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## **INTERNATIONAL CONFERENCE ON INTERDISCIPLINARY SCIENCE**

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## IMPROVING METHODS FOR DEVELOPING MODERN MARKETING STRATEGIES FOR THE BANKING SERVICES MARKET

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### Abstract

In today's competitive and rapidly evolving financial environment, the development of effective marketing strategies is critical for banks aiming to maintain customer loyalty and expand their market share. This study explores innovative methods for improving the development of modern marketing strategies within the banking services market. The research highlights the growing importance of digital transformation, customer-centric approaches, and data-driven decision-making in marketing practices. By analyzing current trends, challenges, and best practices, the paper proposes a framework that integrates advanced analytics, personalized communication, and omnichannel marketing to better address the changing needs of banking customers. The study also examines the role of customer segmentation, service innovation, and technology adoption in enhancing marketing effectiveness. The findings contribute to the theoretical understanding of strategic marketing in the banking sector and offer practical recommendations for financial institutions seeking to strengthen their market position and improve customer engagement.

**Keywords:** market, segmentation, research, mobile banking, personalization, customer, content marketing, SMM, SEO, CX, UX, augmented reality, virtual reality.

The modern banking sector is undergoing a period of significant change due to digital transformation, changing consumer preferences and increased competition. In a changing market environment, developing effective marketing strategies becomes an important task for banking institutions. Marketing strategies play a key role in attracting and retaining customers, improving their experience and increasing the competitiveness of banks. Banks have realized the need to use the capabilities of advanced technologies in their marketing strategies, tactics and operations.

In particular, the Decree of the President of the Republic of Uzbekistan No. PF-60 dated January 28, 2022 “On the New Development Strategy of Uzbekistan for 2022-2026” sets out 25 goals: to increase the level of digitization of production and

operational processes in the real sector of the economy and in the financial and banking sectors to 70% by the end of 2026.

According to a 2023 McKinsey report, more than 70% of customers expect customized offers and services from their banks, and 63% are ready to share their data in exchange for a personalized experience. At the same time, a study by the Boston Consulting Group shows that banks that actively use big data and analytics can increase profits by 15-20%.

The digitization of banking services has become a key trend of the last decade. According to a Deloitte report, more than 60% of all banking transactions worldwide will be conducted through digital channels such as online banking and mobile apps by 2023. In addition, according to Statista, the number of mobile banking users worldwide reached 2.5 billion in 2023 and continues to grow.

Social media is becoming an increasingly important channel for communicating with customers and promoting banking services. According to a Hootsuite study, in 2023, more than 90% of banks actively used social media for marketing and customer communication. At the same time, content marketing, aimed at creating useful and informative materials, allows banks to improve customer relationships and increase their engagement.

Banks are increasingly adopting innovative technologies such as blockchain, artificial intelligence (AI) and machine learning to improve the security, transparency and efficiency of their operations. According to a PwC report, 77% of financial institutions plan to actively use artificial intelligence to optimize their processes and create new products and services by 2025.

The use of big data and analytics is becoming an integral part of modern marketing strategies. According to IBM, 90 percent of the world's data has been created in the last two years, and banks are actively using this data to analyze customer behavior and optimize marketing campaigns. The calculations show that this allows banks to create more accurate and effective strategies, increase customer satisfaction and loyalty.

It is also important for commercial banks to improve the methods of developing modern marketing strategies in order to realistically assess consumer demand for services, better understand the audience, reduce the risk of losing money, prevent duplication of plans, determine market share, optimize human resources, clearly define the actions necessary to achieve the goal, select the most effective modern marketing tools, rationally use the advertising budget, unite the team and determine a single direction of action.

**Segmentation** involves dividing a larger customer base into smaller, manageable groups based on specific criteria. This includes demographic, psychographic, geographic, and behavioral factors. By understanding the unique characteristics and needs of these segments, banks can create targeted marketing campaigns and develop products that are tailored to each group.

**Mobile banking** is a system that allows you to access information and manage your bank account using a mobile phone or tablet. In our opinion, mobile banking is a type of service that offers transactions that allow you to receive information about all card transactions, regardless of where you are, as well as make payments and other transactions via your mobile phone 24/7. Mobile banking has been showing high growth rates in the last three years alone, and the volume of Internet traffic from mobile devices has already exceeded that from desktop computers.

**Context marketing** strategy is one of the leading areas of Internet marketing, which consists of disseminating information about the brand of commercial banks and increasing its reputation, as well as a set of marketing methods based on the creation or distribution of useful information for the consumer in order to gain trust and attract potential customers.

Today, the use of digital marketing tools in the banking services market remains the primary guarantee of profitable entrepreneurial activity. One of these is **search engine optimization**, a set of strategies that help commercial banks' websites rank high in search engine results pages.

**In conclusion**, the application of modern marketing strategies in the process of digital transformation in commercial banks will increase the competitiveness of banks and provide high-quality services to customers. Innovative approaches such as influencer marketing, AR and VR technologies, artificial intelligence, voice marketing, personalized services, customer participation marketing, environmental and social responsibility marketing, and blockchain technologies create new opportunities for banks. These strategies will be effective for banks in improving services, strengthening customer relationships, and ensuring long-term loyalty. They will also open up new sources of revenue for banks and create an opportunity to take a leading position in the digital services market.

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## **CREATININE AND GLOMERULAR FILTRATION RATE ESTIMATED USING IT IN PATIENTS WITH VARIOUS SEVERITY LEVELS OF COVID-19**

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**Introduction.** Although most patients who have had COVID-19 recover and return to their initial state, some of them still have persistent health problems, and this process is called acute post-COVID condition or prolonged COVID. The World Health Organization defines long COVID as the continuation of disease symptoms for three months or more after the initial infection and the occurrence of new symptoms in the absence of other causes. The opinion of experts from the aforementioned reputable organization has been confirmed by a number of other observations.

Sometimes persistent symptoms can be observed even after a minimally symptomatic infection. Fatigue, shortness of breath, chest tightness, cough, arthralgia, headache, and cognitive dysfunction belong to this group of symptoms. According to observers, long COVID is observed in 10-30% of patients and lasts for more than a year.

**Objective of the study.** To assess the functional state of the kidneys based on the results of laboratory and instrumental studies conducted during the acute period of the disease in 400 patients with COVID-19 without comorbidities.

**Materials and methods.** The research source comprised 400 patients (aged 20-45 years, 200 men and 200 women) without comorbid diseases who were treated for COVID-19 and subsequently observed at the Bukhara Regional Infectious Diseases Center and the Bukhara Regional Multidisciplinary Medical Center of the Republic of Uzbekistan. A retrospective analysis of laboratory and instrumental examinations and complex treatments conducted during the acute phase of the disease was performed, and based on the obtained results, the functional state of the kidneys was assessed. Patients were divided into 3 groups (mild, moderate, and severe) according to the clinical course of COVID-19 and were studied comparatively. In the acute period of COVID-19, the complaints and medical history of 400 patients were studied, and the results of general urinalysis, complete blood count, biochemical and blood coagulation tests, coagulogram, and computed tomography (CT) findings were analyzed. The estimated glomerular filtration rate (eGFR) was determined based on the identified creatinine levels.

**Results.** The average age of the observed patients in the groups was  $32.7 \pm 2.15$ ,  $34.7 \pm 2.05$ , and  $34.5 \pm 2.9$  years, respectively, with no significant difference noted between them ( $p > 0.05$ ).

In patients with mild COVID-19, the average serum creatinine level was  $72 \pm 2.4$   $\mu\text{mol/l}$ , while in those with moderate severity it was  $84 \pm 3.5$   $\mu\text{mol/l}$ . When comparing the indicators between these two groups, a statistically significant difference was observed ( $p < 0.01$ ). In the third group, the creatinine level was  $98 \pm 4.6$   $\mu\text{mol/l}$ . When comparing the results obtained in this group with the indicators of mild and severe forms of the disease, a highly significant difference ( $p < 0.001$ ) was revealed.

Creatinine-based eGFR in patients with mild, moderate, and severe disease per  $1.73 \text{ m}^2$  body surface area was  $116 \pm 5.2$  ml/min,  $104 \pm 4.8$  ml/min, and  $89 \pm 4.7$  ml/min, respectively. A comparative analysis of the obtained results revealed a significant difference ( $p < 0.05$ ) between the first and second groups, and a highly significant difference ( $p < 0.001$ ) between the first and third groups. No significant differences in eGFR indicators were noted between the second and third groups.

**Conclusion.** The obtained results confirm the important practical significance of monitoring the functional state of the kidneys in patients with severe COVID-19 infection.

## **PEDAGOGICAL CONDITIONS FOR DEVELOPING CREATIVE QUALITIES IN STUDENTS**

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In modern education, the process of nurturing an independent, critical-thinking, and creative individual is being improved by incorporating new socio-pedagogical demands and principles. The ideas of independent thinking, creativity, and personality development have been at the core of pedagogical theories and the early stages of school development, aiming to shape socially significant subjects with aesthetic sensibilities. In later stages of human history, personal activity has been described as becoming more original and enriched with unique ideas. In this context, we will focus on the issues related to developing students' creative abilities.

Research results indicate that individuals with developed creative qualities exhibit the following behaviors: a desire to introduce novelty, an inclination to demonstrate creative traits, striving for originality in creative work, reorganizing structures of habitual behavior, evaluating themselves positively, believing in their own strength and potential, associating problems with alternative ideas, finding similarities between different (even opposing) concepts, expressing their ideas in unique interpretations, accepting their own and others' transformations positively, and adopting both conventional and unconventional ideas. Such individuals demonstrate the ability to think independently and approach situations innovatively.

In the field of biology, developing creative qualities in students requires consideration of theoretical concepts, pedagogical observations, cognitive exercises, and creative tasks. The practical value of creativity can be assessed using the following criteria:

- 1. Perfection** – The thorough reasoning behind creative ideas; the shape, color, spatial, and compositional consistency of creative products
- 2. Harmony of content and form** – The logical completion of a creative idea based on a solid theoretical foundation, ensuring its alignment with the final product's shape.
- 3. Originality** – The novelty of a creative idea, not previously proposed by others
- 4. Completeness** – The full realization of all components of a creative idea.
- 5. Emotional and aesthetic impact** – The ability of a creative idea or product to evoke emotional responses.

**6. Multifunctionality** – A creative idea should contribute to organizing social, economic, and cultural relationships.

**7. Having practical value** – creative thinking, service of production for organising interpersonal, social, economical, cultural attitudes.

Developing creativity in students is a complex process that requires a step-by-step approach. Below are the stages suggested by researchers for fostering creative qualities:

**1. Adaptation (Adaptive) Stage**

At this stage, special exercises help develop students' creative thinking abilities. Assignments are general in nature, encouraging students to put forward original ideas in various fields.

**2. Development Stage**

At this stage, special exercises further enhance students' creative thinking abilities. Assignments focus on biology-related topics, helping students develop original ideas in this field.

**3. Analytical-Evaluation Stage**

Students assess their own and others' creative qualities. They analyze and evaluate solutions to problems presented in biology assignments.

**4. Practical-Activity Stage**

In this stage, students apply creative qualities in biology-related tasks. They actively participate in problem-solving exercises that require creative thinking.

Developing creative qualities is closely linked to an individual's life experience, knowledge level, lifestyle, and interpersonal relationships.

To foster creative thinking, students should:

Perceive themselves as imaginative and multi-faceted individuals.

Be independent and resistant to external pressures.

Analyze and critically evaluate assumptions.

Be open-minded and flexible in accepting new ideas.

Identify connections between seemingly opposing concepts, express unique thoughts, and persuade others.

Have a well-developed sense of humor.

Thus, determining the key pedagogical principles for fostering students' creative qualities in biology lessons enhances the effectiveness of the educational process.

Ensuring that biology assignments have a problematic, creative, and intellectual nature helps develop students' emotional engagement, curiosity, aesthetic sense, independence, intellectual activity, willingness to take risks, openness to new ideas,

critical thinking ability, creativity, innovative thinking, originality, and divergent thinking.

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## Types of film documents in the central state archive of cinema, photo, voice documents

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**Annotation:** in this article, we will dwell on the issues of cinema, photography, the formation of sound documents, the main important aspects, the emergence of the main terms of the industry.

**Keywords:** exhibition, document, subject, film, Photo and sound documents, Film Studios, film sets, photo albums, micro - calculator, personal computer, print media, museum exhibits.

**Аннотация:** В этой статье мы остановимся на вопросах становления кино, фотографии, звуковой документации, основных важных аспектах, возникновении основных терминов отрасли.

**Ключевые слова:** выставка, документ, тема, фильм, фото - и аудиодокументы, кинопрограммы, коллекции фильмов, фотоальбомы, микрокалькулятор, персональный компьютер, печатные издания, музейные экспонаты.

**Annotatsiya:** Ushbu maqolada kino, surat, ovozli hujjatlarning shakllanib borishi, asosiy muhim jihatlari, sohaning asosiy atamalarining vujudga kelishi masalalari haqida to'xtalib o'tamiz.

**Kalit so'zlar:** Ko'rgazma, hujjat, mavzu, Kino, foto va ovozli hujjatlar, Kinodasturlar, kinoto'plamlar, fotoalbomlar, mikro- kalkulyator, shaxsiy kompyuter, bosma nashrlar, muzey eksponatlari.

Exhibitions are permanent (intended for long - term viewing at a facility) and portable (intended for display within a specific period at various institutions). Exhibitions are organized on the initiative of the archive at the request of interested organizations, in conjunction with a special order of higher authorities or with a single organization. Exhibitions are presented in the form of copies of cinema, photo, sound documents. The work on the preparation and organization of the exhibition includes the following stages: theme selection, study of literature on the topic, find documents on the topic, draw up a theme plan, prepare documents for display, montage and artistic decoration of the exhibition, mark the responsible performers, etc. The State Archive agrees with

other organizations on the conditions of their work and the distribution of tasks in the preparation of exhibitions. The theme of the exhibition is determined taking into account important dates, their significance, the presence of documents in the archive. Identification and selection of documents is carried out by catalogs, lists, Assembly sheets. Cinemas are viewed at the assembly table. When identifying documents for exhibition, they are taken into account their political significance and scientific value, visual qualities. More importance is attached to previously unused documents. The artistic decoration and installation of the exhibition is carried out according to the theme plan. its composition, documents and auxiliary materials (drawings, diagrams, etc.; prints, museum exhibits), which determine the approximate number of items. The contents of the exhibition and the contents of its sections are revealed. The theme plan includes a historical reference, in which the theme of the exhibition is revealed. The topic plan is discussed by the methodological Commission of the State Archive, agreed with interested organizations if necessary and approved by the head of the archive. All documents selected for the exhibition and copies of them are provided with annotations, indicate the date, place and author of filming, the name of the film, the record, the name of the studio (organization) where the production or recording was made, the name of the State Archive. The departmental Archive reports on its opening in the Press, television, radio to organize the arrival of people at the exhibition. Preparation of documentary publications: subject selection, search and selection of documents includes the processes of copying, selection and transmission of text, compilation of a scientific-reference apparatus for publication, as well as work with publishing houses. The publication of film, Photo and sound documents is prepared on the initiative of the State Archive, as well as in conjunction with the editorial offices of newspapers and magazines, publishing houses, with which the topics of pre-articles, the topic of picture documents, as well as a collection of some film frames and other materials, their size and duration of preparation are agreed. TV shows and radio broadcasts are prepared by the state archives on the initiative of the archives or studios in cooperation with television and radio studios. TV broadcasting or broadcasting is carried out in the form of interviews, interviews, Chronicles, information, reportage. Preparation of TV shows and radio broadcasts includes the following stages: selection of the topic of the show or broadcast; search for documents, study and, if necessary, selection of documents of other archives and museums; preparation of the text. The state archive will agree in advance with the relevant studio on the topic and author of the show or broadcast, on the obligatory - Yats of the archive and studio, on the duration of the show or broadcast, the duration of preparation, etc. Lectures prepared

using film, Photo, voice documents can be held at the initiative of the State Archive, as well as at the archive or other organizations at the request of various organizations. Depending on the topic of the lecture, film, Photo, voice documents can serve as illustrations or serve as the main part of the lecture. Films are used in lectures by displaying documents of the relevant topic on the screen, with the help of diapositive (slides), which are stored in the state archive of picture documents and are prepared for special display, by making photo exhibitions and stands, and voice documents by way of hearing. In addition to episodic lessons and lectures, the state archive can organize a series of themed evenings. During these nights, movies, footage can be shown as well as voice documents can be broadcast. The state archive can organize meetings and evenings in order to acquaint the general public with the content and content of films, photos, voice documents. Meeting-Night organization begins with the work of determining the topic, the composition of the audience, the time and location of the night. Then a program is created with the content of lectures and the content of films, photos, sound documents that are shown and broadcast, the surnames of the speakers and those responsible for this meeting-night, as well as the procedure for holding the night. Documents on meeting-Night organization are collected into a single collection of the organization's request for meeting - Night, program, text of lectures, cinema, photo, voice document lists, invitation, etc. The state archive can also organize excursions for teams of various organizations. Tours are organized by agreement with the management of the organization as well as an official letter written in the name of the director of the archive. Excursions can be commented (on the main directions of archival activities, on the composition and content of documents) and topical (on documents related to a particular topic). Preparation for the excursion is carried out on the basis of the topic, content, Order of conduct and, if responsible, - the desired plan. It is determined how expedient it is to prepare the exhibition and photo albums, as well as the day and time of conducting the excursion. Film programs and film programs are prepared by the state archives for the purpose of showing films about the past. The film is a collection of films designed to be shown on the screen once or more in various ceremonies organized by the state archive of cinema. The film program is compiled in the state archive from positive copies of a film, a special show or a complete collection of the film magazine. The program can also include parts of films, plots of film magazines and individual film sets. When composing a film program, it is forbidden to change the order of the film, a special show, a montage of the film magazine. The theme of the film program, the content and content of the films included in it are

selected depending on the theme of the meeting-Night. Kinotoplam is a kinotasvir, which is mounted in a certain sequence in the archive.

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**MAQSUD SHAYKHZADEH PEOPLE OF THE LAST DAYS**

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**Annotation:** about who met the last days of the life of Maqsud Shaykhzoda, a conversation with people with whom he met. Shaikhzoda stood out from all of us not only in the sense of reason, but also in the sense of siymo. The idle question of the autonomous mouth did not seem to melt into it. All the time, in all environments and conditions, the feeling of pride, which has made his heart prosperous, has been exasperated

**Keywords:** Guest, resident, domla, Sakinakhanim, Shaykhzoda, Alisher Navoi, Yashin aka, Doctor, Alley, flies, Mullah, patient, poetry collection, Writers Association.

Shaikhzoda stood out from all of us not only in the sense of reason, but also in the sense of siymo. The idle question of the autonomous mouth did not seem to melt into it. All the time, in all environments and conditions, he exuded a sense of pride that beautified his heart.

9 February 1967. The chairman of the Writers 'Union, Komil Yashin, accompanied by the editor of the newspaper "culture of Uzbekistan" (now Literature and art of Uzbekistan") Laziz Qayumov, visited the ill poet. Unfortunately, Laziz Qayumov gave an account of the poet's last days in the "Telegraph style", writing only in such words: "if the pain is severe, it is keragu, but there was no strain. Brother Yashin: "let's call a doctor from Moscow?"he said," No, the doctor is good, the qualifications are high-he is, but the patient's heart is weak." Again, from the words of the same memoranavis, it turns out that the Shaikhzoda does not drink the drugs that the doctors write down, saying that "my drink has become a pharmacy." Yashin, who heard sakinachanim's reproaches about this, turned to the Shaikhzoda and said: "it is necessary to enter into the words of the wives. Sakinahan is not only your faithful wife, but also a tenant doctor. The medicine knows the benefits of the drugs better than I do with you," he said. Then, in response to the words of the ill - fated poet Yashin, this is the answer: - the Sons of Mullah Nu'man, as the mashoyix say, it turns out that a man lived in ancient times. Whether because he was sick like me, or for some other reason, in any case a fly came while he was lying on the bed and dried his plucked tincture. Then, as long as the

boyaghi killed one of the flies and chased one, the king of the flies crossed over this man to God. God is not a righteous man, he takes the side of the flies and says to the boyaghi: "I have created you and the fly. You have no right to drive flies. Do not do anything wrong after that," he ordered. The boyaghi then turned to the sky and said, "O Almighty Lord, you have created man and creature living in the seven climates. You will give them your judgment. If I could not pass my word on one dim fly, then what would you do by creating me?" he said. Similarly, if I could not pass my word on to my crazy wife, what the Lord would do by creating me. Shaykhzoda had the will to be able to respond with such humor to the grudges of his brothers even during a severe illness.

In early January, Suimahan invited Shaykhzoda to his house with his wife. The lady, well versed in the science of how to wait for the dear guest, wrote a beautiful tablecloth. The poet put from the favors he liked. Guests came and asked for a treat, and they also drank a cup of tea. The mistress was going out into the kitchen and singing with the intention of swimming a liquid dish, my mistress walked in. - Honey, don't be too obsessed. We will not die long. Domlangiz is not in good condition. "Come out, don't bother too much," domlangiz says.

My wife said, involuntarily, tears poured out of her eyes. Suimahan himself, though distraught, gathered himself and began to comfort my Sacinah. Then the two women came out laughing at the Sheikhs as if nothing had happened. A little totingach from the dish brought by the host in the shakhzoda, read one of his new poems, and then a translation he made from Samad Vurgun. Suimahan recently donated the treatise "Alisher Navoi" to the master, along with the short story "Kalila and Dimna", which is out of print in his translation. In exchange for these books, shaykhzadeh asked for permission to leave, saying that he would donate his collection of poems "Alley", which will soon come out of print, and that poems dedicated to Suimahan will certainly be in this collection.

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## **MAQSUD SHAYXZODA SO'NGI KUNLARDAGI INSONLAR**

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**Annotatsiya:** Maqsud Shayxzoda hayotining so'ngi kunlari kimlar bilan uchrashgani haqida, u bilan uchrashgan insonlar bilan suhbat. Shayxzoda aql ma'nosidagina emas, siymo ma'nosida ham hammamizdan ajralib turardi. Muxtor og'aning beozor savoli unga erish tuyulmadi. Hamma vaqt, hamma muhit va sharoitda qalbini obod qilgan faxr tuyg'usini jo'shtirib yubordi

**Kalit so'zlar:** Mehmon, hol-ahvol, domla, Sakinaxonim, Shayxzoda, Alisher Navoiy, Yashin aka, shifokor, Xiyobon, pashshalar, mulla, bemor, she'rlar to'plami, Yozuvchilar uyushmasi.

**Annotation:** about who met the last days of the life of Maqsud Shaykhzoda, a conversation with people with whom he met. Shaikhzoda stood out from all of us not only in the sense of reason, but also in the sense of siymo. The idle question of the autonomous mouth did not seem to melt into it. All the time, in all environments and conditions, the feeling of pride, which has made his heart prosperous, has been exasperated

**Keywords:** Guest, resident, domla, Sakinakhanim, Shaykhzoda, Alisher Navoi, Yashin aka, Doctor, Alley, flies, Mullah, patient, poetry collection, Writers Association.

Shayxzoda aql ma'nosidagina emas, siymo ma'nosida ham hammamizdan ajralib turardi. Muxtor og'aning beozor savoli unga erish tuyulmadi. Hamma vaqt, hamma muhit va sharoitda qalbini obod qilgan faxr tuyg'usini jo'shtirib yubordi.

1967 yil 9 fevral. Yozuvchilar uyushmasi raisi Komil Yashin "O'zbekiston madaniyati" (hozirgi O'zbekiston adabiyoti va san'ati) gazetasi muharriri Laziz Qayumov bilan birga xasta shoirni ko'rgani boradilar. Afsuski, Laziz Qayumov shoirning so'nggi kunlari haqida "telegraf uslubi"da ma'lumot berib, bunday so'zlarnigina yozgan: "Dardi og'ir bo'lsa keragu, ammo hech zorlanmadi. Yashin aka: "Moskvadan doktor chaqiraylikmi?" – deb so'rasa: "Yo'q, doktor yaxshi, malakasi baland-u, ammo bemorning yuragi zaif", - dedi". Yana shu xotiranasining so'zlaridan ma'lum bo'lishicha, Shayxzoda doktorlar yozib bergan dorilarni "Ichim dorixona bo'lib ketdi", deb ichmas ekan. Sakinaxonimning shu haqdagi ta'nalarini eshitgan Yashin aka Shayxzodaga qarab: "Xotinlarning gaplariga kirish kerak. Sakinaxon

nafaqat sizning vafodor rafiqangiz, balki kiroyi shifokor ham. Dori darmonlarning foydali ekanini siz bilan menga qaraganda yaxshi biladi”, - dedi. Shunda xasta shoir Yashinning soʻzlariga javoban bunday javob beradi: - Mulla Nuʻmon oʻgʻillari, mashoyixlarning aytishlaricha, qadim zamonda bir odam yashagan ekan. U menga oʻxshab xasta boʻlgani uchunmi yoki boshqa biror sabab bilanmi, har holda toʻshakda yotganida pashsha kelaverib, uni talayverib tinkasini quritipti. Shunda boyagi odam pashshalarning birini oʻldirib, birini quvavergan ekan, pashshalarning podshosi shu odamning ustidan xudoga arz qilibdi. Xudo adolatparvar emasmi, pashshalarning yonini olib, boyagi odamga: “Seni ham, pashshani ham men yaratganman. Sening pashsha haydashga hech qanday haqing yoʻq. Bundan keyin bunday nomaʼqul ishni aslo qila koʻrma”, - deb buyruq beribdi. Shunda boyagi odam osmonga qarab ikki qoʻlini ochib, debdi: “Ey qudratli Parvardigor, sen yetti iqlimda yashayotgan odamzodni ham, jonzodni ham yaratgansan. Ularga oʻz hukmingni oʻtkazasan. Agar men bitta xira pashshaga soʻzimni oʻtkaza olmasam, unda meni yaratib nima qilarding?” – degan ekan. Shunga oʻxshab men ham oʻz soʻzimni aqalli xotinimga oʻtkaza olmasam, Parvardigor meni yaratib nima ham qilardi. Shayxzoda hatto ogʻir xastalik paytida ham birodarlarining gina-kuduratlariga shunday hazil-mutoyiba bilan javob bera oladigan iroda sohibi edi.

