) since Hui focused on unity while Gongsun focused on differentiation. The two philosophers shared the view that valid conclusions from comparison required the analysis of comparable conceptual

categories.

The Nyāya school of Indian philosophy established upamāna (comparison) as a valid pramāṇa (means of knowledge) to help people understand things through their resemblance. The Mīmāṃsā school developed this approach by viewing it as inferential while the Mīmāṃsā school denied it access to the category of direct pramāṇa.In Greek philosophy, Pythagoreanism viewed proportional comparison as a fundamental cosmic principle. Plato‘s analogy of the divided line and his theory of forms [1;56] highlight the philosophical use of comparison to relate sensible and intelligible realities. Aristotle refined these ideas in his metaphysics and logical classification, explicitly employing analogical reasoning to develop categories, define essences, and describe causal structures.

Philosophical comparison continued through Plutarch’s Parallel Lives and Diogenes Laertius’s doxographies. In the Islamic Golden Age, thinkers like Al-Fārābī and Al-Bīrūnī further advanced comparative reasoning. Al-Fārābī’s Kitāb Ḥurūf al-madīna al-fāḥila exemplifies how Plato and Aristotle’s ethics were interpreted in light of Islamic metaphysical principles. Al-Bīrūnī’s comparative studies of Hindu and Islamic philosophies represent early examples of philosophical anthropology grounded in cross-cultural understanding.

During the Enlightenment and German Idealism, Immanuel Kant recognized the epistemological significance of comparison [6;210] in cognition, writing that "cognition is the whole of representations compared and connected with each other". G.W.F. Hegel, despite a Eurocentric teleology, engaged extensively with Eastern traditions in his Lectures on the History of Philosophy. Arthur Schopenhauer drew directly from Indian sources [5;89] (especially Vedānta and Buddhism), aiming to reconcile Eastern metaphysics with Western transcendental idealism.

Orientalist scholars of the 19th century, such as Paul Deussen and Friedrich Max Müller, provided the first rigorous philological groundwork for comparative philosophy. Müller’s Six Systems of Indian Philosophy [4;203] (1899) emphasized both analogy and difference, a view echoed in his belief that understanding another system requires grasping both its logic and cultural foundation.

Institutionalization of Comparative Philosophy Paul Masson-Oursel’s 1923 dissertation, La Philosophie Comparée, is widely recognized as the foundational work for modern comparative philosophy. Drawing on Comtean positivism and Durkheimian sociology, Masson-Oursel proposed analogy as the central methodological tool. For him, philosophy is culturally conditioned and cannot claim absolute validity unless cross-examined in relation to other traditions. He argued, "there is no truth that is not relative," suggesting that analogy—not equivalence—is the basis for universal philosophical dialogue.

P. T. Raju, in his seminal Introduction to Comparative Philosophy [2;112] (1962), argued that philosophical anthropology must remain central to comparative inquiry. He advocated for a synthesis-oriented methodology rooted in a humanistic vision: the human being as a cultural and metaphysical bridge. Raju emphasized that the goal of comparison is not uniformity, but mutual enrichment grounded in anthropological universals.

Further contributions came from Charles A. Moore, who founded Philosophy East and West, a journal committed to cross-cultural engagement. Chinese philosophers such as Hu Shih and Feng Youlan, influenced by Western pragmatism and liberalism, used comparative methods to reform and recontextualize Confucian philosophy.

In the landscape of comparative philosophy, the work of P. T. Raju stands as a crucial bridge between Eastern and Western traditions, especially through his efforts to articulate a philosophical anthropology grounded in synthesis rather than separation. For Raju, the comparative method was not merely analytical — it was constructive. He believed that philosophy must serve human understanding, and this includes understanding the human being not in isolation, but in cultural, spiritual, and historical context.