Yanvar oyining boshlarida Suyimaxon Shayxzodani rafiqasi bilan uyiga taklif etdi. Aziz mehmonni qanday kutish ilmini yaxshi bilgan xonim chiroyli dasturxon yozdi. Shoir yoqtirgan noz neʼmatlardan qoʻydi. Mehmonlar kelib, hol-ahvol soʻrashdilar va bir piyola choy ham ichdilar. Suyimaxon oshxonaga chiqib, suyuq taomni suzish niyatida kuymaklanib yurgan edi, Sakinaxonim kirib qoldi. - Suyimaxon, koʻp ovora boʻlmang. Biz uzoq oʻltirmaymiz. Domlangizning ahvoli yaxshimas. “Chiqib ayt, koʻp bezovta boʻlmasin”, - deyapti domlangiz.

Sakinaxonim shunday dedi-yu, koʻzlaridan beixtiyor yosh quyilib keldi. Suyimaxonning oʻzi ham maʼyuslanib qolgan boʻlsa-da, oʻzini yigʻib olib, Sakinaxonimga taskin berishga tushdi. Soʻng ikki ayol Shayxzodaning huzuriga hech qanday noxush hol roʻy bermagandek, kulib chiqib keldilar. Shayxzoda mezbondan olib kelgan taomdan ozgina totingach, yangi sheʼrlaridan birini, soʻngra Samad Vurgʻundan qilgan tarjimasini oʻqib berdi. Suyimaxon yaqinda oʻz tarjimasida nashrdan chiqqan “Kalila va Dimna” qissasi bilan birga “Alisher Navoiy” risolasini ustozga sovgʻa qildi. Shayxzoda bu kitoblarning evaziga oʻzining yaqinda bosmadan chiqajak “Xiyobon” sheʼrlar toʻplamini sovgʻa qilajagini va shu toʻplamda Suyimaxonga bagʻishlangan sheʼrlar ham, albatta, boʻlajagini aytib, ketishga ijozat soʻradi.

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**ОСОБЕННОСТИ СОДЕРЖАНИЯ ВОСПИТАТЕЛЬНЫХ УРОКОВ ПО  
ФОРМИРОВАНИЮ ЦЕННОСТНОГО ОТНОШЕНИЯ К ЗДОРОВЬЮ У  
МЛАДШИХ ШКОЛЬНИКОВ**

**CONTENT FEATURES OF EDUCATIONAL LESSONS AIMED AT  
FORMING A VALUE-BASED ATTITUDE TOWARDS HEALTH IN  
PRIMARY SCHOOL STUDENTS**

**BOSHLANG‘ICH SINIF O‘QUVCHILARIDA SOG‘LIQQA BO‘LGAN  
QADRIYATLARGA ASOSLANGAN MUNOSABATNI SHAKLLANTIRISH  
BO‘YICHA TARBIYA DARSLARINING MAZMUNYI XUSUSIYATLARI**

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**Аннотация:** В данной статье анализируется процесс формирования ценностного отношения к здоровью у младших школьников. Рассматривается значение пропаганды здорового образа жизни, обучения правилам гигиены и развития у детей чувства ответственности в воспитательных уроках. Также обсуждается роль и эффективность инновационных педагогических подходов в данном процессе.

**Annotation:** This article analyzes the process of forming a value-based attitude towards health in primary school students. It highlights the importance of promoting a healthy lifestyle, teaching hygiene rules, and developing a sense of responsibility in children through educational lessons. Additionally, the role and effectiveness of innovative pedagogical approaches in this process are discussed.

**Annotatsiya:** Ushbu maqolada boshlang‘ich sinf o‘quvchilarida sog‘liqqa bo‘lgan qadriyatlarga asoslangan munosabatni shakllantirish jarayoni tahlil qilinadi. Sog‘lom turmush tarzini targ‘ib qilish, gigiyena qoidalarini o‘rgatish va bolalarda mas‘uliyat hissini rivojlantirishning tarbiya darslaridagi ahamiyati yoritib beriladi. Shuningdek, mazkur jarayonda innovatsion pedagogik yondashuvlarning roli va samaradorligi ham muhokama qilinadi.

**Ключевые слова:** здоровье, ценностное отношение, младшие школьники, воспитание, здоровый образ жизни, гигиена, педагогические подходы, ответственность.

**Keywords:** health, value-based attitude, primary school students, education, healthy lifestyle, hygiene, pedagogical approaches, responsibility.

**Kalit so‘zlar:** sog‘liq, qadriyatlarga asoslangan munosabat, boshlang‘ich sinf o‘quvchilari, tarbiya, sog‘lom turmush tarzi, gigiyena, pedagogik yondashuvlar, mas‘uliyat.

### **Введение.**

Формирование ценностного отношения к здоровью у младших школьников является одной из приоритетных задач современной системы образования. В условиях растущей урбанизации, увеличения стрессовых факторов и снижения физической активности детей особую значимость приобретает воспитание осознанного отношения к здоровому образу жизни с раннего возраста. Начальная школа играет ключевую роль в этом процессе, так как именно в этот период формируются базовые привычки, поведенческие модели и ценностные ориентиры. Воспитательные уроки и внеурочная деятельность направлены на развитие у детей понимания важности здоровья, личной гигиены, правильного питания и физической активности. Современные педагогические технологии позволяют сделать процесс формирования ценностного отношения к здоровью более эффективным и увлекательным. Использование интерактивных методов, проектной деятельности, игровых форм обучения способствует лучшему усвоению материала и формированию устойчивой мотивации к ведению здорового образа жизни. В данной статье рассматриваются основные подходы и методики, применяемые в образовательном процессе для воспитания у младших школьников ответственного отношения к своему здоровью. Анализируются факторы, влияющие на формирование ценностных установок, а также роль учителя и родителей в этом процессе.

### **Основная часть.**

1. Значение формирования ценностного отношения к здоровью у младших школьников. Здоровье – это важнейшая ценность человека, влияющая на качество жизни, успешность в учебной и профессиональной деятельности, а также на общее благополучие общества. В младшем школьном возрасте формируются базовые привычки, которые могут определять здоровье человека на всю жизнь. Поэтому важно, чтобы дети не только знали о принципах

здорового образа жизни, но и осознанно следовали им, понимая их значимость. Ценностное отношение к здоровью включает не только соблюдение правил личной гигиены и режима дня, но и формирование у ребенка ответственности за свое физическое и психическое состояние. Дети должны осознавать, что их здоровье зависит от их собственного выбора и образа жизни.

2. Основные направления работы по формированию ценностного отношения к здоровью. Работа по формированию у младших школьников ответственного отношения к своему здоровью должна охватывать несколько ключевых направлений: Формирование знаний о здоровье и здоровом образе жизни. Важно, чтобы дети получали достоверную и доступную информацию о пользе правильного питания, физической активности, соблюдения режима сна и отдыха. Это можно делать через уроки, специальные занятия, познавательные мультфильмы и книги. Развитие навыков здорового поведения. Теоретические знания должны подкрепляться практическими навыками. Например, на уроках дети могут учиться правильно мыть руки, чистить зубы, делать зарядку. Создание благоприятной образовательной среды. В школе должна быть атмосфера, способствующая укреплению здоровья: комфортные условия в классах, подвижные перемены, здоровое питание в столовой. Формирование осознанного отношения к здоровью через личный пример. Учителя и родители должны демонстрировать приверженность здоровому образу жизни, ведь дети в этом возрасте активно копируют поведение взрослых.

3. Инновационные педагогические технологии в формировании здоровых привычек. Современные образовательные технологии позволяют сделать процесс обучения более увлекательным и эффективным: Игровые методы. Через ролевые игры, викторины и интерактивные занятия дети лучше усваивают материал и мотивируются на здоровый образ жизни. Например, можно организовать «Неделю здоровья», где дети будут выполнять разные задания, связанные с физической активностью и правильным питанием. Проектная деятельность. Дети могут самостоятельно разрабатывать мини-проекты, связанные со здоровьем, например, создавать буклеты о полезных продуктах или проводить опрос среди сверстников о здоровых привычках. Технологии сотрудничества. Работа в группах и обсуждение тем, связанных с заботой о здоровье, способствует формированию осознанных решений и обмену опытом между детьми. Использование цифровых технологий. Различные образовательные приложения, интерактивные презентации и онлайн-курсы могут сделать обучение более интересным и доступным.

4. Роль учителя и родителей в формировании ценностного отношения к здоровью. Формирование осознанного отношения к здоровью невозможно без активного участия взрослых. Учителя должны не только давать знания, но и мотивировать детей, показывая положительный пример. Родители, в свою очередь, должны поддерживать инициативы школы и внедрять здоровые привычки в семейную жизнь. Важно, чтобы учителя и родители работали совместно: проводили совместные мероприятия, обсуждали с детьми вопросы здоровья, организовывали спортивные игры и экскурсии на природу.

5. Проблемы и пути их решения. Несмотря на значимость темы, в образовательном процессе могут возникать определенные трудности: Недостаток времени на уроках для обсуждения вопросов здоровья. Решением может стать интеграция тем о здоровом образе жизни в другие предметы. Нехватка мотивации у детей. Здесь помогут игровые технологии и личный пример взрослых. Недостаточная вовлеченность родителей. Для их активного участия можно организовывать семейные конкурсы и лекции о здоровом образе жизни.

#### **Заключение:**

Формирование ценностного отношения к здоровью у младших школьников – это важная педагогическая задача, имеющая долгосрочные последствия как для каждого отдельного ребенка, так и для общества в целом. На этапе начального образования закладываются основы мировоззрения, поведения и привычек, которые могут сохраняться на протяжении всей жизни. Поэтому важно, чтобы процесс воспитания здорового образа жизни был системным, последовательным и увлекательным. В ходе исследования было установлено, что для успешного формирования ценностного отношения к здоровью необходимо учитывать несколько ключевых аспектов:

1. Информирование и просвещение детей – важно не только рассказывать о принципах здорового образа жизни, но и объяснять, почему они важны и как влияют на организм.
2. Формирование практических навыков – дети должны не просто знать, что полезно, а уметь применять эти знания на практике: соблюдать личную гигиену, заниматься физической активностью, правильно питаться.
3. Создание благоприятной среды – школьная среда должна способствовать здоровому образу жизни: правильное питание в столовой, подвижные перемены, комфортная обстановка в классах.

4. Использование современных педагогических технологий – игровые методики, проектная деятельность, цифровые ресурсы делают процесс обучения более увлекательным и эффективным.

5. Роль педагогов и родителей – взрослые должны стать примером для детей, демонстрируя в повседневной жизни заботу о своем здоровье. Одним из важнейших выводов является то, что формирование осознанного отношения к здоровью возможно только при тесном взаимодействии школы, семьи и самого ребенка. Если дети будут видеть положительные примеры здорового образа жизни не только на уроках, но и в повседневной жизни, они с большей вероятностью примут эти ценности и будут следовать им. Однако, несмотря на положительные тенденции, в образовательной практике существуют определенные проблемы: недостаток внимания к данной теме в школьной программе, нехватка времени у учителей, слабая вовлеченность родителей. Для решения этих проблем необходимо разрабатывать комплексные программы, интегрировать вопросы здоровья в разные учебные дисциплины, а также привлекать родителей к активному участию в образовательном процессе. В заключение можно сказать, что воспитание здорового поколения – это задача не только педагогов, но и всего общества. Если системно подходить к формированию ценностного отношения к здоровью с раннего возраста, это приведет к снижению числа заболеваний среди детей, повышению их успеваемости, развитию у них ответственности за свое благополучие и, в конечном итоге, к формированию здорового общества.

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**TA'LIM TURLARIDA CHIZMACHILIK FANINING O'QITILISH HOLATI**

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**Qodirova Sevdora**

**Anotatsiya**

Ushbu maqolada mamlakatimiz ta'lim tizimida yangilanayotgan islohatlar, yurtboshimiz rahbarligi asosida ilm-fan rivoji uchun qo'yilayotgan tashabbuslar haqida gap boradi. Bundan tashqari, ta'lim tizimimizda chizmachilik fanini o'rni va uni o'qitilish holati yoritiladi. Prezidentimizni muhandislik va chizmachilik sohalariga e'tibor qaratmoqda va ta'limni rivojlantirish uchun bir qancha ishlarni amalga oshirmoqda. Ushbu ishlar haqida batafsil maqolada yoritilgan.

**Аннотация**

В данной статье рассказывается о реформах, проводимых в системе образования нашей страны, а также о инициативах, предпринимаемых под руководством нашего лидера для развития науки. Кроме того, освещается роль черчения в образовательной системе и текущее состояние его преподавания. Президент уделяет внимание инженерному делу и черчению, проводя ряд мероприятий для развития образования. Обо всех этих мерах подробно рассказывается в статье.

**Abstrac**

This article discusses the ongoing reforms in our country's education system and the initiatives undertaken under the leadership of our head of state to promote scientific development. Additionally, it highlights the role of technical drawing in the education system and its current state of teaching. Our President is focusing on engineering and technical drawing fields and is implementing various measures to improve education. These efforts are covered in detail in the article.

**Kirish**

Bugungi XXI asr zamonaviy texnologiya asri bo'lishiga qaramasdan, hozirgi kunda ta'lim tizimida o'quvchilarning ijodiy va kreativ fikrlash qobiliyatlarini rivojlantirishga katta e'tibor qaratilmoqda. Xususan, davlatimiz rahbarining "2022-2026 yillarga mo'ljallangan yangi O'zbekistonning taraqqiyot strategiyasi"da ham buni isbotini ko'rishimiz mumkin. Jumladan, ma'naviy taraqqiyotni ta'minlash va sohani yangi bosqichga olib chiqish yo'nalishida tasviriy va amaliy san'at hamda dizayn yo'nalishlarini rivojlantirish, aholining badiiy-estetik didini yuksaltirish,

madaniyat va san'at sohalarini yanada rivojlantirish, yoshlarni iste'dodini yuzaga chiqarishga xizmat qiladi.

Ilm-fan har qanday davlatning buguni va kelajagidir. Hozirgi kunda mamalakatimiz taraqqiyoti uchun yurtboshimiz Sh. M. Mirziyoyev ham ilm fan sohasiga katta e'tibor qaratmoqda. Buni isbotini 2018-2021-yillarda ilmiy innovatsion faoliyat sohasida 2 ta qonun, prezidentning 5 ta farmoni va 26 ta qarori, Vazirlar Mahkamasining 35 ta qarori va 7ta farmoyishi qabul qilinganligida ko'rishimiz mumkin. Shu jumladan, aytishimiz mumkinki yurtimizda 31 mingdan ziyod shaxs ilmiy tadqiqot ishlari bilan mashg'ul, ularning 28 mingdan ziyodi oliy ma'lumotga ega. Har yili davlat budjetining ma'lum bir qismi ilm-fanga sarflanadi. O'tgan to'rt yil davomida 28 ta ilmiy tashkilot, 4 ta innovatsion texnoparklar tashkil qilindi. Xususan, O'zbekiston Respublikasi Prezidentining 2020-yil 29-oktabrdagi PF-6097- sonli farmoni bilan tasdiqlangan ilm fanni 2030-yilgacha rivojlantirish konsepsiyasida ilm-fanni rivojlantirish yo'lidagi 19 ta muammo alohida belgilandi. Bullardan dissertatsiya himoyasi va ilmiy pedagogik faoliyatni amalga oshirish muammolari, dolzarb tadqiqot mavzusini tanlash, ilmiy faoliyat bilan bog'liq jarayonda ortiqcha rasmiyatchiliklarning mavjudligi va shunga o'xshagan bir qancha muammolardan tashkil topadi.<sup>1</sup>

Yuqoridagi fikrlardan kelib chiqib shuni aytishimiz joizki, ta'limni rivojlantirish yo'lida bir qancha ishlarni amalga oshirishimiz lozim. Ta'lim sohasida ochiqlik va shaffoflikni ta'minlash, turli rasmiyatchiliklarni oldini olish, malakali proffesor o'qituvchi kadrlarni yetarlicha rag'batlantirish, ta'limni rivojlantirish bo'yicha chora tadbirlarni tizimli va maqsadli qabul qilishini ta'minlashdan iboratdir. Bundan tashqari, internet va raqamli taxnologiyalar ta'limni yanada kengaytirishga imkon yaratmoqda. Albatta, ta'limni rivojlantirishda davlatning roli katta. Ta'lim sohasiga ta'luqli bir qancha strategalar va shu sohaga ta'luqli farmon va qonunlar davlatimiz rahbari tomonidan ishlab chiqilmoqda. Prezidentimizning mana shu sohani rivojlantirishga doir farmonlari va qarorlari asosan ta'lim tizimining sifatini oshirish, zamonaviy talablar asosida yangi ta'lim metodologiyalarini va yuksak malakali kadrlar tayyorlashga qaratilgan.

Har bir mamlakatning ta'lim tizimi uning ijtimoiy-siyosiy, iqtisodiy va madaniy hayoti bilan chambarchas bog'liqdir. O'zbekiston Respublikasining ta'lim tizimi davlat ta'lim standartlariga muvofiq ta'lim dasturlarini amalga oshiruvchi davlat va nodavlat ta'lim muassasalari, ta'lim tizimining faoliyat ko'rsatishi va rivojlanishini ta'minlash uchun zarur bo'lgan tadqiqot ishlarini boshqaruvchi ilmiy-pedagogik muassasalar, ta'lim sohasidagi davlat boshqaruv organlarini o'z ichiga oladi.

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<sup>1</sup> <https://xabar.uz/uz/tahlil/ozbekistonda-ilm-fan-taraqqiyoti>

“Ta’lim to‘g‘risida”gi Qonun 2020-yil 19-mayda qabul qilingan bo‘lib unga muvofiq ta’lim turlari quyidagilardan iborat:

- maktabgacha ta’lim va tarbiya;
- umumiy o‘rta va o‘rta-maxsus ta’lim;
- professional ta’lim;
- oliy ta’lim;
- oliy ta’limdan keying ta’lim;
- kadrlarni qayta tayyorlash va ularning malakasini oshirish;
- maktabdan tashqari ta’lim.<sup>2</sup>

Qonunga ko‘ra davlat oliy ta’lim, o‘rta maxsus, professional ta’lim muassasalari va ularning filiallari, shuningdek davlat ishtirokidagi oliy, o‘rta maxsus, professional ta’lim tashkilotlari va ularning filiallari Prezident yoki Hukumat qarorlari bilan tashkil etiladi.

Birinchi prezidentimiz I.A.Karimov ham: “Bugun xalqaro hayot, kishilik taraqqiyoti shunday bosqichga kirganki, endi unda harbiy qudrat emas, balki intellektual salohiyat, aql-idrok, fikr, ilg‘or texnologiyalar hal qiluvchi ahamiyat kasb etadi”<sup>3</sup> deb ta’kidlaganlar. Demak, biz ham bunday ishonchni oqlashimiz, qaysi sohada bo‘lishimizdan qat’iy nazar o‘z kasbimizni sevishimiz kerak.

Turmush tarzimizda yaratilayotgan har qanday yangiliklarning dastavval, chizmasi chiziladi. Mana shu chizma orqali yaratilayotgan yangilikning afzalliklari va kamchiliklari aniqlanadi va shu chizma orqali bajarilayotgan buyum tartibga solinib yig‘iladi. Shu maqsadda ham chizmachilik fani maktab bosqichidan boshlab o‘rgatiladi. Chizmachilik fani ta’lim sohasida muhim ahamiyatga egadir. Chunki chizmachilik fani o‘quvchilarda texnik ko‘nikmani, ijodkorlik, diqqatni jamlash va turli xil muammolarni hal qilish qobiliyatini rivojlantiradi. Aynan, chizmachilik fanida o‘quvchilarni ijodkorligini oshirishga qaratilgan bir qancha ijodiy topshiriqlar va turli xil metodik ta’minot bazasi yetarlicha. Chizmachilik fanini yaxshi o‘zlashtirgan o‘quvchida grafik savodxonligi, tushunish qobiliyati, chizmani o‘qish ko‘nikmalari shakllanadi. Chizmachilik fanini talaba o‘quvchilarga o‘qitishda qo‘llaniladigan metodlar o‘quvchilarda ijodkorlik faoliyatini shakllantiradi va fazoviy tasavvurini oshiradi. Ummuman olganda, chizmachilik fani texnik kommunikatsiya va loyihalashni samarali amalga oshirish uchun zarur bilim va ko‘nikmalarni shakllantiradi.

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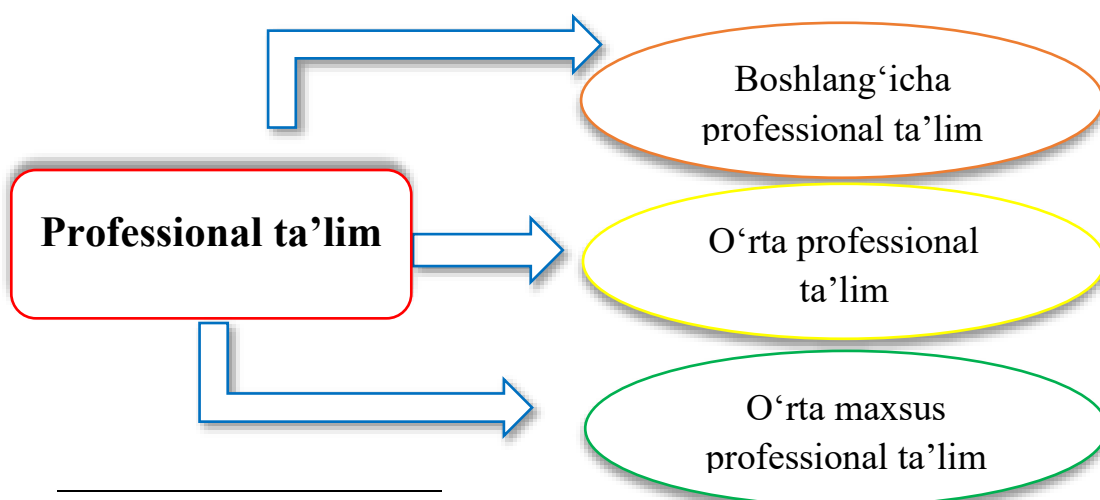
<sup>2</sup> <https://www.gazeta.uz/oz/2020/09/24/education/>

<sup>3</sup> Karimov I A. Biz kelajagimizni o‘z qo‘limiz bilan quramiz. 7-tom.-T: “O‘zbekiston”, 1999.

***Maktabgacha ta'lim va tarbiya turida chizmachilik fanini o'rni.*** Bizga ma'lumki, maktabgacha ta'lim muassasalarida chizmachilik fani fan sifatida alohida o'qitilmasada, ushbu fanning ma'lum bir elementlaridan foydalaniladi. Har qanday bog'chalarda, u hoh davlat bog'chasi bo'lsin, hoh xususiy bog'cha bo'lsin u yerda tarbiyachi pedagoglarimiz bolajonlarimizga turli xil rasmlar chizish orqali chizmachilik elementlarini o'rgatadilar. Misol uchun: bolajonlar daraxtni yashil barglarini aylana shaklida, shoxlarini to'g'ri to'rtburchak yoki trapetsiya shaklida chizishadi. Bu esa chizmachilik va geometriya fanlarini boshlang'inch nuqatada shakllanishidir. Chunki maktabgacha ta'lim muassasalarida tarbiyalanuvchi bolajonlarimiz ushbu fanni hali bilmasada, ammo mana shunday ko'nikmalari shakllanib boradi.

***Umumiy o'rta va o'rta-maxsus ta'lim turi.*** O'zbekiston Respublikasining qabul qilingan ta'lim standartiga asosan chizmachilik fani maktablarda 8-9- sinflarida o'qitiladi. Bizga ma'lumki, chizmachilik fanidek hech qaysi fan o'quvchilarning tasavvur va tafakkur qilish qobiliyatini rivojlantirmaydi. Har bir maktab o'quvchisi chizmachilik fanini o'rganar ekan, unda fazoviy tasavvur rivojlanib boradi. Bu albatta, fazoviy taffakur orqali amalga oshadi. Bejizga chizmachilik fanini maktab dasturlaridan boshlab ta'lim tizimiga kiritilmagan. Yuqorida aytib o'tkanimizdek, chizmachilik fani o'quvchilarni texnik savodxonligini, shuningdek, ijodiy tasavvurini shakllantiradi.

***Professional ta'lim tizimi.*** Prezidentimizning Oliy Majlisga Murojaatnomasida mamlakatimizda 2020-2021 o'quv yilidan boshlab kadrlar malakasini xalqaro mehnat bozori talablariga moslashtirish maqsadida Milliy malaka tizimini ishlab chiqish, yurtimizda 340 ta kasb-hunar maktabi, 147 ta kollej va 143 ta texnikum tashkil etish bo'yicha aniq vazifalar belgilab berilgan edi.<sup>4</sup>



<sup>4</sup> <https://yuz.uz/uz/news/professional-talim-tizimi-va-xalqaro-andozalar>

Maktab dasturida chizmachilik fani boshlang'ich nuqtada o'qitilsa, kasb-hunar maktablarda asosan oliy o'quv yurtlarga tayyorgarlik, ya'ni chuqurlashtirib o'qitiladi. Respublikamizdagi kasb-hunar maktablari mutaxassisliklar bo'yicha kichik mutaxassislar tayyorlanmoqda. Chizmachilik kursining boshqa fanlar bilan aloqalari, kasb-hunar maktablari talabalarini texnikaviy tarbiyalashda va ularning kasbiy faoliyatida katta o'rin egallaydi. Shuning uchun ham kasb-hunar maktablarining ko'pchilik mutaxassisliklarida chizmachilik fani alohida fan sifatida o'quv jarayoniga kiritilgan.

**Oliy ta'lim tizimi.** O'zbekiston ta'lim tizimida chizmachilik fani muhim o'rin tutadi. Bu fan, asosan talabalarga turli sohalarda loyiha ishlab chiqish, dizayn, arxitektura va boshqa tegishli sohalarda asosiy ko'nikmalarni o'rgatadi. Chizmachilik fani ta'lim jarayonida talabalarni nafaqat texnik, balki ijodiy fikrlashga ham o'rgatadi. Bu esa ularga kelajakda loyiha ishlab chiqishga katta yordam beradi.

Oliy o'quv yurtlarida chizmachilik fanini o'qitish – bu muhandislik, arxitektura, dizayn va boshqa texnik sohalarda talabalarga asosiy chizmalar va texnik hujjatlar tayyorlashni o'rgatadi. So'ngi yillarda yurtimizning OTM larida chizmachilik sohasiga mos turli xil yangi mutaxassislik yo'nalishlari ochilmoqda.

Jumladan,

| <b><i>Nizomiy nomidagi Toshkent davlat pedagogika universitetining quyidagi ta'lim yo'nalishlarida:</i></b> |                                                       |
|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| -60110500 - Tasviriy san'at va muhandislik grafikasi;                                                       | -70111202–Muhandislik grafikasi va dizayn nazariyasi; |

| <b><i>Toshkent arxitektura-qurilish universitetining quyidagi ta'lim yo'nalishlarida:</i></b> |                                       |
|-----------------------------------------------------------------------------------------------|---------------------------------------|
| -60730100 – Arxitektura;                                                                      | -60711800 – Atrof-muhit muhandisligi; |
| -60720600 – Materialshunoslik va yangi materiallar texnologiyasi (qurilish)                   | -61020300 – Materialshunoslik;        |

| <b><i>Toshkent davlat transport universitetining quyidagi ta'lim yo'nalishlarida:</i></b> |                                                |
|-------------------------------------------------------------------------------------------|------------------------------------------------|
| -60610900 – Radioelektron qurilmalar va tizimlar;                                         | -60710400 – Energetika muhandisligi;           |
| 60710500 – Elektr muhandisligi;                                                           | -60710800 – Metrologiya va standartlashtirish; |
| -60711200 – Metallurgiya muhandisligi;                                                    | -60711800 – Atrof-muhit muhandisligi;          |

|                                    |                                           |
|------------------------------------|-------------------------------------------|
| -60712300 – Mexanika muhandisligi; | -60711000 – Mexatronika va robototexnika; |
|------------------------------------|-------------------------------------------|

Chizmachilik fanining o'qitishda, talabalar eng sodda geometrik shakllardan boshlab to murakkab detal yoki buyumlarni tasvirini chizish va ularni yaratilish jarayonlarini o'rganadilar. Talabalarda grafik bilimlarni rivojlantirish murakkab jarayon hisoblanadi va bu albatta o'quv jarayon bilan chambarchas bog'langan. Ushbu fanni o'qitish jarayonida barcha talabalarning o'ziga xos xususiyatlarini hisobga olib dars o'tish lozim.

**Oliy ta'limdan keyingi ta'lim.** Oliy ta'limdan keyingi ta'lim bu mamlakatimizda malakali va ilmiy-pedagogik kadrlar tayyorlashga qaratilgan uzluksiz ta'lim turi hisoblanadi. Oliy ta'limdan keyingi ta'lim tizimi ushbu shakllarda amalga oshiriladi: *stajyor-tadqiqotchilik, tayanch doktorantura, doktorantura, mustaqil izlanuvchilik*. Yuqorida ko'rsatib o'tilgan ta'lim shakllari orqali chizmachilik fani mutaxassisligi bo'yicha ham mamlakatimizda juda ko'plab ilmiy ishlar va doktorlik dissertatsiyasi himoya qilinmoqda.

**Kadrlarni qayta tayyorlash va ularning malakasini oshirish.** Bizga ma'lumki, pedagoglar har 5 yilda bir marotaba o'z malakalarini oshiradilar. O'qituvchi malaka oshirish jarayonida mamlakatimizda va jahonda pedagogika, psixologiya hamda o'quv fani bo'yicha erishilgan yutuqlarni o'rganadilar. Shu bilan birga, pedagog hodimlarning ilmiy salohiyatini, dars berish sifatini oshirish bugungi kunda eng dolzarb masalalardan biridir. Jumladan, chizmachilik fani o'qituvchilarining ham grafik savodxonligini yanada oshirish va ta'lim berish jarayonida duch kelinayotgan bir qancha muommolar mana shunday malaka oshirish jarayonida bartaraf qilinadi. Pedagogik mahorat markazida maktab o'qituvchilari xususan tasviriy san'at va chizmachilik fani o'qituvchilari quyidagi modular asosida o'qitiladi:

- Tasviriy san'at va chizmachilik fanining DTS va yangi avlod darsliklarining tahlili;
- Tasviriy san'at va chizmachilik fanlarini o'qitishda ilg'or xorijiy tajribalar;
- Tasviriy san'at va chizmachilik darslarida raqamli texnologiyalardan foydalanish;
- Tasviriy san'at va chizmachilik fanida ART pedagogikasi;
- Tasviriy san'at va chizmachilik darslarida o'quvchilarning o'quv faoliyati natijalarini baholash;
- Tasviriy san'at va chizmachilik fanida o'quvchilarning mustaqil

ta'limini tashkil etish shakllari;

**Maktabdan tashqari ta'lim.** O'quvchi-talabalarni darsdan tashqari bilim va ko'nikmalarini rivojlantirishga qaratilgan ta'lim shakli. Ushbu ta'lim turi yoshlarni intellektual, ijodiy va kasbiy jihatdan rivojlantirishga xizmat qiladi. Masalan, turli to'garaklar, barkamol avlod bolalar maktablari, o'quv kurslari, onlayn ta'lim platformalari va boshqalar.

Hozirgi ilm-fan va texnologiya rivojlangan davrda yurtimizda turli xil xususiy o'quv markazlar ochilmoqda. Ayniqsa, muhandislik sohasiga ta'luqli juda ko'plab o'quv kurslari, ya'ni AutoCAD, 3D max, SolidWorks, sketchUp va BricsCAD kabi modellashtirish va muhandislik loyihalarini yaratishda qo'llaniladigan dasturlarni o'qitadigan o'quv markazlari kundan kunga ko'paymoqda.

**Xulosa va takliflar.** Yuqoridagi fikr va mulohazalardan xulosa qilib shuni aytishimiz zarurki, ta'lim tizimida chizmachilik fanini o'qitish muhim ahamiyat kasb etadi. Chunki u o'quvchilarni fazoviy tafakkurini, muhandislik savodxonligi va texnik bilimlarini shakllantirishga yordam beradi. Biroq hozirgi vaqtda bu fan bo'yicha o'quv jarayonda ayrim muammolar duch kelmoqda, ya'ni amaliy mashg'ulotlar kamligi, texnologik vositalarning yetarlicha ta'minlanmagani va zamonaviy o'quv metodikalarining yetishmasligidir. Shu sababli chizmachilik fanini yanada samarali o'qitish uchun ilg'or pedagogik usullarni joriy etish, zamonaviy dasturiy ta'minotdan foydalangan holda o'qitish. Bu esa kelajak avlodg mutaxassis bo'lib yetishishiga muhim omil hisoblanadi.

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**YANGI O'ZBEKISTONNI BARPO ETISHDA ILM -FAN SOHASIDA  
ZAMONAVIY GRAFIK DASTURLARNING O'RNI VA AHAMIYATI.**

**Nizomiy nomidagi Toshkent davlat pedagogika universiteti Muhandislik  
grafikasi va dizayn nazariyasi yo'nalishi 1-bosqich Magistranti  
Butayeva Zarina Zamonbek qizi**

**Annotatsiya:** Mazkur maqolada so'ngi yillarda zamonaviy grafik dasturlarning o'rni va ahamiyatini tahlil qilinadi. Grafik dasturlar qurilish va shaharsozlik, ta'lim, marketing, IT sohasi hamda madaniy merosni raqamlashtirish kabi yo'nalishlarda qanday qo'llanilayotgani yoritib beriladi. Shuningdek, ushbu texnologiyalar O'zbekistonning iqtisodiy va madaniy rivojlanishiga qanday ta'sir ko'rsatayotgani muhokama qilinadi. Grafik dizayn va 3D modellash vositalari orqali mamlakatning global raqobatbardoshligini oshirish istiqbollari ko'rib chiqiladi. Maqola innovatsion yechimlarning taraqqiyot strategiyasidagi o'rnini chuqur tahlil qilishga qaratilgan.

**Kalit so'zlar:** AutoCAD, SolidWorks, CorelDRAW, Adobe Illustrator, SketchUp, 2D grafik dasturlar, 3D grafik dasturlar, PDF, DWG, DXF, dasturiy kod (LISP, VBA)

**Аннотация:** В данной статье анализируется роль и значение современных графических программ в последние годы. Рассматривается их применение в таких сферах, как строительство и градостроительство, образование, маркетинг, IT-отрасль, а также оцифровка культурного наследия. Также обсуждается влияние этих технологий на экономическое и культурное развитие Узбекистана. Рассматриваются перспективы повышения глобальной конкурентоспособности страны с помощью инструментов графического дизайна и 3D-моделирования. Статья направлена на глубокий анализ роли инновационных решений в стратегии развития.

**Ключевые слова:** AutoCAD, SolidWorks, CorelDRAW, Adobe Illustrator, SketchUp, программы 2D-графики, программы 3D-графики, PDF, DWG, DXF, программный код (LISP, VBA).

**Abstract:** This article analyzes the role and significance of modern graphic software in recent years. It examines their application in various fields, including construction and urban planning, education, marketing, the IT sector, and the digitization of cultural heritage. The impact of these technologies on Uzbekistan's economic and cultural development is also discussed. The article explores the prospects of enhancing the

country's global competitiveness through graphic design and 3D modeling tools. It is aimed at a deep analysis of the role of innovative solutions in development strategies.

**Keywords:** AutoCAD, SolidWorks, CorelDRAW, Adobe Illustrator, SketchUp, 2D graphics programs, 3D graphics programs, PDF, DWG, DXF, programming code (LISP, VBA).

Maqsad qanchalik aniq va ravshan bo'lsa, unga erishish shunchalik oson kechadi. Insonlar yaxshi yashash uchun o'z maqsadi sari tinimsiz harakat qilgani singari jamiyat va davlatlar ham xalqining farovon yashashi, avlodlarining kelajagi porloq bo'lishi uchun o'z manzillarini aniqlab oladilar. Zotan, jadid mutafakkiri Abdulla Avloniy ta'kidlaganidek « Ilm dunyoning izzati. Ilm inson uchun g'oyat oliy va muqaddas bir fazilatdir. Zeroki ilm bizga o'z ahvolimizni, harakatimizni oyna kabi ko'rsatur. Zehnimizni, fikrimizni qilich kabi o'tkir qilur »<sup>1</sup>. Yangi O'zbekiston taraqqiyot sari intilayotgan davlat sifatida ta'lim tizimini modernizatsiya qilishga alohida e'tibor qaratmoqda. Xususan, chizmachilik fanini zamonaviy texnologiyalar bilan uyg'unlashtirish muhim ahamiyat kasb etmoqda. Grafik dasturlar chizmachilik fanida muhandislik, arxitektura va dizayn sohalarida zamonaviy talablarga javob beradigan kadrlarni tayyorlashda muhim vosita bo'lib xizmat qilmoqda. Bu jarayon innovatsion yondashuvlarni joriy etish orqali mamlakatning texnologik rivojlanishiga katta hissa qo'shadi. Shu boisdan, grafik dasturlarni o'quv jarayoniga kengroq tatbiq etish va mutaxassislarni tayyorlashda ilg'or usullardan foydalanish zamon talabi hisoblanadi.

Prezident Shavkat Mirziyoyev rahbarligida olib borilayotgan islohotlar doirasida ta'lim tizimiga zamonaviy texnologiyalarni joriy etish ustuvor yo'nalishlardan biri hisoblanadi. Xususan, chizmachilik fanida grafik dasturlarni keng qo'llash quyidagi natijalarga olib keladi:

- Kasb-hunar ta'limida zamonaviy yondashuv – Texnikum va oliy ta'lim muassasalarida grafik dasturlar asosida chizmachilik o'qitilishi talabalar bilimini oshiradi.
- Ishlab chiqarish bilan integratsiya – Zavod va korxonalar muhandis va dizaynerlardan grafik dasturlarni bilishni talab qilmoqda, bu esa mehnat bozorida raqobatbardoshlikni oshiradi.
- O'quv dasturlarining yangilanishi – Dasturiy ta'minot yordamida o'quv jarayoni yanada samarali va qiziqarli bo'ladi.

**Grafik dasturlar va ularning chizmachilikdagi o'rni.** An'anaviy chizmachilik qog'oz va qalam asosida bajarilgan bo'lsa, bugungi kunda AutoCAD, SolidWorks,

<sup>1</sup> <https://yuz.uz/uz/news/ozbekiston-2030-strategiyasida-talim-tarbiya-masalalari>

CorelDRAW, Adobe Illustrator, SketchUp kabi grafik dasturlar bu jarayonni ancha tezlashtirdi va qulaylashtirdi. Ushbu dasturlar quyidagi imkoniyatlarni taqdim etadi:

1. Aniqlik va aniqlanganlik – Grafik dasturlar aniq o'lchovlar va nisbatlarni saqlab qolish imkonini beradi.
2. Vaqtni tejash – Chizmalarni qo'lda chizishga ketadigan vaqt sezilarli darajada kamayadi.
3. Tahrirlash imkoniyati – Dasturiy ta'minot chizmalarni oson tahrirlash va xatolarni tezda tuzatish imkonini beradi.
4. 3D modellash – Uch o'lchamli obyektlarni yaratish orqali yanada tushunarli va realistik tasvirlar hosil qilish mumkin.
5. Elektron hujjatlashtirish – Chizmalarni raqamli shaklda saqlash va ulashish imkonini beradi.

### **Chizmachilik fanlarini grafik dasturlar yordamida o'qitish.**

Chizmachilik – muhandislik, arxitektura va dizayn sohalarida keng qo'llaniladigan muhim fanlardan biri hisoblanadi. Zamonaviy texnologiyalar rivojlanishi bilan an'anaviy qo'lda chizish usullari asta-sekin o'z o'rnini kompyuter grafik dasturlariga bo'shatmoqda. Grafik dasturlar chizmalar tuzish jarayonini tezlashtirib, aniqlikni oshiradi va loyihalarni raqamli formatda saqlash imkonini beradi. Ushbu maqolada chizmachilikda keng qo'llaniladigan grafik dasturlar haqida so'z yuritamiz.

**Grafik dasturlar haqida umumiy tushuncha.** Grafik dasturlar – bu turli shakl, loyiha va chizmalarni yaratish, tahrirlash va bosib chiqarish uchun mo'ljallangan kompyuter ilovalari. Ular 2D (ikki o'lchamli) va 3D (uch o'lchamli) turlarga bo'linadi.

**2D grafik dasturlar** – asosan chizmachilik, injenerlik chizmalari va loyiha hujjatlarini yaratish uchun ishlatiladi.

**3D grafik dasturlar** – ob'ektlarni uch o'lchovli shaklda modellash va vizualizatsiya qilish uchun mo'ljallangan.

### **Chizmachilikda keng qo'llaniladigan grafik dasturlar**



**AutoCAD** – Autodesk kompaniyasi tomonidan ishlab chiqilgan eng mashhur muhandislik va chizmachilik dasturlaridan biri. John Walker 1982-yilda AutoCAD dasturining yaratilishiga asos solgan bo'lib, u bugungi kunda eng mashhur grafik dasturlardan biri hisoblanadi. Uning ta'kidlashicha "AutoCAD faqatgina chizmachilik dasturi emas, balki injener va dizaynerlar uchun universal vositadir."<sup>2</sup>

AutoCAD quyidagi xususiyatlarga ega:  
- Loyihalash va tahlil qilish uchun qulay interfeys.

<sup>2</sup> [https://en.wikipedia.org/wiki/John\\_Walker\\_\(programmer\)](https://en.wikipedia.org/wiki/John_Walker_(programmer))

- Yuqori aniqlikdagi chizmalar yaratish imkoniyati.
- 2D va 3D modellash imkoniyatlari.
- Dasturiy kod (LISP, VBA) yordamida funksiyalarni avtomatlashtirish.



**SolidWorks** – asosan mashinasozlik va sanoat dizayni sohalarida qo‘llaniladigan 3D grafik dastur. U quyidagi afzalliklarga ega:

- Mahsulot modellarini uch o‘lchovli shaklda yaratish va tahlil qilish.

- Dinamik simulyatsiyalar o‘tkazish
- Detallar va yig‘ilmalarning aniq chizmalarini avtomatik ravishda generatsiya qilish.

**CorelDRAW** va **Adobe Illustrator** chizmachilikning grafik dizayn yo‘nalishida qo‘llaniladigan dasturlar bo‘lib, asosan bezak chizmalari, logotiplar va maketlar yaratish uchun ishlatiladi.



**SketchUp** – arxitektura va interyer dizaynida keng ishlatiladigan 3D dastur. Uning qulayligi shundaki, boshlang‘ich foydalanuvchilar ham tezda mukammal loyihalar yaratishi mumkin.

**CATIA** va **PTC Creo**. Ushbu dasturlar aerokosmik, avtomobilsozlik va murakkab muhandislik sohalarida keng qo‘llaniladi. Ular real jismoniy modellarni yaratish va mexanik tahlillar o‘tkazish imkonini beradi.



**Grafik dasturlarning chizmachilikdagi afzalliklari:**

- Aniqlik va samaradorlik: An‘anaviy qo‘lda chizish usulidan ancha aniqroq natijalarga erishish mumkin.
- Tezkor tahrirlash imkoniyati: Chizmalarni oson tahrirlash va yangilash mumkin.
- Raqamli saqlash va almashish: Loyihalarni PDF, DWG, DXF kabi formatlarda saqlash va hamkorlikda ishlash imkoniyati.
- Avtomatlashtirish va skriptlar yaratish: Murakkab hisob-kitoblar va jadvallarni avtomatlashtirish orqali ish unumdorligini oshirish.

**Grafik Dasturlar va Ularning Sohalar Bo‘yicha Ahamiyati**  
**Qurilish va Shaharsozlik**

Yangi O‘zbekiston taraqqiyot strategiyasi doirasida ko‘plab yangi infratuzilma loyihalari amalga oshirilmoqda. Ushbu jarayonda AutoCAD, Revit, 3ds Max kabi grafik dasturlar muhandislik va arxitektura sohasida keng qo‘llanilmoqda. Ushbu

dasturlar

yordamida:

- Shaharlarni rejalashtirishda 3D modellashtirish ishlatilmoqda;
- Qurilish jarayonlarini optimallashtirish va samaradorlikni oshirish imkoni yaratilmoqda;
- Virtual reallik (VR) texnologiyalari orqali loyihalar oldindan tahlil qilinmoqda.

### **Ta'lim**

va

### **Ilm-fan**

Ta'lim sohasida grafik dasturlar yangi metodikalarni shakllantirishga yordam bermoqda. Adobe Photoshop, Illustrator kabi vositalar dizayn va san'at fanlarini interaktiv o'qitishda qo'llanilmoqda. Shuningdek:

- Blender, Maya kabi dasturlar 3D modellashtirish va animatsiya kurslarida ishlatilmoqda;
- Virtual laboratoriyalar yaratish orqali muhandislik va tabiiy fanlar interaktiv o'qitilmoqda;
- Grafik dasturlar yordamida yangi darsliklar va multimedia resurslari ishlab chiqilmoqda.

### **Marketing**

va

### **Raqamli**

### **Brending**

Global bozorda O'zbekiston mahsulotlarini tanitish va targ'ib qilishda zamonaviy grafik dizayn dasturlari katta ahamiyatga ega. Adobe Creative Suite, CorelDRAW, Canva kabi vositalar yordamida:

- Mahsulot va xizmatlar uchun jozibali reklama materiallari yaratilmoqda;
- O'zbekistonning turizm salohiyatini targ'ib qilish uchun sifatli kontent tayyorlanmoqda;
- Raqamli marketing strategiyalari samaradorligini oshirishga yordam berilmoqda.

### **IT**

va

### **O'yin**

### **Industriyasi**

Dunyo bo'ylab IT sohasi jadal rivojlanmoqda va Yangi O'zbekiston ham bu yo'nalishda ilgari surilmoqda. Grafik dasturlar dasturchilar va ijodkorlar uchun yangi imkoniyatlar yaratmoqda. Xususan:

- Unity va Unreal Engine yordamida milliy o'yin va VR/AR loyihalar ishlab chiqilmoqda;
- Grafika va interaktiv dizayn orqali IT sohasida yangi ish o'rinlari yaratilmoqda;
- O'yin industriyasi eksport salohiyatiga ega bo'lgan yangi soha sifatida shakllanmoqda.

### **Madaniy**

### **Meros**

va

### **Raqamlashtirish**

O'zbekistonning boy madaniyati va san'ati raqamli shaklda saqlanib, jahon miqyosida targ'ib etilmoqda. Grafik dasturlar orqali:

- Milliy naqshlar, miniatyura san'ati va tarixiy obidalar raqamlashtirilmoqda;

- Virtual muzeylar va interaktiv eksponatlar yaratilmoqda;
- San'at asarlarini global auditoriyaga yetkazish imkoniyati oshmoqda.

Yangi O'zbekiston taraqqiyotida grafik dasturlar texnologik rivojlanishning ajralmas qismiga aylanmoqda. Ular qurilishdan tortib, ta'lim, IT, marketing va madaniyat sohalarigacha keng qo'llanilmoqda. Raqamli texnologiyalarning joriy etilishi O'zbekistonni zamonaviy va innovatsion davlat sifatida shakllantirishga xizmat qiladi. Shu bois, grafik dizayn va 3D texnologiyalarni rivojlantirish strategiyaning muhim yo'nalishlaridan biri bo'lib qolishi lozim. Raqamli texnologiyalar dunyo bo'ylab rivojlanib borar ekan, Yangi O'zbekiston taraqqiyot strategiyasida ham zamonaviy yechimlarni o'z ichiga olmoqda. Grafik dasturlar esa ushbu rivojlanishning muhim qismi hisoblanadi. Ular dizayn, qurilish, ta'lim, marketing va san'at sohalarida inqilobiy o'zgarishlar yaratmoqda.

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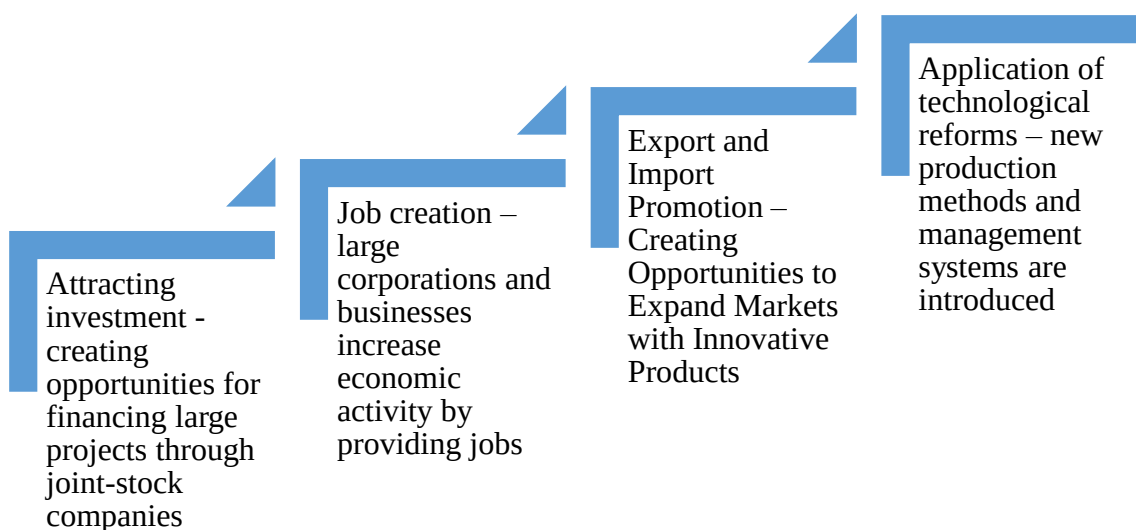
## The role of innovation and technology in economic development and strategic management of joint-stock companies

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In the modern era of globalization, the success of joint-stock companies is closely related to their ability to integrate innovation and technology into strategic management. In order to remain competitive, improve efficiency and conquer new markets, joint-stock companies need to constantly introduce innovative solutions and advanced technologies. In the modern global economy, innovation and technology have become one of the main factors determining the competitiveness of enterprises. Joint-stock companies also play an important role in economic development, and new technologies and innovative approaches to their strategic management provide opportunities to improve efficiency, reduce costs and strengthen market positions. The article analyzes the role of joint-stock companies in economic development, the importance of innovation in strategic management and the impact of technological innovations.