Raju’s central anthropological contribution lies in his concept of the human as a dynamic point of convergence between traditions — a “meeting place” where Vedantic, Buddhist, and Western existentialist insights could enter into dialogue. This vision of the human subject was deeply shaped by Raju’s engagement with both classical Indian metaphysics and contemporary Western philosophy. In his view, true philosophical anthropology must aim not at abstract definition but at experiential understanding, a lived grasp of what it means to be human across traditions. Drawing from Advaita Vedānta, Raju interprets the self (ātman) not as individual ego but as a manifestation of a universal reality (brahman). Yet, he does not dismiss Western notions of subjectivity; rather, he places them within a broader metaphysical horizon. In doing so, he opens a space for cultural synthesis — not by reducing one worldview to another, but by finding shared anthropological constants: consciousness, suffering, ethical striving, and the search for meaning.

This methodology of synthesis is particularly important in contemporary philosophical anthropology. It moves beyond the either/or dichotomy (East vs. West, tradition vs. modernity, reason vs. faith) and suggests a both/and approach. Raju’s human being is not locked into a single tradition but is capable of navigating multiple ones — a “cross-cultural self” shaped by dialogue and transformation.

Raju also stresses the spiritual dimension of the human, which he finds inadequately addressed in secular Western anthropologies. In this sense, his work anticipates today’s growing interest in post-secular and transcultural thought. He positions human beings as ontological bridges — both finite and infinite, conditioned yet open to transcendence. This perspective aligns well with intercultural philosophy, which likewise rejects any fixed, monocultural model of human nature.

In short, Raju’s anthropological project exemplifies how comparative methodology can generate not just understanding, but new philosophical horizons. His thought encourages us to treat the human being not merely as an object of study, but as the dialogical ground upon which the future of philosophy — and perhaps of civilization — must be built.

To extend and deepen the methodological strength of Raju’s comparative anthropology, integrating structuralist analysis offers powerful analytical leverage. Structuralism, as a philosophical and anthropological approach, directs attention toward uncovering underlying cognitive and symbolic structures—particularly binary oppositions and relational frameworks—that shape conceptions of the human being across cultures.

Structuralist thought, profoundly developed by Claude Lévi-Strauss [3;78], posits that beneath the apparent diversity of cultural expressions lies a deeper level of universal structures that human minds universally share. Lévi-Strauss famously analyzed myths not merely as narrative forms but as structured systems of thought governed by universal binary oppositions (life/death, nature/culture, self/other). Adopting such a structuralist lens within Raju’s comparative framework reveals deeper connections and divergences among various philosophical traditions.

By using structuralism, we can analyze how various traditions answer questions about the self, ethics or transcendence by using certain opposing symbols. The Vedāntic tradition uses the concepts of ātman and brahman to unite opposing concepts such as finite and infinite or particular and universal. In the same way, Islamic philosophical anthropology makes use of binaries such as nafs and rūḥ to explain different but similar metaphysical tensions. Western existentialism also uses concepts such as authenticity/inauthenticity and being/nothingness to look at what it means to be human. With this method, each philosophical tradition can be examined not only by its themes or general ideas but also by looking at its underlying symbolic structure. It demonstrates how cultures and philosophies give meaning to the same experiences and problems faced by all people. It also values cultural differences and at the same time reveals common mental patterns, just like Raju suggested.

In the end, the lessons we gain from this approach are not only for academic purposes. It deals with issues that are close to people’s hearts. Trying to grasp how various cultures interpret being human, using concepts such as ātman and brahman, nafs and rūḥ or being and nothingness, shows us that these are not just ideas. They are answers to the main questions people ask about themselves: Who am I? What is the reason behind our suffering? What should we work towards? We don’t solve these problems; we simply have to deal with them. When we use both approaches, we get closer to a way of thinking that is both honest and meaningful in our lives. We relate to philosophies as ongoing traditions, each one giving us useful ideas about living, facing hardships, hoping and understanding others. Since the world is both more connected and more divided, this kind of openness is absolutely necessary. It encourages us to be humble, curious and brave, since it shows us that people are links between different times, cultures and ideas, always changing and growing.

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