Joint-stock companies are a form of ownership whose main feature is centralized capital management and the participation of many investors (shareholders). Joint-stock companies influence the economic development of our country in the following ways:



Joint stock companies are one of the main components of the modern economy. They should be managed not only for financial gain, but also to achieve long-term strategic

goals. Strategic management is an important process of increasing a company's competitiveness, efficient allocation of resources, and ensuring sustainable development.

Strategic management is the process of setting long-term goals for an enterprise and developing ways to achieve them. Innovations have become a key element of strategic management in joint-stock companies, for example: digital transformation, cloud technologies – increase the efficiency of data storage and analysis, Big Data Analysis – Big Data Analytics - analyzes customer behavior and helps make strategic decisions, artificial intelligence and machine learning -automation of production processes and minimization of errors.

One of the main elements of strategic management is the ability to foresee the future of the company and define the mission. Any axiomatic society should be able to anticipate and define its long-term goals through a mission statement. A vision is a vision of the company's future, and a mission represents its main objectives. For example, "to become the world's leading manufacturer of electric vehicles" (in the case of Tesla).

One of the key elements of strategic management is SWOT analysis. SWOT analysis (strengths, weaknesses, opportunities and threats) plays an important role in strategy development. It helps to evaluate the internal and external factors of the company.

Studying competitive strategies is important in this process. Based on Michael Porter's five forces model (suppliers, customers, competitors, new entrants, substitute products), public companies can choose one of the following strategies, for example:

- Cost leadership (e.g. Walmart);
- Differentiation strategy (innovative products, such as Apple);
- Targeting strategy (focus on a specific market segment);

**The strategic management process is based on the principles of corporate governance and transparency, which is a factor of efficiency. In joint-stock companies, strategic decisions are mainly made by the board of directors. Good corporate governance requires transparency, reporting and openness of information (e.g. GAAP or IFRS standards).**

**At the same time, risk management is also of great importance. Any strategy must take risks into account. Diversification and insurance mechanisms are used to minimize factors such as credit risk, market risk and operational risks.**

**A clear strategy, effective corporate governance, innovation and risk control are necessary for economic development and successful management of joint-stock companies. Only long-term planning and flexibility will lead to sustainable**

### **development of the company.**

Innovations also play an important role in the economic development of joint-stock companies, which is confirmed by a number of factors. For example:

-diversification of products and services. In this process, innovations allow joint-stock companies to develop new products and services, improve existing ones and thereby expand their market share.

-technological innovations help optimize production and management processes, reduce costs and increase profitability.

-creation of new markets: Innovations allow joint-stock companies to develop new market segments and take leading positions in them.

-increased competitiveness: innovative joint-stock companies gain an advantage over competitors and quickly adapt to changing market conditions.

Technologies occupy the following places in the strategic management of joint-stock companies:

1. Data analysis and decision-making: Modern technologies allow joint-stock companies to quickly and efficiently analyze large volumes of data and make strategic decisions based on them.

2. Optimization of production and logistics processes: Digital technologies help automate production and logistics processes, increase efficiency and reduce costs.

3. Improving customer relationships: CRM systems and other technologies allow joint-stock companies to improve customer relationships, better understand their needs and provide customer-oriented services.

4. Increasing employee productivity: Modern technologies help increase employee productivity, develop their knowledge and skills, and optimize work processes.

To successfully implement innovation and technology in joint-stock companies, it is necessary to pay attention to the following factors:

- Joint-stock companies should create a corporate culture that supports innovative ideas and encourages employees to think creatively.
- Joint-stock companies should allocate sufficient funds for research and development, technology development and implementation of innovative projects.
- Joint-stock companies can cooperate with research institutes, start-ups and other organizations to more quickly implement innovative ideas and technologies.
- Joint-stock companies should improve the digital literacy of employees and train them to work with new technologies.

In conclusion, it can be said that innovations and technologies play a decisive role in economic development and strategic management of joint-stock companies. Their

successful implementation will allow joint-stock companies to maintain competitiveness, increase efficiency and conquer new markets. Strategic management of joint-stock companies is an important condition for the long-term success and sustainable development of the company. Joint-stock companies of Uzbekistan should strive to apply modern methods of strategic management in their activities, increase competitiveness and protect the interests of shareholders. Also, the widespread use of digital technologies, the introduction of modern management methods, and the attraction of highly qualified personnel are important factors in increasing the competitiveness of companies and ensuring their sustainable development.

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## **Qadimgi Xitoy va Hind tamaddunlarida musiqa**

*Azimova Zarnigor Azamat qizi*

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**Annotatsiya:** Ushbu maqolada Qadimgi Xitoy va Hind tamaddunlaridagi musiqa madaniyati haqida batafsil ma'lumotlar berib o'tilgan, jumladan qadimgi Xitoy musiqasi, qadimgi hind musiqasi va ushbu xalqlarni musiqa asboblari, musiqa va diniy marosimlari hamda musiqa zamonaviy ta'siri haqida batafsil ma'lumotlar keltirib o'tilgan.

**Kalit so'zlar:** Qadimgi Xitoy musiqasi, Qadimgi Hind Musiqasi, guqin, erhu, pipa, dizi, Sitar, tabla, veena, Veda,

### **Kirish**

Qadimgi Xitoy va Hind tamaddunlari, o'zining boy madaniyati, san'ati va ilm-fanini rivojlantirgan mamlakatlardir. Musiqa bu tamaddunlarning ajralmas qismi bo'lib, u nafaqat estetik ifoda vositasi, balki diniy marosimlar, ijtimoiy hayot va falsafiy fikrlar bilan ham bog'liqdir. Ushbu maqolada qadimgi Xitoy va Hind musiqasining tarixi, asosiy xususiyatlari va madaniy ahamiyati tahlil qilinadi.

### **Qadimgi Xitoy Musiqasi**

Qadimgi Xitoy musiqasi miloddan avvalgi III ming yillikdan boshlab rivojlandi. Musiqa asosiy vositalaridan biri "guqin" (uzun simli musiqa asbobi) bo'lib, u nafaqat musiqa ijro etish uchun balki ruhiy tarbiya vositasi sifatida ham ko'rigan. Guqin musiqasining asosi Konfutsiy falsafasiga borib taqaladi, u musiqa orqali inson ruhini poklashni maqsad qilgan.

Xitoyda musiqa ikki turga bo'lingan: rasmiy (diniy) va xalq musiqasi. Rasmiy musiqalar davlat marosimlari va diniy tadbirlarda ijro etilgan bo'lsa, xalq musiqalari oddiy odamlarning hayotini aks ettirgan.

Xitoy an'anaviy musiqasi Xitoyda avlodlar uchun meros qilib qoldirilgan bo'lib qolgan turli xil musiqa janrlarini o'z ichiga oladi. Jumladan, bu atama [Qing sulolasi](#) davrida yoki undan oldin paydo bo'lgan musiqa janrlariga ishora qiladi deb taxmin qilinadi Tashqi ko'rinishiga ko'ra, janrlarni cholg'u ansambl, cholg'u

yakkaxon, teatr, shuochang, raqs musiqasi va qo'shiqlarga ajratishimiz mumkin. Hozirda u tadqiqot va ta'lim sohasida asosiy e'tibor qaratilayotgan tasnifga allaqachon aylangan, garchi ba'zi janrlar ijroning turli shakllarini o'z ichiga olsada ular bitta toifaga kirmaydi. Janrlarni madaniy mazmuni yoki maqsadiga ko'ra ushbu turlarga bo'lishimiz mumkin: savodli musiqa, xalq musiqasi, diniy musiqa va saroy musiqasiga ham ajratish mumkin.

### **Qadimgi Hind Musiqasi**

Hind musiqasi haqida gapirganda, "Veda" matnlariga murojaat qilish zarur. Veda matnlarida musiqa haqida ko'plab ma'lumotlar mavjud bo'lib, unda «Sama Veda»da qo'shiqlarni qanday ijro etish kerakligi to'g'risida ko'rsatmalar berilgan. Qadimgi Hindistonda musiqa din bilan chambarchas bog'langan edi: har bir diniy marosimning o'ziga xos qo'shiqlari mavjud edi.

Hind musiqasi klassik uslubda "Raga" (melodiyalar) va "Tala" (ritm) tizimlariga asoslangan. Raga - bu insonning hissiyotlarini ifodalovchi melodik tuzilmalar bo'lib, har bir raga ma'lum bir vaqtga yoki mavsumga mos keladi.

### **Musiqa Asboblari**

Xitoy va Hind tamaddunlarida foydalanilgan musiqa asboblari o'ziga xos xususiyatlarga ega:

- Xitoy: Guqin (uzun simli), erhu (ikki simli), pipa (to'rt simli), dizi (qayta chalinadigan qush shaklidagi fluta).
- Hind: Sitar (to'rt simli), tabla (kichik baraban), veena (bir nechta simlardan iborat).

Bu asboblarni nafaqat ovoz chiqarish uchun mo'ljallangan balki ular ham san'at asarlari sifatida qadrlangan.

### **Musiqa Va Diniy Marosimlar**

Musiqa ijtimoiy hayotdagi roli juda muhimdir. Qadimgi Xitoyda konfutschilik ta'limoti doirasida musiqa ijtimoiy ahamiyat kasb etdi; u davlat ishlarini tartibga solishda muhim vosita sifatida xizmat qildi.

Hindistonda esa musiqa diniy marosimlarda ajralmas qism sifatida mavjud edi. Har bir festival yoki diniy tadbirda maxsus qo'shiqlar ijro etilib, bu jarayon ishtirokchilarni birlashtiruvchi kuchga ega edi.

### **Zamonaviy Ta'siri**

Bugungi kunda qadimgi Xitoy va Hind musiqalari zamonaviy san'atkorlarga ilhom manbai bo'lmoqda. Ularning an'anaviy melodiylarini zamonaviy janrlarga moslashtirish orqali yangi asarlar yaratilmoqda.

Shuningdek, globalizatsiya davrida ushbu madaniyatlarni o'rganish imkoniyatlari oshdi: turli xil festivallarda an'anaviy xitoycha yoki hindcha musiqa performanslari keng tarqalgan.

### **Xulosa**

Qadimgi Xitoy va Hind tamaddunlaridagi musiqa madaniyati insoniyat tarixidagi muhim elementlardan biridir. U faqat san'at

### **Foydalanilgan adabiyotlar:**

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**BOSHLANG‘ICH SINIF O‘QUVCHILARINING JAMOADA ISHLASH  
KO‘NIKMALARINI RIVOJLANTIRISHNING PEDAGOGIK-PSIXOLOGIK  
XUSUSIYATLARI**

**Jumanova Shaxnoza Baxromjanovna**

*Namangan davlat universiteti tadqiqotchisi*

**Annotatsiya:** Ushbu maqolada boshlang‘ich sinf o‘quvchilarining jamoada ishlash ko‘nikmalarini rivojlantirish asosida tarkib topadigan pedagogik-psixologik xususiyatlar xususida fikr yuritiladi.

**Kalit so‘zlar:** o‘zini-o‘zi anglash va shaxsiy identifikatsiya, ichki motivatsiya va maqsadga yo‘naltirish, emotsional intellekt va his-tuyg‘ularni boshqarish, emotsiyalarni boshqarish va stressni nazorat qilish, ijtimoiy muloqot ko‘nikmalari va kommunikatsiya, konstruktiv va tanqidiy fikrlash.

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**Аннотация:** В данной статье рассматриваются педагогико-психологические особенности, лежащие в основе развития умений младших школьников работать в коллективе.

**Ключевые слова:** самосознание и личная идентичность, внутренняя мотивация и целенаправленность, эмоциональный интеллект и управление эмоциями, управление эмоциями и контроль стресса, навыки социального общения и общения, а также конструктивное и критическое мышление.

**Jumanova Shakhnoza Bakhromjanovna**

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**Annotation:** this article reflects on the pedagogical and psychological characteristics of Primary School students, which are composed on the basis of the development of skills for working in a team.

**Keywords:** self-awareness and personal identity, internal motivation and targeting, emotional intelligence and emotion management, emotion management and stress control, social communication skills and communion, constructive and critical thinking.

Here is the exact translation without any additions or modifications:

Teamwork is the process of implementing joint activities with one or more people to achieve a common goal. Teamwork in the educational process is the process of students

working together effectively, communicating, defining roles and leadership, sharing resources, and actively listening to each other.

Teamwork skills not only contribute to the student's personal development but also play an important role in improving the overall effectiveness of education. At the same time, these skills create a solid foundation for the team to achieve common goals through effective communication, trustworthy cooperation, and innovative solutions.

When developing teamwork skills in primary school students, we observe the formation of the following psychological characteristics in them:

*1. Self-awareness and personal identification.* The student must understand in which roles and tasks they feel effective, identify their strengths and weaknesses, and correctly comprehend their personal abilities and limitations. This process creates a strong foundation for self-assessment and self-improvement. Personal confidence, motivation, and discipline encourage active participation in team activities. This aspect allows for self-reassessment based on personal achievements and failures, creating opportunities for learning and growth.

Self-awareness and personal identification are the processes of children recognizing themselves. From a psychological perspective, this process is closely related to the child's acceptance of their abilities, emotions, and social roles. According to Piaget's theory, children around the ages of 7-8 transition to the concrete operational stage and begin to develop logical thinking. During this period, self-awareness, identifying personal traits, and finding one's place within a social group are of great importance. Strengthening personal identification increases the child's self-confidence, ensures self-worth, and serves as a foundation for preparing for complex social situations in the future.

*2. Intrinsic motivation and goal orientation.* Students' internal interests, aspirations, and goals are the main factors in active participation in teamwork. Intrinsic motivation supports both personal development and effective collaboration within the group. To achieve goals, students must control their emotions, actions, and time. This skill increases personal responsibility and ensures that the student's role in the team is clearly and effectively fulfilled.

Intrinsic motivation and goal orientation are based on the child's internal desires, interests, and ability to motivate themselves. According to Ryan's self-determination theory, human motivation depends on three basic needs: autonomy, competence, and relatedness. For primary school students, intrinsic motivation is further strengthened by recognizing their achievements, accomplishing small goals, and establishing

positive relationships with others. The desire to achieve their goals allows them to actively participate in team activities, test themselves, and evaluate their successes.

*3. Emotional intelligence and emotion management.* Understanding and adapting to the emotions of group members plays an important role in mutual relationships. This ability strengthens not only emotional connections but also trust and harmony within the group. Students who can quickly and accurately understand the emotions of those around them and respond appropriately maintain emotional stability in complex situations.

Emotional intelligence and emotion management are the child's ability to understand and manage their own and others' emotions and express them appropriately. Emotional intelligence helps not only in controlling personal feelings but also in understanding the moods of other team members. This ability, in line with Vygotsky's social development theory, is formed through communication and interactions. Exercises in expressing and managing emotions, role-playing games, and small group activities in the classroom help children develop emotional intelligence. Through this, they achieve mutual empathy, patience, and social harmony.

*4. Emotion regulation and stress management.* Constructively managing stress and pressure that arise during teamwork and controlling one's emotions significantly impacts students' successful performance. Adapting to various emotional states, transforming negative emotions into positive energy, and maintaining calm in critical situations are also integral parts of emotional intelligence.

Emotion regulation and stress management represent the child's ability to increase resilience to stress and constructively control negative emotions. Because young children are still in the process of mastering emotional regulation, they may often react excessively emotionally in uncomfortable situations. Therefore, from a psychological approach, it is important to teach children strategies to reduce stress, identify their emotions, and manage them correctly. For example, through breathing exercises, short meditations, and pedagogical approaches, they develop the ability to change their attitude toward stress and calm themselves in difficult situations.

*5. Social communication skills.* The ability to express one's thoughts clearly, understandably, and logically reduces potential misunderstandings within the group. Listening attentively to the opinions and considerations of group members and taking their perspectives into account are also key factors in effective communication.

Social communication skills are aimed at developing the child's language and social interactions. For children, clearly expressing their thoughts, listening to others, and establishing mutual communication are important factors determining their success in

the teamwork process. From a psychological perspective, this aspect is one of the fundamental components of personal development, strengthening trust, cooperation, and social connections among children. Through interactive games, group lessons, and free communication environments organized by teachers, children's communicative abilities develop, and they learn to successfully manage social relationships.

6. *Constructive and critical thinking.* Providing critical feedback during the exchange of ideas within the team encourages students to learn from their mistakes and work more effectively in the future. Open and free communication among students with different opinions and perspectives fosters a positive interactive environment.

Constructive and critical thinking represent the child's ability to solve future problems, develop new ideas, and analyze information. Critical thinking, self-assessment, and logical analysis of environmental situations greatly influence the child's cognitive development. During this process, children learn not only to consider their own opinions but also to take others' perspectives into account. Through constructive thinking, teachers instruct them to analyze problems, ask critical questions, and plan future actions based on results. As a result, the child's thinking ability develops, and they actively participate in effective communication and creative problem-solving within the team.

These aspects complement each other and serve to maximize the psychological and social potential of primary school students. Through self-awareness, the student strengthens self-confidence; intrinsic motivation drives them to strive toward their goals; and emotional intelligence and emotion management ensure self-control in communication and collaboration processes. Additionally, the ability to manage stress and emotions, as well as effective social communication and constructive thinking, create a foundation for the child's success in team activities. Thus, psychologically, these factors play an important role in the child's overall personality, social relationships, and cognitive development, serving as key elements in forming independent thinking, creative approaches, and teamwork skills in the future.

Organizing the process of developing teamwork skills in primary school students based on educational principles defines the pedagogical aspect of this process. Educational principles are the initial rules reflecting the general laws of the educational process that must be managed by the teacher. Educational principles are the basic rules that define the main requirements for the content and methods of the educational process and its organization.

Below, based on educational principles, we will examine the directions for developing teamwork skills in primary school students:

1. The principle of humanizing education. The concept of humanizing education focuses not only on the student as an object receiving academic knowledge but also on their personal, social, and moral development. For primary school students, teamwork activities emphasize forming human values such as mutual respect, empathy, listening, and support. When planning team tasks, the teacher selects tasks that encourage mutual cooperation, taking into account each student's needs, abilities, and emotions.
2. The principle of harmony with nature. Based on the principle of harmony between students and nature, team games and project work are organized in open-air or garden environments. Through these activities, students not only learn to study and appreciate the environment but also master working together and using resources wisely. Team tasks organized in natural settings, such as studying nature, ecological projects, or participating in joint gardening, strengthen teamwork and communication among students.
3. The principle of systematic and consistent learning. The lesson process is planned based on a systematic approach, meaning teamwork skills are formed step by step and developed through increasingly complex tasks. The order of completing team tasks, defining roles within the group, and sharing responsibilities allow students to systematically master teamwork. In each lesson, the place of teamwork is defined, clear tasks are given to students, and their knowledge and skills are developed consistently.
4. *The principle of cultural alignment.* During lessons, tasks that include national and universal cultural values allow students to learn about mutual cultural connections. In group work, each student's cultural heritage, traditions, and uniqueness are considered, thereby strengthening mutual respect and harmony among students. National holidays, cultural events, or team projects related to art help develop students' teamwork skills and cultural awareness.
5. *The principle of scientific approach.* Teamwork methods are selected through a scientifically based approach. In this process, students are given tasks based on experiments, research, and practical work, developing their analytical and critical thinking skills. In team activities, the teacher uses scientifically based materials and methodological approaches to deliver knowledge systematically and evidence-based. Team tasks organized based on scientific projects and experiments strengthen students' collaboration, problem identification, and problem-solving skills.
6. *The principle of integrating education and upbringing.* Education and upbringing are considered complementary processes. In forming teamwork skills, not only intellectual but also ethical, cultural, and social aspects are taken into account. By involving students in team activities, educational values such as mutual trust,

responsibility, honesty, and diligence are formed. Teamwork activities are integrated into the lesson process, ensuring students' educational development and preparing them for future social life.

The educational process organized based on the above principles plays an important role in developing teamwork skills in primary school students. Each principle is aimed at enhancing students' personal, cultural, scientific, and educational potential, serving to form a culture of working together, solving problems, and mutual assistance. In this way, students not only acquire academic knowledge but also develop as active, conscious, and morally responsible individuals in society.

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## **PEDAGOGICAL ASSISTANCE FOR CHILDREN RECEIVING PALLIATIVE CARE**

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**Annotation:** Pedagogical Assistance for Children Receiving Palliative Care Palliative care for children aims to provide relief from the symptoms and suffering associated with life-limiting illnesses, focusing on enhancing the quality of life for both the child and their family. In this context, pedagogical assistance plays a crucial role in addressing the educational and developmental needs of children who are undergoing palliative care. This article explores the significance of pedagogical support for children in palliative care, emphasizing the importance of creating a nurturing and supportive educational environment. It highlights the necessity of adapting educational strategies to accommodate the physical, emotional, and cognitive challenges that children may face due to their illness. Effective pedagogical approaches include personalized learning plans, emotional support, and the incorporation of play therapy, which helps children cope with their condition while continuing to develop their skills. Additionally, the article discusses the role of educators, healthcare professionals, and families in collaborating to ensure that children receiving palliative care experience a holistic approach to their education and well-being. It underscores the importance of flexibility, compassion, and understanding in providing pedagogical assistance to children in these challenging circumstances. Ultimately, this support enables children to maintain a sense of normalcy and continue their educational journey, even in the face of serious health challenges.

**Keywords:** Palliative care, pedagogical assistance, children, educational support, developmental needs, personalized learning, emotional support, play therapy, life-limiting illness, quality of life, educators, healthcare professionals, family collaboration, holistic approach, cognitive challenges, adaptive education, special needs education, terminal illness, therapeutic education, child development, coping strategies, individualized teaching, educational adaptation, family-centered care, compassionate teaching, social-emotional development, illness-related educational challenges, multidisciplinary collaboration.

### **Introduction.**

Pedagogical Assistance for Children Receiving Palliative. Palliative care, traditionally associated with end-of-life support, extends its compassionate reach to children with life-limiting or terminal illnesses. This specialized care aims not only to alleviate physical pain and discomfort but also to address the emotional, psychological, and social needs of the child and their family. Children receiving palliative care face unique challenges that affect their overall well-being, including developmental delays, cognitive limitations, and emotional distress. As these children navigate the complexities of their health conditions, it is essential to provide them with appropriate pedagogical assistance to support their education, emotional growth, and quality of life. Pedagogical assistance for children in palliative care goes beyond conventional teaching practices. It involves the adaptation of educational methods to fit the individual needs of children who may have fluctuating health conditions and different levels of cognitive, emotional, and physical abilities. The primary objective is to ensure that these children continue to receive meaningful educational experiences while also managing the discomforts associated with their condition. The importance of personalized learning plans, which consider the child's medical condition, emotional state, and developmental level, cannot be overstated. These plans often include flexible teaching approaches, such as one-on-one support, play therapy, art and music therapies, and methods that help children express their feelings and cope with stress. Such pedagogical practices help children to maintain a sense of normalcy and accomplishment, which is critical for their emotional and cognitive development, even during periods of illness. In addition to these individualized strategies, the role of educators and healthcare professionals is critical in providing a supportive, compassionate environment for children in palliative care. Collaboration between teachers, doctors, nurses, and families is vital to creating a holistic support system that enables children to continue their educational journey with dignity and hope, despite their challenging circumstances. This article explores the pedagogical strategies, challenges, and collaborative efforts needed to ensure that children receiving palliative care are provided with the support they need to thrive educationally and emotionally, helping them navigate their illness with resilience and dignity.

### **Main Body.**

Pedagogical Assistance for Children Receiving Palliative Care. Children receiving palliative care face significant challenges that impact their educational and developmental needs. Palliative care, which focuses on alleviating symptoms and improving quality of life rather than curative treatment, requires a unique approach to

education. The goal is to provide pedagogical assistance that addresses both the educational needs and the emotional, physical, and psychological well-being of the child. This section explores the key aspects of providing pedagogical support to children in palliative care, focusing on the strategies, challenges, and importance of a holistic approach.

1. **Personalized Learning Plans for Children in Palliative Care.** One of the most crucial components of pedagogical assistance for children in palliative care is the development of personalized learning plans. These plans are tailored to each child's specific needs, taking into account their health condition, cognitive abilities, emotional state, and level of physical mobility. Given that many children undergoing palliative care may experience fluctuations in their physical and mental health, these learning plans must be flexible and adaptable. For example, a child undergoing treatment for a life-limiting illness might not be able to participate in traditional classroom activities or follow the typical curriculum. Instead, teachers and caregivers can design individualized lessons that focus on the child's current abilities, interests, and developmental goals. Activities such as reading, storytelling, art, and music can be incorporated to engage children emotionally while fostering their cognitive and sensory development. These tailored learning experiences not only help children retain a sense of normalcy but also contribute to their emotional well-being by providing a sense of accomplishment and purpose despite their illness.

2. **Emotional Support and Psychological Well-being.** Emotional support is an integral part of pedagogical assistance for children receiving palliative care. The impact of a life-limiting illness on a child's mental health can be profound, with feelings of fear, anxiety, sadness, and isolation. Addressing these emotional needs is crucial for maintaining the child's psychological well-being. One effective method of providing emotional support is through therapeutic practices such as play therapy, art therapy, and music therapy. These interventions allow children to express their feelings in a safe, non-threatening environment, which can be particularly important when they are unable to verbalize their emotions. Additionally, play therapy offers children an opportunity to engage in activities that promote social interaction, creativity, and relaxation, all of which are essential for emotional growth. Incorporating these therapeutic approaches into the educational process helps children manage the psychological stresses associated with their illness. Pedagogical strategies that integrate emotional support foster resilience, providing children with the tools they need to cope with their changing health status.

3. **Collaboration Between Educators, Healthcare Professionals, and Families.** A collaborative approach is essential when providing pedagogical assistance to children receiving palliative care. Teachers, healthcare professionals, and family members must work together to create a cohesive plan that addresses all aspects of the child's well-being. Healthcare professionals, including doctors and nurses, play an important role in determining the child's medical needs and how those needs should be considered in the educational process. For example, healthcare providers can advise on the child's physical limitations, pain management, and energy levels, which can inform the pacing and structure of educational activities. Similarly, nurses and therapists can help to identify the child's emotional and psychological needs and recommend interventions such as relaxation techniques or counseling. On the educational side, teachers must adjust their approach based on the guidance provided by healthcare professionals. They must maintain open lines of communication with both the family and healthcare team to ensure that the child receives the most appropriate support at all times. Family members also play a central role in this collaborative process, as they can provide valuable insight into the child's preferences, emotional state, and interests. This family-centered approach ensures that the child's learning experience is holistic and tailored to their individual circumstances.

4. **The Role of Play and Creative Expression in Learning.** For children in palliative care, traditional education methods may not be feasible due to their health conditions. In these cases, creative and play-based learning methods provide an effective way to engage children and stimulate their development. Play, in particular, is a vital aspect of a child's learning and emotional expression, even in the context of illness. Through play, children can explore their world, express their emotions, and develop critical social and cognitive skills. Educators working with children in palliative care often incorporate play-based strategies, including role-playing, interactive games, and sensory activities. These methods offer children an opportunity to learn in a non-threatening, enjoyable manner that respects their physical and emotional limitations. Art and music therapies are also highly beneficial in this context. Engaging in creative activities allows children to express complex emotions and explore their feelings in a safe and supportive environment. These therapeutic activities help foster emotional healing and provide an outlet for children to cope with their illness.

5. **The Importance of Flexibility and Compassion in Pedagogical Assistance.** Providing effective pedagogical assistance for children in palliative care requires not only creativity and adaptability but also a deep sense of compassion and empathy. Educators must approach each child with understanding, recognizing that their educational needs

may change from day to day based on their physical and emotional state. Flexibility is key, as the child's condition may fluctuate, and what works one day may not be suitable the next. It is important for educators to maintain a positive, encouraging attitude, even in difficult situations. By providing a compassionate and patient environment, educators help children feel safe and valued. This approach is vital for maintaining the child's dignity and emotional stability, ensuring they feel supported throughout their educational journey, no matter how short or long it may be.

**Conclusion:**

Providing pedagogical assistance for children receiving palliative care is an essential aspect of enhancing their quality of life and supporting their development during a challenging time. The unique needs of these children require a tailored approach to education that not only focuses on their cognitive growth but also prioritizes emotional and psychological well-being. Through personalized learning plans, therapeutic support, and collaboration between educators, healthcare professionals, and families, children in palliative care can continue to engage in meaningful learning experiences. Play therapy, art, music, and other creative methods of expression play a vital role in supporting these children emotionally, helping them cope with their illness, and providing a sense of normalcy. Moreover, flexibility, compassion, and understanding are key components for educators to create a nurturing environment where children feel safe, valued, and empowered. Ultimately, a holistic approach to pedagogical assistance ensures that children in palliative care are given the tools to maintain a sense of purpose and dignity, allowing them to continue growing, learning, and developing in the face of serious health challenges. By addressing both their educational and emotional needs, we help these children navigate their illness with resilience, providing them with the support they need to thrive, even in difficult circumstances.

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**ELEKTRON RESURSLARDAN FOYDALANISH ASOSIDA  
BOSHLANG'ICH TA'LIMNING DIDAKTIK TA'MINOTINI  
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**Anatatsiya.** Ushbu maqolada boshlang'ich ta'limda elektron resurslardan foydalanish orqali didaktik ta'minotni takomillashtirish masalasi ko'rib chiqilgan. Elektron resurslarning ta'lim jarayonidagi o'rni va ahamiyati, uning ta'lim sifatini oshirishga qanday ta'sir qilishi, shuningdek, o'qituvchilarning malakasini oshirish va ta'lim jarayonini innovatsion metodlar bilan boyitish yo'llari tahlil qilingan. Maqolada shuningdek, elektron resurslardan foydalanishda duch kelinadigan muammolar va ularni hal etish uchun zaruriy tavsiyalar ham keltirilgan.

**Kalit so'zlar.** Boshlang'ich ta'lim, elektron resurslar, didaktik ta'minot, interaktiv dasturlar, o'quvchilarning faol ishtiroki, ta'lim innovatsiyalari, pedagogik texnologiyalar, ta'lim sifati, o'qituvchilarning malakasi.

**Kirish.** Zamonaviy ta'lim tizimining asosiy vazifalaridan biri — o'quvchilarga sifatli bilim berishdir. Bu vazifani amalga oshirishda ta'limning zamonaviy metodlari va innovatsion texnologiyalardan foydalanish katta ahamiyatga ega. Xususan, boshlang'ich ta'limda elektron resurslardan samarali foydalanish, ta'lim jarayonini yanada samarali va qiziqarli qilish imkoniyatini yaratadi. Elektron resurslar, multimedia, interaktiv dasturlar va boshqa raqamli vositalar o'quvchilarning o'rganish jarayonini qiziqarli va samarali qilishda muhim rol o'ynaydi. Maqolada boshlang'ich ta'limda elektron resurslarning didaktik ta'minotni takomillashtirishdagi o'rni va ahamiyati tahlil qilinadi.

**Adabiyotlar tahlili.** Elektron resurslar va raqamli texnologiyalarning ta'limdagi ahamiyatiga oid bir nechta tadqiqotlar mavjud.

Masalan, Shuxratova (2020) o'zining tadqiqotida elektron ta'lim resurslarining boshlang'ich ta'limda samarali qo'llanilishi uchun zarur metodik yondashuvlarni ko'rsatgan. Tadqiqotda, elektron resurslar yordamida o'quvchilarning o'rganish faoliyatini faollashtirish va mustahkamlash mumkinligi ta'kidlangan.

Bundan tashqari, Abdullaeva (2019) elektron resurslar orqali ta'lim jarayonini individualizatsiya qilish, ya'ni har bir o'quvchining o'ziga xos ehtiyojlariga moslashtirilgan o'quv materiallarini taqdim etish orqali ta'lim sifatini oshirishga e'tibor qaratgan. Shuningdek, boshqa tadqiqotchilar (Xodjayev, 2021; Karimov, 2022) elektron resurslarning o'quvchilarning kognitiv ko'nikmalarini rivojlantirishdagi ahamiyatini ko'rsatishgan.

Metod. Tadqiqot usuli sifatida analitik va tavsifiy metodlardan foydalanildi. Ta'lim tizimida elektron resurslar va raqamli texnologiyalarning o'rni va ta'sirini o'rganish uchun mavjud ilmiy adabiyotlar tahlil qilindi. Shuningdek, boshlang'ich ta'limdagi mavjud amaliyotlar va tajribalar asosida elektron resurslardan foydalanishning samaradorligi baholandi davomida o'qituvchilar va o'quvchilarning elektron resurslar bilan ishlashdagi yutuqlari va muammolari keltirilib, mumkin bo'lgan echimlar taklif qilindi.

**Kirish.** Zamonaviy ta'lim tizimi yangilanishni va innovatsion texnologiyalarni joriy qilishni talab etmoqda. Xususan, boshlang'ich ta'limda elektron resurslardan samarali foydalanish, ta'lim sifatini yaxshilash va o'quvchilarning o'zlashtirish darajasini oshirishda muhim ahamiyatga ega. Elektron didaktik materiallar va resurslar o'qituvchilarga ta'lim jarayonini diversifikatsiya qilish, o'quvchilarning qiziqish va motivatsiyasini oshirish, shuningdek, ta'limni individualizatsiya qilish imkonini beradi.

Elektron resurslarning o'rni va ahamiyati. Elektron resurslar – bu turli xil raqamli materiallar va vositalar bo'lib, ular ta'lim jarayonini boyitadi, o'qitish va o'rganish samaradorligini oshiradi. Bu resurslar quyidagilarga kiradi:

Multimedial taqdimotlar – matn, audio, video va animatsiyalardan iborat materiallar o'quvchilarning diqqatini jalb etish va mavzularni yaxshiroq tushunishlariga yordam beradi.

Interaktiv darsliklar va ilovalar – o'quvchilar bilan bevosita muloqot qilish imkonini beradi, o'rganilayotgan materialni mustahkamlashga xizmat qiladi.

Elektron kutubxonalar va ma'lumotlar bazalari – o'quvchilarga turli xil ma'lumotlarni tezda topish va ulardan samarali foydalanish imkonini beradi.

Ta'lim veb-saytlari va platformalar – o'quvchilar va o'qituvchilar uchun didaktik materiallarni taqdim etish va o'quv jarayonini masofadan turib boshqarish imkoniyatini yaratadi.

Boshlang'ich ta'limda elektron resurslardan foydalanishning afzalliklari

Didaktik jarayonning vizualizatsiyasi: Elektron resurslar orqali o'qituvchilar materiallarni yanada ravon va qiziqarli tarzda taqdim etishlari mumkin. Masalan,

interaktiv dasturlar va multimedia vositalari o'quvchilarga o'rganayotgan materialni ko'rish, tinglash va his qilish imkoniyatini beradi.

O'quvchilarni faol ishtirokchiga aylantirish: Elektron resurslar o'quvchilarga o'zini o'zi ta'lim olish imkoniyatini yaratadi. O'quvchilar maxsus dasturlar yordamida o'z bilimi va ko'nikmalarini mustahkamlashlari mumkin. Buning natijasida, ular o'z-o'zini baholash va boshqarish ko'nikmalarini rivojlantiradilar.

Ta'limning individualizatsiyasi: Elektron resurslar yordamida o'quvchilar o'zlarining individual ehtiyojlariga mos ravishda materialni o'rganishlari mumkin. Bu o'z navbatida o'quvchilarning muvaffaqiyatini oshiradi va har bir o'quvchining shaxsiy yondashuvini ta'minlaydi.

Ma'lumotlar tahlili va monitoringi: Elektron ta'lim platformalari o'qituvchilarga o'quvchilarning muvaffaqiyatlarini va o'rganish jarayonini kuzatish imkonini beradi. Bu esa ta'lim jarayonini doimiy ravishda takomillashtirish imkoniyatini yaratadi.

Boshlang'ich ta'limda elektron resurslardan foydalanishning muammolari

Biroq, elektron resurslardan foydalanish boshlang'ich ta'limda bir qator muammolarni keltirib chiqarishi mumkin. Ularning ayrimlari quyidagilardan iborat:

Texnik infratuzilmaning etishmasligi: Ba'zi hududlarda internetga ulanish imkoniyatlari cheklangan bo'lishi mumkin. Bu esa elektron resurslardan samarali foydalanishni cheklaydi.

O'qituvchilarning malakasizligi: Ba'zi o'qituvchilar raqamli texnologiyalardan to'liq foydalana olishmaydi. Bu o'qituvchilarga elektron resurslarni samarali qo'llashda to'siqlar yaratadi.

Elektron resurslarning sifati: Ko'plab elektron resurslar o'zining pedagogik jihatdan to'g'riligini va didaktik samaradorligini ta'minlashda kamchiliklarga ega bo'lishi mumkin.

Boshlang'ich ta'limning didaktik ta'minotini takomillashtirish bo'yicha tavsiyalar. Texnik infratuzilmani yaxshilash: Elektron resurslardan samarali foydalanish uchun internetga ulanish va texnik vositalar mavjudligini ta'minlash zarur. Hukumat va ta'lim muassasalari tomonidan zarur infratuzilma yaratilishi lozim.

O'qituvchilarning malakasini oshirish: O'qituvchilarni yangi raqamli vositalar va metodikalar bilan tanishtirish, ularning malakasini oshirish uchun doimiy ravishda treninglar va kurslar tashkil etilishi lozim. Elektron resurslarni sinovdan o'tkazish va sifatini tekshirish: Ta'lim resurslarining didaktik samaradorligini oshirish uchun ularni sinovdan o'tkazish va tahlil qilish, pedagogik maqsadlarga muvofiqligini tekshirish zarur.

Interaktiv va moslashtirilgan ta'lim dasturlarini yaratish: Har bir o'quvchining o'ziga xos xususiyatlariga mos keladigan interaktiv dasturlar ishlab chiqish, ta'limni shaxsiylashtirishni ta'minlash zarur.

Xulosa. Elektron resurslardan foydalanish boshlang'ich ta'limda didaktik ta'minotni takomillashtirishda muhim vosita hisoblanadi. Elektron ta'lim platformalari o'quvchilarga o'z o'rganish jarayonlarini samarali boshqarish imkonini berib, o'qituvchilarga esa ta'limni yanada individualizatsiya qilish va shaxsiylashtirish imkoniyatlarini yaratadi. Shuningdek, elektron resurslar orqali o'quvchilarning motivatsiyasini oshirish, o'rganish jarayonini qiziqarli qilish va ta'limning sifatini yaxshilash mumkin. Biroq, bu jarayonda texnik infratuzilmaning yetishmasligi, o'qituvchilarning malakasizligi kabi muammolar ham mavjud. Shu sababli, ta'lim tizimining raqamli infratuzilmasini yaxshilash, o'qituvchilarning malakasini oshirish va elektron resurslarni sifatli yaratish zarur. Elektron ta'lim resurslari faqatgina ta'lim jarayonini boyitibgina qolmay, balki ta'limdagi yutuqlarning oshishiga ham katta hissa qo'shadi.

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## **BOSHLANG`ICH TA`LIM JARAYONIDA INTERFAOL METODLARNING AHAMIYATI**

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**Annotatsiya:** Ushbu maqolada boshlang'ich sinf o'quvchilari bilan ishlashda zamonaviy texnologiyalar hamda metodlardan foydalanish haqida batafsil bayon etilgan.

**Kalit so'zlar:** O'qituvchi, o'quvchi, ta'lim, tizim, texnologiya, boshlang'ich, tarbiya

Yangi o'zbekistonda ijtimoiy ta'limni rivojlantirish bo'yicha qator islohotlar amalga oshirilmoqda. Ta'lim o'qituvchi va o'quvchilarning hamkorlikdagi faoliyati bo'lib, shu jarayonda shaxsning taraqqiyoti, uning ma'lumoti va tarbiyasi ham amalga oshadi. Darslarda o'qituvchi o'z bilimi, ko'nikma va malakalarini mashg'ulotlar vositasida o'quvchilarga yetkazadi, o'quvchilar esa uni o'zlashtirib borishi natijasida undan foydalanish qobiliyatiga ega bo'ladi. O'rganish jarayonida o'quvchilar o'zlashtirishning turli ko'rinishlaridan foydalanishadi, ya'ni o'zlashtirilayotgan ma'lumotlarni qabul qilish, qayta ishlash hamda amaliyotga tatbiq etishda o'ziga xos tafovutlarga tayanadi. Ta'lim jarayonida o'qituvchi va o'quvchilarning dars paytidagi hamkorligi, o'quvchilarning mustaqil ishlashi, sinfdan tashqari ishlar shaklida ta'lim va tarbiya masalalari hal etiladi. Ulug' donishmandlardan biri «... kelajak tashvishi bilan yashasang, farzandlaringga yaxshi bilim ber, o'qit», degan ekan. Yurtimizda ta'lim-tarbiya tizimida amalga oshirilayotgan islohotlar haqiqiy ma'noda bir-ikki yillik yoki qisqa davrda samaraga erishishga qaratilgan ish emas, balki chin ma'noda bir necha yuz yillarga tatiydigan o'zgarish bo'ldi, desak xato bo'lmaydi.

Ma'lumki, ta'limda ilg'or pedagogik va yangi axborotlar texnologiyalarini tatbiq etish o'quv mashg'ulotlarining samaradorligini oshiribgina qolmay, ilm-fan yutuqlarini amaliyotda qo'llash orqali mustaqil va mantiqiy fikrlaydigan, har tomonlama barkamol yuksak ma'naviyatli shaxsni tarbiyalashda muhim ahamiyat kasb etadi. Hozirgi kunda ta'lim jarayonida interfaol metodlar va axborot texnologiyalarini o'quv jarayonida qo'llashga bo'lgan qiziqish kundan-kunga ortib bormoqda. Bunday bo'lishining sabablaridan biri, shu vaqtgacha an'anaviy ta'limda o'quvchilar faqat tayyor bilimlarni egallashga o'rgatilgan bo'lsa, zamonaviy texnologiyalardan foydalanish esa ularni egallayotgan bilimlarini o'zlari qidirib topish, mustaqil

o'rganish va fikrlash, tahlil qilish, hatto yakuniy xulosalarni ham o'zlari keltirib chiqarishga o'rgatadi. O'qituvchi bu jarayonda shaxs rivojlanishi, shakllanishi, bilim olishi va tarbiyalanishiga sharoit yaratadi va shu bilan bir qatorda boshqaruvchilik, yo'naltiruvchilik funksiyasini bajaradi.

Bugungi kunda ta'limda «Aqliy hujum», «Fikrlar hujumi», «Tarmoqlar» metodi, «Sinkveyn», «BBB», «Beshinchisi ortiqcha», «6x6x6», «Bahs-munozara», «Rolli o'yin», FSMU, «Kichik guruhlarda ishlash», «Yumaloqlangan qor», «Zigzag», «Oxirgi so'zni men aytay» kabi zamonaviy texnologiyalar qo'llanmoqda. Dars mashg'ulotlarida o'yin-topshiriqlarni takrorlash yoki mustahkamlash darslarida foydalanilsa ijobiy natija beradi. O'yin-topshiriqning qaysi bir turini tanlash darsning turiga, sinf o'quvchilarining o'yin-topshiriqlarni bajarishga o'rgatilganlik darajasi, ularning bilim saviyasi, mustaqil ijodiy ishlash imkoniyatlari, o'rganilganlarni xotirada tez tiklay olishi, ijodkorlikning qay darajada shakllanganiga ham bog'liq bo'lishi kerak. Xususan, hozirgi kunda ta'lim jarayonida innovatsion texnologiyalar, pedagogik va axborot texnologiyalarini o'quv jaraynida qo'llashga bo'lgan qiziqish, e'tibor kuchaygan. Innovatsion texnologiyalar asosida mantiqiy fikrlash uzluksiz ta'lim tizimini rivojlantirishning eng muhim omillaridan hisoblanadi

Xulosa qilib aytganda zamonaviy pedagogik texnologiyalar ta'lim jarayonining unumdorligini oshiradi, o'quvchilarning mustaqil fikrlash jarayonini shakllantiradi, o'quvchilarda bilimga ishtiyoq va qiziqishni oshiradi, bilimlarni mustahkam o'zlashtirish, ulardan amaliyotda erkin foydalanish ko'nikma va malakalarini shakllantirib faolligini oshiradi. Shuning uchun ham bo'lajak boshlang'ich sinf o'qituvchilarini kelgusi faoliyatga tayyorlashda, pedagogik texnologiyalarni amaliyotga tatbiq etishga tayyorlash bugungi ta'limning oldiga qo'yilgan talablardan biridir

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## **THE ROLE OF THE DEPUTY DEAN IN DEVELOPING STUDENT LEADERSHIP IN HIGHER EDUCATION INSTITUTIONS**

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**Abstract.** This article analyzes the role of the deputy dean for youth affairs in developing student leadership in higher education institutions, and the impact of their educational and organizational activities. Effective approaches are also examined through examples of projects, trainings, and social activities aimed at developing leadership skills.

**Keywords:** leadership, students, deputy dean, higher education, upbringing, engagement

**Introduction.** Today, increasing student engagement in higher education institutions, involving them in social life, and developing leadership skills are among the most pressing issues. In this process, the role of the Deputy Dean for Youth Affairs is invaluable. They serve as the primary guide not only in the upbringing of students but also in developing their initiative, responsibility, and social awareness.

**Main body.** Through the work carried out by the Deputy Dean, students' leadership abilities are being developed by involving them in student unions, various clubs, social projects, and volunteer activities. In particular, the organized seminars and trainings, motivational meetings, and experience exchange programs strengthen students' ability to freely express their opinions, work in teams, and take on responsibilities. Students with developed leadership skills are usually distinguished by their social activity among classmates. They actively participate in various organizational processes within the institution and serve as a positive example for their peers. The main task of the Deputy Dean is to identify, encourage, and support such young people.

**Conclusion.** In shaping student leadership in higher education institutions, the deputy dean acts as a bridge. They establish effective communication between students and administration, as well as between students and society, ensuring the social, spiritual, and moral development of young people. Therefore, specialists working in this position

must possess modern leadership skills and have a deep command of communicative culture.

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## COVID-19 БИЛАН КАСАЛЛАНГАН ОНАЛАРДАН ТУҒИЛГАН ЧАҚАЛОҚЛАРДА ИНТЕФЕРОН ҲОЛАТИНИНГ ХУСУСИЯТЛАРИ

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**Долзарблиги:** COVID-19 тасдиқланган янги коронавирус инфекцияси билан касалланган оналардан туғилган чақалоқлар иммунитетини ўрганиш ҳозирда кам ўрганилган масала ҳисобланади. COVID-19 коронавирус инфекцияли оналардан туғилган янги туғилган чақалоқларнинг иммунитетини ўрганиш COVID-19 давом этаётган пандемия туфайли катта қизиқиш уйғотмоқда[1]. Чет эл адабиётларида, муаллифлар томонидан янги туғилган чақалоқларнинг COVID-19 янги коронавирус инфекциясига қарши иммунитет масаласига бағишланган бир неча ишлар мавжуд бўлиб бу муаммони янада чуқур ўрганиш ва таҳлил қилишни талаб қилади[2].

**Тадқиқот мақсади:** COVID-19 коронавирус инфекцияси билан касалланган оналардан туғилган чақалоқларнинг интерферон ҳолатини ўрганиш.

**Материаллар ва усуллар:** COVID-19 билан касалланган оналардан туғилган чақалоқларнинг интерферон хусусиятларини ўрганиш учун Бухоро вилоятидаги Когон "COVID госпитали" базасида 60 та янги туғилган чақалоқлар текширилди. Назорат гуруҳини 30 нафар соғлом оналардан туғилган чақалоқлар ташкил қилди. Барча ҳомиладор аёлларда SARS-CoV-2 учун ПЦР тести ижобий бўлган. Текшириш 2021 йилнинг июл-ноябр ойларида ўтказилди. Барча чақалоқлар ҳомиладорликнинг 38-42 ҳафталигида тўлиқ муддатда туғилган. Киндикдан олинган қонда ИНФ  $\alpha$ , ИНФ  $\gamma$  ва ИНФ  $\alpha$  антителоси миқдори аниқланди.

**Тадқиқот натижалари:**

Тадқиқот учун танланган янги туғилган чақалоқларнинг интерферон ҳолатини ўрганиш натижалари кузатув гуруҳидаги чақалоқларда ИНФ- $\alpha$  даражасининг соғлом гуруҳ курсаткичларига нисбатан 4 барабар статистик жиҳатдан сезиларли даражада пасайганлигини кўрсатди -  $33,32 \pm 0,91$  ПКГ/мл ( $p < 0,05$ )

ИФН $\alpha$  антителолари даражасини таҳлил қилиш, беморларда кўрсаткичларни  $156,54 \pm 15,8$  ПКГ/мл гача ишончли ўсишини кўрсатди ва бу назорат гуруҳидаги болаларда  $92,43 \pm 7,58$  ПКГ/мл ( $p < 0,05$ ) ни ташкил этди.

Таҳлил натижалари ҳомиладорлик пайтида коронавирус инфекциясига дучор бўлган оналардан туғилган чақалоқларда ИФН $\alpha$  антителолари синтезининг фаоллашувини кўрсатади.

Шу билан бирга, кузатув гуруҳдаги чақалоқларда ИФН $\gamma$  даражасининг соғлом гуруҳ кўрсаткичларига  $23,8 \pm 0,6$  ПКГ/мл нисбатан 2,9 баравар ошиши ( $p < 0,05$ ) кузатилди.

COVID-19 билан касалланган оналардан муддатида туғилган чақалоқларда ИФН $\gamma$  синтези 2,9 баравар, ИФН- $\alpha$  га қарши антителолар синтези 1,7 баравар фаоллашиши фонида ИФН- $\alpha$  синтезининг 4 баравар камайиши кузатилди.

Бинобарин, ҳаётнинг илк кунларида янги туғилган чақалоқларнинг интерферон ҳолатини ўрганиш натижасида олинган маълумотлар интерферонлар синтезидаги номутаносибликни кўрсатади.

**Хулоса:** Шундай қилиб, бизнинг илмий тадқиқотларимиз натижасида COVID-19 инфекцияси билан касалланган оналардан туғилган чақалоқларда интерферон синтези тизимидаги номутаносиблик пайдо бўлиши аниқланди.

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## KIYIM DIZAYNIDA 3D TEXNOLOGIYALARNING QO‘LLANILISHI VA RAQAMLI MODANING KELAJAGI: INNOVATSIYALAR, IMKONIYATLAR VA MUAMMOLAR

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### **Annotatsiya:**

Ushbu maqolada kiyim dizaynida 3D texnologiyalarning qo‘llanilishi va raqamli modaning rivojlanishi o‘rganiladi. 3D texnologiyalar dizaynerlarga tez va aniq modellar yaratish, ishlab chiqarish jarayonida resurslarni tejash hamda ekologik barqarorlikni ta‘minlash imkonini beradi. Shuningdek, raqamli moda virtual podiumlar, raqamli kiyimlar va onlayn ko‘rgazmalar orqali moda sanoatining kelajagini shakllantiradi. Maqolada ushbu texnologiyalar yordamida yuzaga kelayotgan yangi imkoniyatlar va ularning ijtimoiy, iqtisodiy hamda texnologik ta‘siri tahlil qilinadi.

**Kalit so‘zlar:** 3D texnologiyalar, raqamli moda, kiyim dizayni, virtual podium, innovatsiya, ekologik moda, raqamli kiyimlar, texnologik dizayn.

### **KIRISH**

Hozirgi kunda texnologiya deyarli barcha sohalarga o‘z ta‘sirini o‘tkazmoqda va bu jarayondan moda sanoati ham chetda qolmayapti. Dizayn va moda olamida innovatsion texnologiyalar, xususan, **3D texnologiyalar** va **raqamli moda** tushunchalari so‘nggi yillarda tezkorlik bilan rivojlanmoqda. 3D texnologiyalar dizaynerlarga an‘anaviy usullardan voz kechib, yanada samarali va ijodiy yondashuvlar orqali yangi mahsulotlar yaratish imkonini bermoqda. Bu texnologiya yordamida kiyim modellarini kompyuterda yaratish, ularni virtual muhitda sinovdan o‘tkazish va hatto 3D printerlar yordamida tayyor mahsulotga aylantirish mumkin bo‘lib qoldi.

**Raqamli moda** esa virtual kiyimlar yaratish va ularni ijtimoiy tarmoqlar yoki raqamli podiumlarda namoyish etish orqali yangi trendga aylanmoqda. Bugungi kunda ko‘plab brendlar va dizaynerlar o‘z kolleksiyalarini faqat virtual ko‘rinishda taqdim etmoqda. Bu, bir tomondan, atrof-muhitga yetkaziladigan zararlarni kamaytirsa, boshqa tomondan esa dizaynerlarga cheksiz imkoniyatlar yaratib bermoqda.

Masalan, **The Fabricant**, **Balenciaga** va **Gucci** kabi mashhur brendlar 3D texnologiyalardan keng foydalanib, o‘z loyihalarini virtual maydonga ko‘chirgan.

Ularning tajribasi nafaqat dizaynerlar uchun, balki butun moda sanoati uchun yangi imkoniyatlar eshigini ochdi. Shuningdek, **Metaverse** va boshqa virtual platformalarda kiyim dizaynining rivojlanishi raqamli modaning kelajagini belgilab bermoqda.

Shu bilan birga, 3D texnologiyalarning joriy etilishi dizaynerlar va ishlab chiqaruvchilar uchun yangi muammolarni ham keltirib chiqarmoqda. Masalan, texnologik vositalarga ehtiyoj ortishi, mualliflik huquqlari bilan bog'liq masalalar va raqamli kiyimlarning real iqtisodiyotga ta'siri kabi savollar hamon dolzarb bo'lib qolmoqda.

Ushbu maqolada kiyim dizaynida 3D texnologiyalarning qanday qo'llanilayotgani, raqamli modaning imkoniyatlari va yuzaga kelayotgan muammolar tahlil qilinadi. Shuningdek, texnologik dizaynning kelajagi va uning moda sanoatiga qanday o'zgarishlar olib kelishi haqida fikr yuritiladi.

### **METODOLOGIYA**

Ushbu maqolani yozishda **nazariy tahlil** va **taqqoslash usullari** qo'llanildi. Avvalo, kiyim dizaynida 3D texnologiyalar va raqamli modaning rivojlanishiga oid ilmiy maqolalar, modaga doir jurnallar, dizaynerlarning tajribalari va mashhur brendlarning amaliy ishlari o'rganildi. Shu bilan birga, raqamli moda sanoatida faoliyat yuritayotgan kompaniyalar va platformalar, jumladan **The Fabricant**, **Gucci Virtual 25**, va **Balenciaganing** virtual kolleksiyalari tahlil qilindi.

Tadqiqotda quyidagi asosiy bosqichlar amalga oshirildi:

1. **Ilmiy manbalarni o'rganish:** 3D texnologiyalarning kiyim dizaynidagi qo'llanilishi haqida ilmiy maqolalar, tahlillar va intervyular ko'rib chiqildi.
2. **Amaliy misollar tahlili:** Mashhur dizaynerlar va brendlarning 3D texnologiyalar asosida yaratgan ishlarini taqqoslab, ularning samaradorligi va dizayndagi ahamiyati tahlil qilindi.
3. **Onlayn platformalar va virtual moda ko'rgazmalari o'rganildi:** Raqamli podiumlar va Metaverse'dagi kiyim dizaynlari o'rganilib, raqamli modaning hozirgi holati va istiqbollari baholandi.

Shuningdek, ekologik barqarorlik, ishlab chiqarish jarayonidagi tejamkorlik va 3D texnologiyalarning dizaynerlar uchun qanday afzalliklar yaratishi ham tahlil qilindi.

### **NATIJALAR**

Tadqiqot natijalari shuni ko'rsatadiki, **3D texnologiyalar** va **raqamli moda** kiyim dizaynida sezilarli darajada o'zgarishlarga sabab bo'lmoqda. Ushbu texnologiyalar dizaynerlarga yaratgan modellarini qisqa vaqt ichida tayyorlash, ularni virtual muhitda namoyish etish va ishlab chiqarish jarayonlarida resurslarni tejash imkonini bermoqda.

**Asosiy natijalar quyidagilar:**

### 1. Tez va samarali dizayn yaratish:

3D texnologiyalar yordamida dizaynerlar kiyim modellarini kompyuterda tezkor yaratib, ularni ishlab chiqarishga tayyorlash jarayonini sezilarli darajada qisqartirishga erishmoqda. Masalan, ilgari bir necha hafta yoki oy talab qilgan dizaynlar endi bir necha kun ichida tayyorlanmoqda.

### 2. Ekologik barqarorlik:

Raqamli moda va 3D texnologiyalar atrof-muhitga yetkaziladigan zararlarni kamaytirishga xizmat qilmoqda. Raqamli kiyimlar yordamida materiallar va suv sarfi sezilarli darajada kamayib, ishlab chiqarish jarayonida chiqindilar miqdori qisqaradi.

### 3. Virtual podiumlar va Metaverse'dagi moda:

Dizaynerlar o'z kolleksiyalarini virtual muhitda namoyish etish orqali an'anaviy moda ko'rgazmalariga bog'liq bo'lmasdan, global miqyosda auditoriyaga chiqish imkoniyatiga ega bo'ldilar. **Balenciaga** va **Gucci** kabi brendlarning virtual ko'rgazmalari bunga yaqqol misol bo'la oladi.

### 4. Raqamli kiyimlar va ijtimoiy tarmoqlar:

Raqamli kiyimlar faqat ijtimoiy tarmoqlarda foydalanish uchun yaratilgan bo'lib, foydalanuvchilar o'z suratlariga bu kiyimlarni virtual tarzda qo'shib, o'z brendini targ'ib qilish imkoniyatiga ega bo'lmoqda. Bu yangi marketing usuli dizaynerlarga o'z ishlarini kengroq auditoriyaga taqdim etish imkonini beradi.

### 5. Muammolar va cheklovlar:

Raqamli moda va 3D texnologiyalar rivojlanishi bilan birga muammolar ham yuzaga kelmoqda. Texnologik vositalarga yuqori talab, dasturiy ta'minotning murakkabligi va raqamli mahsulotlar bilan bog'liq mualliflik huquqlari asosiy muammolardan biridir.

### XULOSA

Kiyim dizaynida **3D texnologiyalar** va **raqamli moda** sanoatni tubdan o'zgartirib, dizaynerlar uchun yangi imkoniyatlar eshigini ochdi. 3D texnologiyalar yordamida dizaynerlar kiyim modellarini tez va samarali yaratish, ishlab chiqarish xarajatlarini kamaytirish va ekologik barqarorlikni ta'minlash imkoniyatiga ega bo'ldilar. Raqamli moda esa virtual podiumlar, raqamli kiyimlar va ijtimoiy tarmoqlarda keng qo'llanilishi bilan moda sanoatining global rivojlanishiga katta ta'sir ko'rsatmoqda.

**Raqamli kiyimlar** va **Metaverse** platformalaridagi moda ko'rgazmalari yordamida dizaynerlar o'z ishlarini butun dunyo auditoriyasiga taqdim etish imkoniyatiga ega bo'lib, bu esa modaning geografik va iqtisodiy chegaralarini kengaytirmoqda. Shu bilan birga, bu texnologiyalarning joriy etilishi dizaynerlar va ishlab chiqaruvchilar uchun yangi muammolarni ham yuzaga chiqarmoqda, xususan texnologik vositalarga

ehtiyoj, mualliflik huquqlari va raqamli kiyimlarning iqtisodiy ta'siri kabi masalalar dolzarb bo'lib qolmoqda.

Kelajakda 3D texnologiyalar va raqamli moda yanada rivojlanib, nafaqat dizayn jarayonini, balki iste'molchilarning modaga bo'lgan yondashuvini ham o'zgartirishi kutilmoqda. Shu sababli, dizaynerlar bu texnologiyalarni o'zlashtirib, innovatsion yechimlar yaratishda faol bo'lishlari zarur.

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## Technology of organizing the training process of highly qualified handball players

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**Abstract.** This article discusses the key aspects of organizing an effective training process for high-level handball players. It covers modern training methods, periodization, physical and tactical preparation, as well as psychological aspects to enhance performance.

Keywords: handball, education, technology, train, process.

**Introduction.** Handball is a fast-paced, physically demanding sport that requires strength, speed, agility, and tactical intelligence. To achieve high performance, players must follow a well-structured training program that balances physical conditioning, technical skills, and mental preparation.

Periodization is essential for peak performance. The training year is divided into:

Long-term training and education of high-class athletes is a complex process, the quality of which is determined by a number of factors [8, 9]. The progress of domestic sports on the world stage is due to the improvement of scientific and methodological support for the preparation of the country's sports teams and its sports reserve, in connection with which a number of regulatory legal acts have been adopted in our republic: laws, decrees, government resolutions, which provide for: creating favorable conditions for conducting fundamental research in the field of physical culture and sports, development of recommendations for the wide application of innovative technologies, providing scientific and methodological assistance and methodological assistance to coaches of national teams [1, 2, 3]. The modern composition of national teams in sports games, in particular in handball, apparently should be made up of players representing a potentially high level of training, namely speed-power, since they have to play at high speeds for as long as possible at an accelerated pace, therefore the problem of specialized speed-power training of athletes acquires significant significance and paramount importance in sports training of a long-term educational and training process. At the same time, it should be noted that at present it is the issues of speed and strength training of athletes of various sports, including handball players, that are a flaw in the

methodological plan of the training process [4,5,6,7,8,9]. The relevance of the work. To date, scientifically-based recommendations related to the use of tools, methods, methodological techniques and approaches for the development and improvement of special strength qualities, as well as control, assessment of their level in the integral system of speed and strength training of athletes in the relationship of their improvement with the technical parameters of the skill of athletes have not been sufficiently developed [8,9]. A huge number of judgments and the lack of consensus among scientific experts on the construction of the training process, taking into account the monitoring of both the entire training process and competitive activity, as well as its individual aspects of preparedness, is one of the priorities that fully affect the effectiveness of managing the process of training highly qualified athletes in general, and highly qualified handball players, in particular, indicates the relevance of the problem being studied.

**Methods and results of research.** Based on the results of pedagogical observations, pedagogical testing, analysis of competitive activity and monitoring of training sessions, we have developed a methodology for the development and improvement of special strength qualities, and increasing the level of speed and strength training in general, of highly qualified handball players. In the course of working on the research topic, we developed a methodology for using special strength training tools, one of the tasks of which was the development of explosive strength and reactive ability of the extensor muscles of the arms and legs, realized in specific conditions of fatigue developing during the game of handball. The program is designed for 72 days, it uses several types of basic exercises such as: squats with a barbell, jumping out with a barbell, a deep jump, jumping on an elevation, lifting a barbell on the chest, a barbell press. As a result of the conducted pedagogical experiment, the methodology developed by us, designed for handball players with good preliminary training and having a solid foundation for the development of physical abilities, showed superiority over the traditional system of conducting handball training sessions among high-class athletes. The developed methodology contributed to an increase in the level of speed and strength training of highly qualified handball players in general by 14.6%, an improvement in special strength qualities by 19.7%, an improvement in the level of OFP and SFP by 12.8% and 14.6%, respectively. Analyzing the results obtained during the pedagogical experiment, it can be noted that statistically significant differences were obtained

between the experimental and control groups ( $n=28$ ). The analysis of the results indicates an improvement in the results at the level of significance ( $p<0.05$ ) in the standards: running for 30 m; triple jump from a place; throwing a stuffed ball weighing 1 kg (right hand); throwing a stuffed ball weighing 1 kg (left hand); throwing a stuffed ball weighing 1 kg with two hands from behind the head; throwing a stuffed ball weighing 1 kg with two hands behind the head; tracing chips 30 meters right hand; tracing chips 30 meters with the left hand; throwing a handball ball at a distance. The developed method of using the means of special strength training with the purposeful development of explosive force and reactivity of the extensor muscles of the arms and legs, is based on the principle of gradually increasing specificity.

**Conclusion:** An effective training program for elite handball players requires a balanced approach, combining physical, technical, tactical, and psychological elements. Proper periodization and recovery are crucial for long-term success.

The development of a methodology for the use of special strength training tools with the purposeful development of explosive strength and the reactive ability of the extensor muscles of the arms and legs, actively complements the program for the selection of special strength training tools for highly qualified handball players, which significantly improves the overall level of speed and strength training of highly qualified handball players, which in turn allows you to widely vary the individual arsenal of technical and tactical actions of an athlete and thus, it will increase the effectiveness of competitive activities. The results obtained confirm the effectiveness of the developed methodology and will contribute to increasing the reliability and effectiveness of the participation of highly qualified handball players in responsible competitions by improving the development of explosive power and the reactive ability of the extensor muscles of the upper and lower extremities.

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**MAQSUD SHAIKHZODA'S LITERARY LEGACY****Tashkent State transport University****Aktamova Aziza Utkir kizi**

**Annotation:** about the life and work of Maqsud Shaykhzoda, about his entry into Uzbekistan and acquaintance with the famous writers here, about his creations during the war years

**Keywords:** in poetic creativity, creativity, courage, fairness, thoughtful thinking, popularism, literary critic

Maqsud Shaykhzoda was born in 1908 in Oqtosh, Azerbaijan, studied at the higher Pedagogical Institute in Baku, and the main part of his life devoted to creativity and literature was recorded in the works of many of our writers about the artist who spent in the Uzbek land – Tashkent. And we look at the youth of the Maqsud Shaykhzadeh as mentioned above.

Maqsud was the eldest child of her parents. His family had four more children after him. These are Maqsud, Safura, Fuod, Nozim and Saida. Father Masim the father was a man who was extremely interested in literature and poetry, and was a doctor by profession. Shaykhzoda's interest in literature also passed through his father. The future poet Maqsud Shaykhzoda lived under the attractive tone and magic of the Royal works, enjoying literary discussions. He began his career at the age of 12. He received his first lesson at the Rushdia school in Aqtaş. At school, he reads his poems and gets the attention of his teachers and visitors who come. Even with his poems printed in newspapers, the school principal advises him to call his parents and send them to Baku for Maqsud's more extensive education. Later, he entered the Pedagogical Institute in Baku. Here he is influenced by a wider literary environment, learning from the intellectuals of his time. Having received a superficial education at the high school, he became a teacher in the city of Darband, regularly interacting with intellectual people and realizing the ugliness of Soviet ideology. Fights him.

In 1927, Maqsud Shaykhzoda and his friends were imprisoned for the counter-revolutionary movement. According to the court decision, he could serve his term of exile in any city other than Moscow, Tbilisi and Baku. Maqsud, who has been released from his 9-month imprisonment in Makhachkala, chooses Tashkent on the wishes of his father. Because his father had made Noble Azerbaijani acquaintances, such as Pasha

Ganiyev and Sobir Sharipov, who lived in Tashkent during his studies in Moscow, and his father says that his son will contact them if he needs any help.

Maqsud Shaykhzoda arrives in Tashkent in February 1928. At first, the Azerbaijani lived in the House of his acquaintances, and later in a rented apartment in the House of the poet Dadakishiy. Having mastered the Uzbek language well within a year, he begins to teach in Uzbek schools. In the meantime, he also enters the Faculty of Oriental Studies of the Central Asian State University, and his activities are greatly expanded. He finds himself a number of friends, like-minded people. Ghafur Ghulam, Oybek, Abdullah Qadiri, Abdullah Qahhor, who will be among the great writers in the future, will get acquainted with young people. For a while he works for the newspapers "Red Uzbekistan", "eastern truth" and "young Lenin".

He then continued his postgraduate studies, working as a research fellow at the Institute of language and literature. In 1932, "The Poet's" worthy watchman", ten poems", in 1933 "the third book", "My relatives", in 1935 "Republic", in 1937 "New davron", twelve", in 1938 "holiday songs", in 1948 "poems of the Fatherland". Since 1938, he begins teaching at the Tashkent State Pedagogical University named after Nizami.

Despite the fact that in the years of post-war construction, repression suffered, a dedicated poet to his homeland wrote a wide column about triumphal Labor, the struggle for peace, creating such poetic collections as "notebook of fifteen years", "my applause", "the strings of time", "Shu'la", "the Lord of a quarter of a century".

Maqsud shaykhzoda, Saeed Ahmad, Shukrullo, Mirzakalon Ismaili, Shurh, Mirkarim Osim and several other intellectuals were arrested in 1952 on charges of "anti-Soviet nationalist activities" and sentenced to 25 years in prison.

Even pre-trial investigative processes before the arrest were not inferior in number to the early repression periods of 1937-1938. Day and night interrogations, confrontations with false witnesses, insults cannot bend his will. It can also be said that when we get to know closely the archival documents that reflect the life of that time, from many of our adobs, your passion goes back. But with the exception of Shaykhzoda, because without infecting himself or others with gard, "chalchasavod" gives a clear answer to the absurd questions of the investigators. They are called by his intelligence (mind, mind sharp; wise, mind-sharp.) with matte finish. But despite this, a sentence of twenty-five years of imprisonment will be issued for the person.

When the enemy crossed the western borders of the Soviet country and reached the threshold of Moscow for several months, the heads of state, whose fate was in great danger, urged the writers to write a work about the famous Warlords of the past. In their opinion, such works could call on the people and the army to instruct themselves

from the brave Warlords of the past, from the heroes of the people, to educate them in the spirit of the patriotic qualities of these famous personalities. Having received such an ijofndiy order, Shaykhzoda went on to write a stage play about Jalaliddin, one of the brave children of the Uzbek people. Not a single piece of fiction was created before the Sheik about Jalaliddin, who showed great courage in Movaraunnahr during the Mongol invasion, while in the scientific works of Soviet historians, neither his name nor his combat courage were mentioned in warm words. Nevertheless, Shaikhzoda made a commitment to write his own work based on the events of the historical period described in these works, reading Shahobuddin Muhammad nasawi's "Siyrat as-Sultan Jaloliddin Mangburni" and Alouddin Atoma's "Historia jahongushoyi Juvayni" on this magnificent siymo. It is worth noting separately that one of the unique sources about Jaloliddin – Nasavi's name in the work noted above-is the name of the famous sarkarda Jaloliddin Mangburni. In his work, however, Shaikhzoda referred to Jalaliddin, unlike historical sources, as "Manguberdi", and thus translated the word "Mangburni" from The Book of nasawi into Uzbek. And the famous sarkarda still lives with this name among the Uzbek people. Judging by historical sources, if Khorezmshah had not accepted Genghis Khan's proposal for peace and harmony and had not crossed the trade caravan with the ambassador he sent with the sword, the powerful Khwarezmian kingdom would not have been bloodied by the Mongols in the 13th century. Khwarazmshah made a big mistake, not counting on Genghis Khan's accumulation of the most powerful army of the time, while the Tsar scattered the seeds of death around him and did not help Jalaliddin, who, like ya'juj-Ma'juj, rode against the invading Mongols, but, on the contrary, resisted him in every possible way and made a big mistake again. Jalaliddin, not only because he deeply felt his duty to the homeland and history, would go on an unequal struggle against the Mongols with a small army and show examples of genuine courage. Despite the fact that jalaliddin was a fierce enemy of the Mongols, Genghis Khan is forced to confess to his bravery and skill as a captain. In the first stage play, which shaykhzoda began to write as a mature writer, he heroizes such a historical figure –Jaloliddin, who humbled the Mongolian troops, who also left the battlefields, where the victory turned away, omoneson.

If in 1953 I.V. When Stalin did not die, The Life of the Sheikhs and the innocent punished ADIBS like him could have been extremely tragic, like Abdullah Qadiri, Fitrat, Chulpan, Uthman Nazareth.

In 1958, a lyric epic "Tashkent" was created, dedicated to the city of navqiron Tashkent in Kohn and Ayn chog of ADIB, describing its history, past culture and international ties. In the 1960 tragedy" Ulughbek, who wrote Mirzo", the great Uzbek astronomer

created the image of the enlightener and Tsar, the first of the Uzbek ADIBS to create a Shaykhzoda. the history of Uzbek literature, Uzbek folk oral creativity, in particular the scientific work on the research of Alisher Navoi creativity, are also noteworthy.

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## Expression of the courage of Maqsud Shaikhzoda's drama " Jaloliddin Manguberdi

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(Student of Tashkent State transport University)

**Annotation:** the article talks about Jalaliddin's courage, love for the motherland, shijoati, expression in Maqsud Shaikhzoda's drama "Jalaliddin Manguberdi".

**Keywords:** Jalaliddin Manguberdi, Mogil, brave sarkarda, enemy, Shaykhzoda, Uzbek, stage play, there is a holly on the nose, kholdor, Khwarazmshah, burch, Army, Tashkent, disciple, freedom of the Fatherland, Sultan Muhammad.

"A wonderful one who does not blind to glorious intentions,  
I am the one who gives chase from the land."

Maqsud Shaykhzade.

At a time when jalaliddin Manguberdi's life is in danger, Hatto dahrī also expects encouragement from Allah. When the enemy crosses the western borders of Soviet countries and has reached the threshold of Moscow for several months, Heads of state, whose fate is in great danger, urge writers to write works about famous Warlords of the past. In their opinion, such works could call on the people and the army to take an example from the brave Warlords of the past, folk heroes, educate them in the spirit of the patriotic qualities of these famous personalities. Having received such a wonderful order, Shaykhzoda went on to write a stage play about Jalaliddin, one of the brave children of the Uzbek people. According to the famous literary critic Naim Karimov, during the war years, representatives of the authorities encouraged writers to write works about famous Warlords of the past. They looked at the fact that such works could invite the people and the army to learn from the brave Warlords of the past, folk heroes, educate them in the spirit of the patriotic qualities of these famous personalities.

The then head of the Republic, Usman Yusupov, sends him to the Fergana region, one of the khushmanzara maksans of our country, so that the poet can complete his work faster. "Do not fantasize with other things. The people are looking forward to a work about Jalaliddin from you. Go to the Valley and finish it faster and come back!" the leader inspires the poet. So Maqsud Shaykhzoda went to Fargana with his wife Sakinakhonim and wrote a historical drama in six months.

By the time the poet reached the Valley, the early spring meant that gardeners were also preoccupied with planting seedlings by other collective farmers. The sheikhzoda

talked to them during the hours of humiliation from creativity and planted a couple of seedlings himself. In such “nursery” times, manglayi met a gardener whose trail of years has been exaggerated and wrote a poem dedicated to him. Although the poem, published after the death of the poet, is not dedicated to the topic of Garchan Jalaliddin, it helps us to get acquainted with his dream in usha moments.

Here is a poem by usha:

Ancient wrinkles on the forehead,  
The secret of the soil, which is evident in the eye.  
Since knowing to hear  
Listen not to the moans.

In fact, the poet Ham is a saying as a gardener. Although he does not plant trees, he writes works. From this work, it is not her that others will be happy. Perhaps the month of May, Shaykhzoda writes a two-latitude letter to one of his disciples. The letter asked him to take a few books and come and go to Vadil once. The disciple takes a history book or two on the history of the Khwarazmshahs and reaches Vadil.. Then, at his request, he goes to Margilan and finds the old men who served in the army of the Lord and identifies the names of the weapons used at that time. After that, the master leads the disciple and goes to Khojand. They go to the defensive fortress of Khojand on the Syrdarya and see with their own eyes the ruins of ancient fortifications, places where the traces of Jalaliddin and Temur Malik have not yet been extinguished. Usually during such walks, people who have heard “firsthand” about which way Jalaliddin or Temur Malik walked and through which collar of Sirdaro he forgave Daro. Speaking with such ”living witnesses”, the sheikhzoda diligently rejoiced at meeting people interested in this distant history, no matter how correctly the information they gave them, without embarrassing them for their misinformation, she herself spoke with pleasure the historical truth about Jalaliddin Manguberdi and Timur Malik.

This is how the Sheik worked on the work. It was not until seven centuries ago that he brought to light the extremely complex and terrible events that took place, that he finished writing the work.

In addition to”Jaloliddin Manguberdi drama“,” Jaloliddin Manguberdi " was also produced. It was compiled and illustrated by the Golden Pen State Award winner, renowned director Hamid Qaram.

Look at this, this work in the spirit of heroism, which exudes a sense of patriotism in the hearts of people, has not lost its relevance today. Even after many years, the works of the Shaykhzadeh have shown their strength. A vivid example of this is the fact that the poem by the poet Botir Ergashev, inspired by the verse of the

drama Jaloliddin Manguberdi, "who does not blind to glorious intentions, whoever chases away from the land, I am mine", was sung by Azodbek Nazarbekov delivered to Maromi, and this song took a deep place in the hearts of our people.

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## **Pedagogical and Psychological Aspects of Developing Sports Activity Motivation in Students**

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**Abstract:** The motivation for sports activity is a critical component of students' overall well-being and academic success. This article explores the pedagogical and psychological aspects of fostering motivation for physical activities among students. By analyzing key factors influencing motivation, including intrinsic and extrinsic motivation, as well as the role of educators and the learning environment, the article aims to highlight effective methods for increasing students' engagement in sports activities. The findings emphasize the importance of tailored strategies in developing long-lasting motivation and healthy habits in students.

**Keywords:** sports, critical component, modern educational system

**Introduction.** In the modern educational system, physical activity plays a significant role in promoting physical health, mental well-being, and social development. However, despite the clear benefits, many students exhibit low motivation to engage in regular sports and physical activities. This lack of motivation can be attributed to various factors such as individual differences, the influence of the social environment, and inadequate pedagogical approaches. Therefore, understanding the psychological and pedagogical mechanisms behind sports activity motivation is essential to develop effective strategies for increasing student participation.

### **Pedagogical and Psychological Foundations of Sports Motivation**

Motivation is commonly categorized into two types: intrinsic and extrinsic. Intrinsic motivation refers to the drive to engage in an activity for its own sake, driven by internal rewards such as enjoyment or personal satisfaction. Extrinsic motivation, on the other hand, involves performing an activity for external rewards, such as recognition, prizes, or grades. Both types of motivation are critical in determining students' involvement in sports activities.

#### **1. Intrinsic Motivation in Physical Activity**

Intrinsic motivation is a powerful driver for sustained engagement in physical activity. According to self-determination theory (Deci & Ryan, 1985), individuals are more likely to engage in activities that fulfill their basic psychological needs, including autonomy, competence, and relatedness. In the context of sports, students who feel

competent in their abilities and enjoy the activity for personal satisfaction are more likely to continue participating.

## 2. **Extrinsic Motivation in Physical Activity**

While intrinsic motivation is ideal, extrinsic motivation also plays a role in fostering sports engagement. External rewards such as recognition, praise from peers, or the prospect of winning can encourage students to engage in physical activity, especially when starting or when intrinsic motivation is low. However, over-reliance on extrinsic rewards may undermine intrinsic motivation in the long term, as noted in the overjustification effect.

### **Psychological Factors Influencing Sports Motivation**

Several psychological factors significantly affect students' motivation to participate in sports activities. These include:

#### 1. **Self-Efficacy**

Self-efficacy, or the belief in one's ability to succeed in specific tasks, is a major determinant of motivation. Students with high self-efficacy in sports are more likely to initiate and persist in physical activities. Teachers and coaches can boost self-efficacy by providing positive reinforcement, setting achievable goals, and creating a supportive environment.

#### 2. **Goal Setting**

Setting clear, achievable goals is another effective way to enhance motivation. According to Locke and Latham's goal-setting theory, students who set specific and challenging goals for their sports activities are more likely to be motivated and engaged. These goals provide direction and a sense of accomplishment, which boosts motivation.

#### 3. **Social Influence**

The role of social support is also crucial in shaping students' motivation for physical activity. Encouragement from family, peers, and educators can serve as a powerful motivator. Social influence, especially in peer groups, can either promote or hinder participation, depending on the prevailing attitude toward sports within the group.

### **Pedagogical Approaches to Enhance Sports Motivation**

Educators and coaches can implement various strategies to foster motivation for sports activities. Some effective pedagogical approaches include:

#### 1. **Creating a Supportive Environment**

A positive and supportive environment is crucial for nurturing motivation. Teachers should focus on creating an atmosphere where students feel valued, respected, and encouraged to try their best without the fear of failure.

## 2. **Individualized Instruction**

Recognizing that each student has unique motivations and abilities is essential. Providing personalized feedback, differentiating tasks based on skill level, and allowing students to explore different sports can help cater to their interests and improve engagement.

## 3. **Encouraging Autonomy**

Autonomy is a key component of intrinsic motivation. Allowing students to have a say in their physical activities and to make choices about how they engage in sports can increase their sense of control and personal investment in the activity.

**Conclusion.** Developing motivation for sports activity in students is a complex, multifaceted process that requires attention to both psychological and pedagogical aspects. Teachers and coaches play a significant role in shaping students' attitudes toward physical activity by fostering intrinsic motivation, enhancing self-efficacy, and providing a supportive environment. By understanding and addressing the various psychological factors influencing motivation, educators can better equip students to adopt and maintain an active, healthy lifestyle.

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## **Deviant Behavior: Understanding its nature and impact**

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**Abstract.** Deviant behavior refers to actions or behaviors that violate societal norms or expectations. This behavior can range from mild infractions to serious criminal acts, and it plays a crucial role in the dynamics of social control and the functioning of societies. This article explores the nature of deviant behavior, its causes, types, and how societies react to such behavior. Understanding deviant behavior is essential to improve social cohesion, prevent crime, and foster healthy communities.

**Introduction.** Deviant behavior is any action, thought, or condition that violates the societal norms and values of a given social group or society. This concept is crucial in the field of sociology and psychology because it provides insight into the interactions between individuals and the social structure. What is considered deviant behavior in one culture or time period may be seen as acceptable in another, highlighting the fluid nature of societal norms.

In any society, rules, laws, and conventions are established to maintain order, and deviant behavior challenges these expectations. Sociologists and psychologists have studied deviant behavior to understand its causes, implications, and the social mechanisms designed to control it.

**Theories of Deviant Behavior.** Several theoretical frameworks exist to explain deviant behavior:

1. **Strain Theory** (Robert K. Merton): Merton's Strain Theory posits that deviance occurs when there is a discrepancy between culturally approved goals and the means available to achieve them. When individuals cannot meet societal expectations through legitimate channels, they may resort to deviant behavior.
2. **Social Learning Theory** (Edwin H. Sutherland): This theory suggests that deviant behavior is learned through interactions with others. Individuals learn the values, norms, and behaviors of their peer groups, and if these groups condone deviant actions, the individual is more likely to adopt such behaviors.
3. **Labeling Theory** (Howard Becker): Labeling Theory focuses on the societal reaction to deviance. It argues that once a person is labeled as deviant, they may

internalize this label and continue to engage in deviant behavior. The theory highlights the power of societal labels in shaping an individual's identity and behavior.

4. **Control Theory** (Travis Hirschi): According to Hirschi, individuals are naturally inclined to deviate from societal norms, but various social controls (family, school, peer groups) prevent them from doing so. When these controls are weak or absent, the likelihood of deviance increases.

**Types of Deviant Behavior.** Deviant behavior can be categorized into different types:

1. **Primary Deviance:** This refers to minor acts of deviance that do not have a long-lasting effect on an individual's identity. Primary deviance may be unnoticed by others or excused as isolated incidents.

2. **Secondary Deviance:** Secondary deviance occurs when the individual internalizes the label of "deviant" and continues to engage in deviant behavior. This often follows the societal reaction to primary deviance, which may include stigmatization or social exclusion.

3. **Criminal Deviance:** Criminal deviance involves behavior that violates legal statutes, such as theft, assault, or drug abuse. This type of deviance is typically addressed by the criminal justice system, with punishments ranging from fines to imprisonment.

4. **Non-criminal Deviance:** Non-criminal deviance refers to actions that break social norms but do not involve illegal activities. Examples include unconventional fashion choices, eccentric behavior, or non-traditional family structures. Although not punishable by law, these behaviors can lead to social stigma.

**Causes of Deviant Behavior.** Deviant behavior can result from a variety of factors:

1. **Socialization:** The way individuals are socialized influences their behavior. If a person is raised in an environment where deviant behavior is normalized or accepted, they are more likely to engage in similar behaviors.

2. **Social Inequality:** Economic and social inequalities contribute to deviant behavior. Those who lack access to legitimate opportunities may resort to deviance, either out of necessity or to gain social recognition.

3. **Psychological Factors:** Psychological conditions, such as personality disorders, can lead to deviant behavior. However, mental illness alone does not always explain deviance, as many people with psychological disorders do not engage in deviant actions.

4. **Cultural and Societal Norms:** What is considered deviant behavior is often culturally relative. Behaviors deemed acceptable in one society may be viewed as

deviant in another. This is evident in the way certain practices, such as marriage customs or dress codes, vary across cultures.

**Consequences and Responses to Deviant Behavior.** Societies have various ways of responding to deviant behavior:

1. **Social Control:** To maintain order, societies develop formal and informal mechanisms of social control. These include laws, regulations, and institutional structures such as the police and judiciary system. Social control also operates through informal means, such as family expectations or peer pressure.
2. **Stigmatization:** Deviants often face stigmatization, a process in which they are labeled as "outsiders" or "undesirables." This social exclusion can reinforce deviant behavior by limiting opportunities for social integration.
3. **Deviance and Social Change:** In some instances, deviant behavior leads to social change. For example, protests and civil disobedience, which may initially be seen as deviant, can challenge outdated laws and practices, leading to reforms. Historical movements such as the Civil Rights Movement in the United States and the Women's Liberation Movement were initially considered deviant but played a crucial role in societal transformation.

**Conclusion.** Deviant behavior is a complex and multifaceted phenomenon that can have significant social, psychological, and legal implications. By examining the various causes, types, and responses to deviance, we can better understand the dynamics of societal control and the mechanisms that shape behavior. While deviance is often viewed negatively, it also serves as a catalyst for social change and highlights the evolving nature of cultural norms and values.

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## **TECHNOLOGY FOR SEPARATION OF MOLYBDENUM FROM TECHNOLOGICAL SOLUTIONS IN URANIUM DEPOSITS**

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**Abstract.** This article studies methods for separating molybdenum elements from technological solutions formed during the processing of uranium deposits. It analyzes the leading technologies used in molybdenum separation—ion exchange, aqueous-organic extraction, and precipitation methods. The advantages and disadvantages of each method are given with examples. Based on the study's results, effective solutions adapted to existing technological conditions are proposed.

**Keywords:** uranium deposits, molybdenum separation, technological solution, molybdate ion ( $\text{MoO}_4^{2-}$ ), ion exchange, organic extraction, precipitation method, in-situ leaching (ISL), sulfuric acid ( $\text{H}_2\text{SO}_4$ ), resin, molybdenum trioxide ( $\text{MoO}_3$ ), ferromolybdenum, industrial processing, environmental safety, regeneration process, man-made solutions, diluted minerals, metal separation technology from solution, component selectivity, industrial technologies.

**Introduction.** In the hydrometallurgical processing of uranium, in addition to the primary target element, the composition of technological solutions also contains valuable companion elements, including molybdenum (Mo). Molybdenum is essential in the high-temperature-resistant catalysts, special steels, and electronics industries. Therefore, the extraction of molybdenum from uranium deposits increases economic efficiency and serves to use resources rationally.

### **1. Composition of technological solutions**

The composition of technological solutions extracted from uranium deposits with sulfuric acid ( $\text{H}_2\text{SO}_4$ ) mainly includes uranium ( $\text{UO}_2^{2+}$ ), molybdenum ( $\text{MoO}_4^{2-}$ ), as well as metal ions such as iron, vanadium, manganese, zinc, and diluted red-brown or black minerals from the earth's surface. Molybdenum is present here mainly in the form of molybdate ions ( $\text{MoO}_4^{2-}$ ) in a highly water-soluble form, which makes it very convenient to separate it from the process solution.

### **2. Methods for separating molybdenum. Ion exchange method**

The ion exchange method is based on the selective separation of molybdenum from the process solution using special ion exchange resins. In this process, the solution is passed through a unique column, where the resin retains molybdate ions ( $\text{MoO}_4^{2-}$ )

while other metal ions remain in the waste. Subsequently, the retained molybdenum is separated from the resin during the regeneration stage (for example, using alkaline or saline eluents). The main advantages of this method are its high selectivity, recyclability, and the possibility of easy automation of the process. However, its disadvantages include resins losing effectiveness over time and the requirement for significant financial investments in new equipment.

The organic extraction method is based on transferring molybdenum from the process solution to the organic phase using special organic reagents (e.g., amine extractants). The solution is mixed with an organic substance, and the molybdenum passes into the organic phase. Subsequently, in a step called "back extraction", the molybdenum is re-isolated from the organic phase. This method is very efficient on an industrial scale and has relatively low energy consumption. However, its main disadvantages are the requirement for expensive organic reagents and environmental hazards, especially the importance of safety measures when working with organic substances. The precipitation method is based on separating molybdenum from the solution by forming a precipitate and is one of the simplest and most economically effective methods. This process uses sulfides (e.g.,  $\text{H}_2\text{S}$  or  $\text{Na}_2\text{S}$ ) and organic precipitants (oxen). For example, molybdate ion reacts with  $\text{H}_2\text{S}$  to precipitate molybdenum disulfide ( $\text{MoS}_2$ ):



This method's advantages include its affordability, ease of implementation, and effectiveness in laboratory and small-scale production environments. However, its main disadvantages are the low purity of the collected precipitate and the long processing time.

The separated molybdenum is usually recycled as molybdenum trioxide ( $\text{MoO}_3$ ) and is subsequently used in various metallurgical processes in industry as ferromolybdenum or metallic molybdenum.

When choosing a technological method, depending on the main factors, ion exchange is recommended for obtaining high-purity molybdenum, organic extraction is recommended for processing large-scale solutions, and precipitation is recommended for low-cost and small-scale production.

In conclusion, separating molybdenum from uranium ore processing solutions allows for the full utilization of these resources and the full attainment of additional economic benefits. Today, ion exchange and organic extraction are the most effective and widely used methods. Introducing these technologies in uranium mines in Uzbekistan reduces imports and increases export potential in the molybdenum industry.

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## BOSHLANGICH SINIF O'QUVCHILARIGA CHET TILINI O'QITISHDA INTERAKTIV METODLARDAN FOYDALANISHNING ZAMONAVIY USULLARI

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**Annotatsiya:** Ushbu maqolada chet tilini o'qitishning interaktiv metodlardan foydalanishning zamonaviy usullari qisqacha yoritib o'tildi. Bunda boshlangich sinf o'quvchilariga mos bo'lgan metodlardan foydalanib chet tilini tez va oson o'rganish uchun o'ziga hos bo'lgan ro'lli o'yinlar keltirib o'tilgan.

**Kalit so'zlar:** Interfaol ta'lim, ekskursiyalar, leksik ko'nikmalar, suhbat madaniyati, grammatika o'yinlari, Axborot-kommunikatsiya, ro'lli o'yin.

**Abstract:** This article briefly discusses modern methods of teaching a foreign language using interactive methods. It presents role-playing games that are suitable for primary school students to learn a foreign language quickly and easily using methods suitable for them.

**Keywords:** Interactive education, excursions, lexical skills, conversational culture, grammar games, Information and communication, role-playing game.

Maktabda chet tilini o'rganish boshlang'ich sinflardan boshlanadi va shu paytdan boshlab butun o'quv jarayoni kommunikativ yo'nalishga ega bo'ladi. Boshlang'ich sinflarda chet tilini o'qitish metodikasi hali shakllanish bosqichida, bugungi kunda kichik maktabda chet tilini o'qitishning samarali usullarini izlash faol olib borilmoqda, ular ushbu bosqich o'quvchilarining psixologik xususiyatlaridan kelib chiqadi.

Axborot-kommunikatsiya texnologiyalari boshqa sohalar qatori ta'lim tizimida ham keng qo'llanilmoqda. Darslarni yangi pedagogik texnologiyalardan foydalangan holda o'tkazish o'qituvchidan alohida intellektual qobiliyatlarni talab qiladi. O'qituvchi o'quvchilarning qiziqishlarini to'g'ri aniqlay olsa, ularni maqsadga erishish yo'lga to'g'ri yo'naltira olsagina ta'limni o'zgartirish mumkin.

Interfaol ta'lim - bu kognitiv faoliyatni tashkil etishning o'ziga xos shakli bo'lib, u qulay o'quv muhitini yaratishga qaratilgan. Har bir talaba o'zini qulay, ishonchli his qiladi, o'zini muvaffaqiyatli, aqlli deb biladi va o'ziga ishonadi. Interfaol ta'limning mohiyati shundan iboratki, o'quv jarayoni barcha o'quvchilarning doimiy, faol va ijobiy o'zaro ta'siri sharoitida amalga oshiriladi. Keling, ba'zi interaktiv usullarni taqdim etaylik. Texnologiya "Ro'lli o'yin" Ro'lli o'yin bir vaqtning o'zida nutq, o'yin

va ta'lim faoliyati. Talabalar nuqtai nazaridan, ro'1 o'ynash - bu turli xil ro'llarda harakat qiladigan o'yin faoliyati. O'qituvchi uchun o'yinning maqsadi o'quvchilarning nutq qobiliyatlari va qobiliyatlarini shakllantirish va rivojlantirishdir. Ro'lli o'yinni boshqarish mumkin, uning tarbiyaviy tabiati o'qituvchi tomonidan aniq tushuniladi. Ro'1 o'ynash shaxslararo munosabatlarga asoslanganligi sababli, u muloqotga bo'lgan ehtiyojni keltirib chiqaradi, chet tilida unda ishtirok etishga qiziqish uyg'otadi, ya'ni motivatsion va motivatsion funktsiyani bajaradi [1].

Ro'lli o'yin ko'p jihatdan til vositalarini tanlashni aniqlaydi, nutq qobiliyatlari va qobiliyatlarini rivojlantirishga yordam beradi, o'quvchilarga turli xil nutq vaziyatlarida muloqotni taqlid qilishga imkon beradi. Boshqacha aytganda, bu shaxslararo muloqot sharoitida ko'nikma va qobiliyatlarni o'zlashtirish uchun mashqdir. Shu munosabat bilan ro'lli o'yin o'rganish funktsiyasini ta'minlaydi. Ingliz tili darslarida ro'lli o'yinlarning juda ko'p shakllari mavjud: taqdimotlar, qiziqish klublari, intervyular, sirtqi sayohatlar, davra suhbatlari, matbuot anjumanlari, ekskursiyalar, ertaklar, hisobotlar va boshqalar. Trening natijalari shuni ko'rsatadiki, chet tili darslarida ro'lli o'yinlardan foydalanish o'quvchilar nutqida ham sifat jihatidan ijobiy o'zgarishlarga yordam beradi (dialogik hamkorlikning xilma-xilligi, nutqiy hamkorligining xilma-xilligi). nutq) va miqdoriy jihatdan (nutqning to'g'riligi, nutqning hajmi, nutq tezligi) [2].

Ushbu texnologiyaning samaradorligi aniq, chunki loyiha interaktiv ta'lim va ingliz tili darslarida kommunikativ ko'nikmalarni rivojlantirishning faol shakllaridan biriga aylandi. Ushbu usul bolaning faol mustaqil fikrlash qobiliyatini rivojlantirishga qaratilgan bo'lib, uni nafaqat eslab qolish va olgan bilimlarini takrorlashga, balki ularni amalda qo'llashga o'rgatadi. Loyiha ustida ishlash loyihani ishlab chiqish uchun har bir vazifani bajarish uchun yuqori darajadagi individual va jamoaviy mas'uliyatni o'z ichiga oladi. Guruhda ishlash barcha talabalarga ishda ishtirok etish imkoniyatini beradi

Hamkorlik va shaxslararo muloqot ko'nikmalarini mashq qilish imkonini beradi, bu esa uni eng mashhur strategiyalardan biriga aylantiradi. Bularning barchasi ko'pincha katta jamoada mumkin emas. Bu mozaika, munozaralar, ommaviy tinglovlar va taqlidning deyarli barcha turlari kabi ko'plab interaktiv usullarning ajralmas qismidir. Texnologiya "Mozaika" Axborot matni qismlarga bo'lingan. Alohida ma'lumotlar o'quvchilarga tarqoq shaklda beriladi. Vazifa ma'lumotlarning to'liq matnini yig'ishdir. Har bir talaba o'z asarini o'qiydi, so'ngra eshitganlari asosida to'liq matn tuzadi [3].

Texnologiya "Sotsiologik so'rov" Ushbu usul taklif qilingan mavzu bo'yicha ma'lumot to'plashga qaratilgan va o'quvchilarning sinf bo'ylab harakatlanishini o'z ichiga oladi. Ular topshiriq savollari yozilgan varaqlarni olishadi. Shu bilan bir qatorda, siz quyidagi vazifani taklif qilishingiz mumkin: Sinfdozlaringiz qanday filmlarni ko'rishni yoqtirishini bilib oling. Iloji boricha ko'proq yigitlardan intervyu oling. Bunday holda, "Siz qanday filmlarni ko'rishni yoqtirasiz?" javobi ishlab chiqilmoqda.

Ko'pincha talabalarga qiyinchilik tug'diradi, chunki u to'liq javobni talab qiladi. Texnologiya "Qor to'pi" Ushbu usul kichik maktab o'quvchilarining nutqi va xotirasini rivojlantirish uchun yaxshi qo'llaniladi. Talaba mavzuni nomlaydi va tayoqchani qo'shniga beradi, u bir xil mavzular guruhiga tegishli ikkinchi so'zni o'ylab topadi va allaqachon ikkita so'zni tartibda chaqiradi. Keyingi talaba ikkita so'zni chaqiradi va o'zinikini qo'shadi va hokazo. Siz mavzular bo'yicha lug'atni ishlab chiqishingiz mumkin: "O'yinchoqlar" (mening ayiqcham, qo'g'irchoq, itim bor ...), "Kiyimlar" (menda ko'ylak, kozok bor, ...), "Meva va sabzavotlar" (menga apelsin, banan, olma.).

O'qitishning interfaol usullaridan foydalanishning afzalliklari:

- barcha o'quvchilarni faollashtirish;
- qiziqarli va foydali;
- o'rganish motivatsiyasini oshirish;
- darsda ish shakllarini diversifikatsiya qilish imkonini beradi;
- bilimlarni amaliyotda qo'llash imkonini beradi;
- mustaqil ishlashga o'rgatadi;
- aqliy faoliyatni rivojlantirish;
- jamoadagi ishlash qobiliyatini rivojlantirish;
- turli qarashlarni aniqlash imkonini beradi;
- muloqot madaniyatini tarbiyalash;
- yangi materialni idrok etishni osonlashtirish;
- kognitiv faollikni rag'batlantirish;
- o'zini hurmat qilish va o'z ishidan qoniqish hissin oshirish;
- ular sizni tinglashni, tushunishni, suhbatdoshga munosabat bildirishni o'rgatadi. Demak, interfaol ta'limning mohiyati shundan iboratki, o'quv jarayoni shunday tashkil etilganki, unda deyarli barcha o'quvchilar ishtirok etadilar [4].

Bilish jarayoni, ular bilgan va o'ylagan narsalarni tushunish va mulohaza yuritish imkoniyatiga ega. O'quv materialini o'zlashtirish, o'zlashtirish jarayonida o'quvchilarning birgalikdagi faoliyati har kimning o'ziga xos individual hissasini qo'shishini, bilim, g'oyalar, faoliyat usullari almashishini anglatadi. Boshlang'ich sinf o'quvchilarini o'qitishning etakchi usullari o'yin ekanligi ham isbotlangan.

O'yin muhim uslubiy va psixologik vazifalarni muvaffaqiyatli hal qilish imkonini beradi, masalan: — bolalarning nutq faoliyatiga, muloqotga psixologik tayyorgarligini yaratish; — ularning til materialini qayta-qayta takrorlashning tabiiy zarurligini ta'minlash; — talabalarni situatsion spontan nutqqa tayyorlash bo'lgan nutq variantini to'g'ri tanlashga o'rgatish; - charchoq va zo'riqishni yo'qotish. O'yin xarakteridagi mashqlar o'z maqsadi, mazmuni, usullariga ko'ra har xil bo'lishi mumkin. Keling, ushbu o'yin turlarining har birini ko'rib chiqaylik.

Talabalarining artikulyatsiya va intonatsiya qobiliyatlarini shakllantirishga hissa qo'shish. Masalan: "Asalari" o'yini. O'yinning maqsadi: ovozli trening O'yinning borishi: o'qituvchi ko'rsatadi. Talabalar ikkita asalari chizilgan rasm. O'qituvchi bir ari ingliz, ikkinchisi rus ekanligini tushuntiradi. Asalarilar bir-birlari bilan muloqot qilishadi, inglizcha esa And tovushini va ruschani talaffuz qiladi. Talabalar ikki ari suhbatini, navbatma-navbat tovushlarni tasvirlashlari kerak. Imlo o'yinlar. Boshlang'ich sinflarda ingliz tilini o'rgatishda imlo o'yinlaridan foydalanishdan asosiy maqsad yozuv ko'nikmalarini shakllantirishdan iborat. Masalan: "Yo'qolgan harflar" o'yini. O'yinning maqsadi - o'rganilayotgan mavzu doirasida leksik birliklarni yozishda imloni tekshirish. O'yinning borishi: o'yin boshlanishidan oldin o'qituvchi sinfni ikki jamoaga ajratadi. Ikkala jamoa uchun ham harflari etishmayotgan so'zlar doskaga yoziladi. O'yin davomida har bir jamoa a'zosi doskaga chiqadi va etishmayotgan xatni yozadi. A'zolari kamroq xatoga yo'l qo'ygan jamoa g'alaba qozonadi [5].

Leksik o'yinlar leksik birliklarni esda saqlashga yordam beradi, o'quvchilarni tabiiy muhitga yaqin vaziyatlarda lug'atdan foydalanishga o'rgatadi, o'quvchilarning nutq reaksiyasini rivojlantiradi, so'zlarning mos kelishi bilan tanishtiradi, ya'ni kuchli so'z birikmalarining shakllanishiga yordam beradi.

Leksik ko'nikmalar. Masalan: "Kim to'g'ri ulanadi?" o'yini. O'yinning maqsadi o'quvchilarni yangi lug'at bilan tanishtirish va ularni ishlatishga o'rgatishdir. O'yinning borishi: talabalar ma'lum bir ketma-ketlikda joylashgan nuqtalari bo'lgan qog'oz varaqlarini olishadi. 1 dan 20 gacha nuqtalarni birlashtirib, konturni chizish orqali ular rasmda tasvirlangan ob'ektni aniqlay oladilar. Keyin o'qituvchi so'zni tarjima qiladi va o'quvchilar undan keyin takrorlaydilar. Grammatik o'yinlarning asosiy maqsadi ma'lum grammatik qoidalarni o'rgatishdir. O'qituvchi deyarli har bir grammatik hodisa uchun o'yinni tanlashi mumkin. Keling, grammatik o'yinlarning misollarini ko'rib chiqaylik. O'yin "Sizning joyingiz qayerda?". O'yinning maqsadi - oddiy va so'roq gapda so'z tartibini o'rgatish. O'yinning borishi: O'qituvchi birinchi navbatda jumalarni o'ylab topadi va gapning har bir so'zini kartaga yozadi. Keyin u

kartalarni aralashtirib, talabalarga tarqatadi. Hukm olish uchun ular turishlari kerak. Ijodiy o'yinlar, yuqorida aytib o'tilganidek, eshitish va nutqni o'z ichiga oladi. Eshitish o'yinlari o'quvchilarning eshitish xotirasini rivojlantirishga, nutq oqimidagi individual nutq shakllari va so'z birikmalarini tan olish qobiliyatiga yordam beradi. Keling, eshitish o'yinlari misollarini ko'rib chiqaylik. O'yin "Kimligini toping?" O'yinning maqsadi: nutqni eshitishni rivojlantirish, dialogik nutq ko'nikmalarini shakllantirish hisoblanadi [6].

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**OPPORTUNITIES FOR DEVELOPING LEADERS' COMMUNICATIVE  
AND SOCIAL SKILLS IN THE CONTEXT OF DIGITAL TECHNOLOGIES**

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**ABSTRACT**

This article explores the opportunities for developing communicative and social skills among educational leaders within the context of rapidly advancing digital technologies. In today's educational landscape, school leaders are expected to go beyond traditional management skills and demonstrate the ability to engage effectively in digital communication, foster virtual collaboration, and adapt to hybrid and remote learning environments. The study examines the integration of digital platforms such as Zoom, Google Meet, and Microsoft Teams into school management practices, highlighting both the benefits and the social-psychological challenges that arise. The article also investigates the emergence of new concepts such as digital empathy, digital ethics, virtual leadership, and digital culture — all of which contribute to the evolving model of socially competent leadership. The author analyzes international experiences and presents modern training methodologies aimed at enhancing educational leaders' communicative capacities in the digital era, while evaluating their applicability to Uzbekistan's national education system. The findings offer practical guidance for building a socially conscious, digitally fluent leader who can successfully manage educational processes in virtual environments.

**KEYWORDS:** Digital technologies, leadership competence, communication skills, social competencies, virtual leadership, digital culture, digital empathy, online management, modern training methods, digital education.

**ВОЗМОЖНОСТИ РАЗВИТИЯ КОММУНИКАТИВНЫХ И  
СОЦИАЛЬНЫХ НАВЫКОВ РУКОВОДИТЕЛЕЙ В УСЛОВИЯХ  
ЦИФРОВЫХ ТЕХНОЛОГИЙ**

**ЗИЁВИДДИНОВА ПОКИЗА САДРИДДИНОВНА**  
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**АННОТАЦИЯ**

В статье рассматриваются возможности формирования и развития коммуникативных и социальных навыков руководителей образовательных

учреждений в условиях стремительного развития цифровых технологий. Современный образовательный менеджмент требует от руководителей не только административных умений, но и способности эффективно взаимодействовать в цифровой среде, адаптироваться к новым форматам общения и управления. В условиях удалённого и гибридного обучения важным становится умение руководителя использовать цифровые платформы (Zoom, Microsoft Teams, Google Meet и др.) для создания продуктивного диалога с педагогическим коллективом, учащимися и родителями. Анализируются проблемы, возникающие в процессе цифровой трансформации образовательной среды, а также необходимость формирования цифровой эмпатии, цифровой этики, культуры виртуального взаимодействия. В статье представлены современные методы тренингов, зарубежный опыт развития лидерских и социальных компетенций в цифровую эпоху и предложены практические рекомендации по их внедрению в национальную систему образования Узбекистана. Основное внимание уделено модели руководителя, обладающего высоким уровнем социальной ответственности и способного к эффективному цифровому взаимодействию.

### **КЛЮЧЕВЫЕ СЛОВА**

Цифровые технологии, управленческая компетентность, коммуникативные навыки, социальные компетенции, цифровая культура, цифровая эмпатия, онлайн-управление, цифровое лидерство, тренинги, образование в цифровую эпоху.

### **RAQAMLI TEXNOLOGIYALAR SHAROITIDA RAHBARLARNING KOMMUNIKATIV VA IJTIMOY KO'NIKMALARINI RIVOJLANTIRISH IMKONIYATLARI**

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### **ANNOTATSIYA**

Maqolada raqamli texnologiyalar jadal rivojlanayotgan bugungi davrda ta'lim muassasalarini boshqarayotgan rahbar xodimlarning kommunikativ va ijtimoiy ko'nikmalarini shakllantirish va rivojlantirish imkoniyatlari tahlil etiladi. Axborot-kommunikatsiya texnologiyalarining ta'lim boshqaruvida keng qo'llanilishi rahbar shaxsidan yangicha yondashuvlar, zamonaviy ijtimoiy muhit bilan samarali muloqotda bo'lish, virtual va an'anaviy kommunikatsiyani uyg'unlashtira olish kabi salohiyatni talab etmoqda. Tadqiqotda rahbarlarning onlayn platformalar, raqamli muloqot

vositalari (masalan, Zoom, Google Meet, MS Teams) orqali jamoa bilan samarali aloqada bo'lishi, ta'lim jarayonini masofadan boshqarishda yuzaga kelayotgan muammolar va ularga ijtimoiy-psixologik yondashuvlar chuqur tahlil qilinadi. Shuningdek, maqolada raqamli davrda ijtimoiy kompetensiyaning yangi shakllanishi, raqamli etika, raqamli empatiya, virtual yetakchilik, raqamli madaniyat kabi tushunchalarning dolzarbligi yoritiladi. Muallif tomonidan rahbarlarning kommunikativ va ijtimoiy ko'nikmalarini rivojlantirishga qaratilgan zamonaviy trening metodikalari, xorijiy tajribalar va ularning O'zbekiston ta'lim tizimiga moslashtirish imkoniyatlari ko'rib chiqiladi. Natijada, zamonaviy raqamli muhitda samarali faoliyat yurituvchi, ijtimoiy ongli va kommunikativ jihatdan yetuk rahbar obrazini shakllantirishga xizmat qiluvchi ilmiy-amaliy tavsiyalar ilgari suriladi.

### **KALIT SO'ZLAR**

Raqamli texnologiyalar, rahbar kompetensiyasi, kommunikativ ko'nikmalar, ijtimoiy ko'nikmalar, virtual yetakchilik, raqamli madaniyat, raqamli empatiya, onlayn boshqaruv, zamonaviy treninglar, raqamli pedagogika.

### **INTRODUCTION**

The rapid development of digital technologies has become one of the defining characteristics of the 21st century, profoundly transforming all spheres of human activity, including education. In the current era of globalization and digitalization, the management of educational institutions demands not only traditional administrative efficiency but also the ability of leaders to adapt to modern socio-technological environments.<sup>1</sup> As schools and academic systems undergo structural and functional changes, the role of school leaders expands beyond administrative boundaries to encompass strong communicative competence, social awareness, and digital fluency. In particular, the increasing reliance on digital platforms for remote learning, online meetings, and virtual collaboration has redefined the skills necessary for effective school leadership. A modern leader must now be capable of organizing and maintaining dynamic interaction in virtual spaces, managing educational processes through digital tools, and fostering constructive dialogue among staff, students, and

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<sup>1</sup> Fullan, M. (2007). *Leading in a culture of change*. San Francisco, CA: Jossey-Bass.

parents within digital environments.<sup>2</sup> This requires not only technical know-how but also emotional intelligence, adaptability, and social empathy—competencies that are often underestimated but crucial in maintaining a cohesive school climate. Furthermore, as digital interactions replace many face-to-face communications, the development of social competencies such as digital empathy, cultural sensitivity in online communication, and ethical digital behavior becomes vital. The ability of school leaders to manage and motivate their teams, resolve conflicts, and build trust now depends significantly on their capacity to communicate effectively in virtual settings. This article explores the opportunities for enhancing the communicative and social skills of educational leaders through the use of digital technologies. It examines how digital tools can be used not only for administrative purposes but also for leadership development, team engagement, and community-building. The paper also considers the integration of international best practices, digital leadership training models, and interactive learning strategies into Uzbekistan's educational leadership development system.<sup>3</sup> By addressing these issues, the article aims to contribute to the formation of a new generation of educational leaders—individuals who are socially competent, technologically literate, and capable of leading in a digital era.

#### Materials and methods

This study employs a mixed-methods approach to examine the development of communicative and social skills among school leaders within the context of rapidly expanding digital technologies. The research was conducted among educational administrators working in general secondary schools across several regions of Uzbekistan.<sup>4</sup> A total of 120 participants, including school principals, deputy directors, and administrative support staff, were selected through stratified sampling to ensure diversity in terms of professional experience, institutional size, and geographic location. The research process was grounded in both theoretical analysis and empirical

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<sup>2</sup> Hargreaves, A., & Fullan, M. (2019). *Professional capital: Transforming teaching in every school*. New York: Teachers College Press.

<sup>3</sup> Leithwood, K., Harris, A., & Hopkins, D. (2020). Seven strong claims about successful school leadership revisited. *School Leadership & Management*, 40(1), 5–22.

<sup>4</sup> OECD. (2020). *School leadership for learning: Insights from TALIS 2018*. Paris: OECD Publishing. <https://doi.org/10.1787/19cf08df-en>

investigation. The theoretical framework involved an extensive review of academic literature on digital leadership, communicative competence, social-emotional learning, and education management in digital environments. This review included scholarly articles, international policy documents (e.g., OECD, UNESCO reports), and contemporary case studies from countries such as Finland, South Korea, and the United Kingdom.

The empirical part of the research included the following components:

- **Questionnaires:** A structured questionnaire was designed to assess the participants' self-perception of their communicative and social skills in digital contexts. Questions covered areas such as digital interaction, online conflict resolution, use of digital platforms for communication, and perceptions of virtual team engagement.
- **Interviews:** In-depth semi-structured interviews were conducted with 15 selected school leaders to gather qualitative insights into the challenges and opportunities of managing teams remotely, maintaining motivation among staff, and ensuring social connectedness in a digital environment.
- **Observation:** The researchers conducted non-intrusive observations during virtual staff meetings and online professional development sessions to identify behavioral patterns in digital communication, leadership tone, and interaction style.<sup>5</sup>
- **Comparative analysis:** The study also involved comparing the current state of digital leadership practices in Uzbekistan with international examples. This included analyzing how educational leadership training in other countries incorporates digital empathy, ethical use of technology, and social collaboration tools.
- **Statistical analysis:** Quantitative data obtained from surveys were processed using Microsoft Excel and SPSS software.<sup>6</sup> Descriptive statistics (mean scores, standard deviations, frequency distributions) were used to identify general trends, while qualitative data were analyzed using thematic coding to extract meaningful patterns and emerging themes.

Ethical considerations were observed throughout the research process, with all participants providing informed consent and being assured of the confidentiality and

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<sup>5</sup> UNESCO. (2021). *Reimagining our futures together: A new social contract for education*. Paris: UNESCO Publishing.

<sup>6</sup> Northouse, P. G. (2018). *Leadership: Theory and practice* (8th ed.). Thousand Oaks, CA: Sage.

voluntary nature of their participation.<sup>7</sup> This multi-faceted methodological approach allowed for a comprehensive understanding of how digital environments influence the development and application of communicative and social competencies among educational leaders, as well as what practical steps can be taken to improve these skills in the evolving educational landscape.

## Results

The data collected through surveys, interviews, and observations reveal several key findings regarding the current state of communicative and social competencies among educational leaders operating in digital environments. Firstly, the survey responses indicate that a significant portion of school leaders recognize the importance of communicative and social skills in the digital era. Approximately 78% of respondents agreed that their ability to engage effectively in virtual communication directly influences staff motivation, team cohesion, and conflict resolution. However, only 42% of respondents felt fully confident in their skills to manage and lead virtual discussions or team meetings using digital tools such as Zoom, Google Meet, or Microsoft Teams. Further analysis of the questionnaire data shows that while most leaders are proficient in using basic communication platforms, they often lack training in key areas such as digital conflict mediation, maintaining emotional connection in online settings, and fostering inclusive digital dialogue. This indicates a gap between digital tool usage and the application of socially competent leadership in virtual contexts.<sup>8</sup>

Qualitative data from the in-depth interviews further highlight the challenges faced by school leaders. Many participants expressed difficulty in reading emotional cues in digital environments, noting that the absence of face-to-face interaction often leads to miscommunication or emotional distance among staff members. Several leaders reported struggling to maintain team morale and unity, particularly during prolonged periods of remote work or hybrid learning models. A commonly cited issue was the lack of structured training programs specifically focused on developing digital empathy

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<sup>7</sup> Mutch, C. (2020). Educational leadership in a crisis: Lessons from New Zealand's response to the COVID-19 pandemic. *Educational Management Administration & Leadership*, 48(3), 485–497.

<sup>8</sup> Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Palo Alto, CA: Learning Policy Institute.

and communication techniques. Observational data reinforced these findings.<sup>9</sup> During virtual staff meetings, some leaders demonstrated strong organization and control but lacked interactivity and personal engagement. Others attempted to foster open dialogue but faced technical or social barriers, such as passive participation or limited feedback from staff. In several cases, the tone of digital communication was overly formal or administrative, reducing opportunities for genuine team bonding. Despite these challenges, the research also identified a number of promising practices. Some leaders have proactively adopted strategies such as using breakout rooms for collaborative dialogue, sending personalized follow-up messages to staff, or incorporating visuals and multimedia to enhance digital engagement.<sup>10</sup> These practices, while not yet widespread, offer scalable models for improving communication and social connectedness in digital leadership settings. Moreover, the comparative analysis with international models revealed that countries with more mature digital education systems—such as Finland and South Korea—actively incorporate digital empathy, cultural awareness, and social-emotional learning into their leadership training programs. These countries prioritize not just technological proficiency but also human-centered communication in digital education management. In summary, the results demonstrate a growing awareness among educational leaders of the need to develop advanced communicative and social skills in digital contexts. However, there remains a significant gap in structured training, practical application, and systemic support, which hinders the full realization of these competencies in practice.<sup>11</sup> These findings underscore the urgency of integrating communication-focused modules and digital social-emotional development into educational leadership programs in Uzbekistan.

### Discussion

The findings of this study clearly illustrate the growing significance of communicative and social competencies in the digital leadership landscape of educational institutions.

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<sup>9</sup> Avolio, B. J., & Kahai, S. S. (2020). Adding the "E" to E-Leadership: How it may impact your leadership. *Organizational Dynamics*, 49(1), 100715.

<sup>10</sup> Heikka, J., & Husu, J. (2020). Distributed leadership in action: A social practice perspective. *Educational Management Administration & Leadership*, 48(1), 108–126.

<sup>11</sup> Anderson, R., & Dexter, S. (2021). School technology leadership and its effect on digital learning. *Educational Administration Quarterly*, 57(2), 302–332.

As digital platforms become integral to school management and communication, school leaders are required to function not only as administrators but also as digital facilitators, empathetic communicators, and social connectors. However, the results suggest that the transition toward this new leadership paradigm remains uneven and fragmented, particularly in the context of developing education systems such as Uzbekistan's. The gap between technological proficiency and social competence in digital environments presents a critical challenge. While many educational leaders are adept at using digital tools for basic tasks—such as scheduling meetings or sharing information—the more nuanced aspects of communication, such as emotional resonance, inclusive dialogue, and real-time feedback in virtual spaces, are still underdeveloped. This echoes findings in international studies, which emphasize that leadership effectiveness in digital contexts is increasingly determined not by access to technology, but by the ability to use it in socially meaningful ways.<sup>12</sup> One key insight from the research is the psychological impact of digital communication. As observed in virtual staff meetings and confirmed through interviews, many leaders struggle to establish warmth, engagement, and trust when working through screens. In traditional, face-to-face environments, much of this social connection occurs organically through informal conversations, body language, and emotional proximity.<sup>13</sup> In digital settings, however, these elements are often missing or diminished, placing additional pressure on leaders to be intentional and proactive in their communication style.

Another important theme emerging from the study is the concept of **digital empathy**—the ability to perceive and respond to emotional cues in virtual interactions. This competence is critical in maintaining a supportive environment, especially during crises such as the COVID-19 pandemic, which forced rapid transitions to remote learning. Leaders who demonstrate digital empathy are more likely to sustain staff morale, manage emotional stress, and foster a sense of belonging among dispersed teams. Yet, many participants reported having received no formal training in how to build or apply such skills in practice. The comparative analysis with countries like Finland, South Korea, and Canada reveals that these systems integrate digital

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<sup>12</sup> European Commission. (2020). *Key competences for lifelong learning*. Luxembourg: Publications Office of the European Union.

<sup>13</sup> World Bank. (2018). *Successful school leadership: International practices and recommendations*. Washington, DC: World Bank Publications.

leadership and emotional intelligence training as part of their professional development programs for school administrators. For example, Finland's leadership preparation models include modules on digital ethics, virtual collaboration, and conflict management in online environments. Such structured programs offer valuable blueprints for Uzbekistan and other developing countries aiming to strengthen leadership capacity in the digital age. In the Uzbek context, the absence of standardized frameworks for cultivating communicative and social skills through digital means limits the system's readiness for long-term digital transformation. Leadership development programs still tend to focus on regulatory and procedural training rather than equipping administrators with the interpersonal tools necessary for virtual leadership. This misalignment may result in short-term functionality but long-term stagnation in terms of staff engagement, innovation, and collective motivation.

Despite these challenges, the study also uncovered a willingness among many school leaders to embrace digital transformation and adapt their leadership style. Several interviewees expressed interest in receiving more hands-on training in areas such as digital public speaking, emotional awareness in virtual settings, and online team-building strategies. This highlights a key opportunity: by aligning leadership development with the needs of digital-era school governance, policymakers and educational authorities can foster a more resilient and human-centered education system.<sup>14</sup> In sum, the discussion reinforces the idea that communicative and social competencies are not peripheral, but central to effective leadership in a digitally mediated world. Developing these skills should no longer be considered optional but essential to sustaining school effectiveness, promoting teacher well-being, and navigating the complexities of digital education.

## **Conclusion**

This study has highlighted the critical importance of communicative and social competencies in educational leadership within the context of rapidly evolving digital technologies. As the education sector continues to undergo significant digital transformation, the role of school leaders must adapt accordingly—moving beyond traditional administrative functions toward dynamic, people-centered, and digitally fluent leadership. The research findings demonstrate that while many school leaders

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<sup>14</sup> Koehler, M. J., & Mishra, P. (2009). What is technological pedagogical content knowledge (TPACK)? *Contemporary Issues in Technology and Teacher Education*, 9(1), 60–70.

possess basic digital literacy, their ability to lead effectively in virtual settings is often limited by underdeveloped communicative and social skills. Challenges such as limited emotional engagement, poor virtual interaction strategies, and a lack of formal training in digital empathy were recurrent themes. These limitations not only hinder collaboration and team morale but also negatively impact overall school climate and teacher motivation.<sup>15</sup> However, the study also reveals a growing awareness and willingness among educational leaders to improve in these areas. There is clear demand for targeted professional development programs that focus on fostering digital communication strategies, emotional intelligence, and social awareness within virtual learning and leadership environments. Furthermore, international experiences show that integrating digital leadership modules—such as virtual collaboration, ethical digital conduct, and inclusive communication—into professional training significantly enhances leadership capacity and effectiveness. These insights offer valuable guidance for shaping future educational policies in Uzbekistan and other countries undergoing similar transitions.

In conclusion, developing strong communicative and social skills in the digital context should be considered a core competency for educational leaders. It is not enough to simply use digital tools—leaders must be equipped to build trust, maintain human connection, and foster collaboration in virtual environments. Investing in the digital and interpersonal capacities of school leaders will not only enhance their personal effectiveness but also contribute to building more resilient, inclusive, and future-ready educational institutions.

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<sup>15</sup> Tondeur, J., Scherer, R., Siddiq, F., & Baran, E. (2020). A comprehensive analysis of teacher digital competence: A review of frameworks and approaches. *Journal of Educational Computing Research*, 58(5), 887–913.

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## **THE DEVELOPMENT OF ENGLISH TERMINOLOGY IN SCIENCE AND TECHNOLOGY**

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**Annotation:** This article explores the development of English terminology in the fields of science and technology. It traces the historical evolution of scientific language, from the dominance of Latin to the rise of English as the global language of science. The article examines how English adapted and expanded its vocabulary to accommodate rapid advancements in knowledge, often borrowing terms from Latin, Greek, and other languages. Special attention is given to the role of globalization, technological innovation, and the standardization of terms in shaping modern English scientific and technical vocabulary. The study highlights how terminology evolves to meet the changing needs of communication within specialized disciplines.

**Key words:** English terminology, science and technology, linguistic development, scientific language, technical vocabulary, loanwords, Latin and Greek influence, terminology standardization, globalization, language of science.

### **FAN VA TEXNOLOGIYA SOHALARIDA INGLIZ TERMINOLOGIYASINING RIVOJLANISHI**

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**Annotatsiya:** Ushbu maqolada fan va texnologiya sohalarida ingliz terminologiyasining rivojlanishi tahlil qilinadi. Unda ilmiy tilning tarixiy rivojlanishi — Lotin tilining ustunligidan boshlab ingliz tilining global ilmiy tilga aylanishigacha boʻlgan jarayon yoritiladi. Maqolada ingliz tilining bilimlar tez surʼatda rivojlanayotgan davrda oʻz soʻz boyligini qanday kengaytirgani, koʻpincha lotin, yunon va boshqa tillardan soʻzlar oʻzlashtirilgani koʻrib chiqiladi. Globallashuv, texnologik innovatsiyalar va terminlarning standartlashtirilishi zamonaviy ingliz ilmiy va texnik terminologiyasining shakllanishida qanday rol oʻynagani alohida taʼkidlanadi. Tadqiqot terminologiyaning ixtisoslashgan sohalarida aloqa ehtiyojlariga mos ravishda qanday oʻzgarib borishini koʻrsatadi.

**Kalit soʻzlar:** Ingliz terminologiyasi, fan va texnologiya, lingvistik rivojlanish, ilmiy til, texnik lugʻat, oʻzlashma soʻzlar, lotin va yunon tillarining taʼsiri, terminlarni standartlashtirish, globallashuv, ilm-fan tili.

## РАЗВИТИЕ АНГЛИЙСКОЙ ТЕРМИНОЛОГИИ В ОБЛАСТИ НАУКИ И ТЕХНОЛОГИЙ

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**Аннотация:** В данной статье рассматривается развитие английской терминологии в области науки и технологий. Прослеживается историческая эволюция научного языка — от доминирования латинского до становления английского как глобального языка науки. В статье анализируется, как английский язык адаптировал и расширил свой словарный запас в ответ на стремительное развитие знаний, часто заимствуя термины из латинского, греческого и других языков. Особое внимание уделяется роли глобализации, технологических инноваций и стандартизации терминов в формировании современной английской научной и технической терминологии. Исследование подчеркивает, как терминология развивается, чтобы удовлетворить меняющиеся потребности общения в специализированных областях.

**Ключевые слова:** Английская терминология, наука и технологии, лингвистическое развитие, научный язык, технический словарь, заимствованные слова, влияние латинского и греческого языков, стандартизация терминов, глобализация, язык науки.

In the contemporary world, science and technology are among the most rapidly evolving fields, constantly generating new knowledge, processes, and inventions. The foundation of this progress lies not only in discovery but also in the effective communication of ideas. Language, therefore, plays a fundamental role in shaping scientific discourse. Among all world languages, English has emerged as the dominant medium of international scientific communication. The terminology developed within the English language now facilitates the exchange of scientific and technological knowledge across borders. Terminology refers to the set of specialized words and phrases used within a particular field. In science and technology, such terminology allows precision, clarity, and consistency when describing processes, systems, and innovations. As new disciplines emerge and older ones evolve, English has expanded

to accommodate these changes by developing new terms or adapting existing ones. This paper explores how English terminology in science and technology has developed over time, highlighting its historical roots, linguistic sources, standardization efforts, and adaptation to modern advancements. For centuries, Latin was the lingua franca of the educated world, particularly in Europe. Scholars, scientists, theologians, and philosophers wrote in Latin to ensure that their works could be understood across national and linguistic boundaries. Early scientific texts in disciplines such as astronomy, medicine, and mathematics were all published in Latin, which was considered the language of authority and academia. This tradition was particularly prominent during the Middle Ages and continued into the Renaissance. As a result, the early foundations of scientific terminology were rooted in Latin and, to a lesser extent, Greek. Many of the core scientific terms we use today, such as radius, cell, species, and virus, have Latin origins. Even though Latin is no longer a spoken language, its legacy endures in the vocabulary of science.

The 17th century witnessed a gradual transition in Europe as scholars began to write in their native languages. In England, this shift coincided with the establishment of the Royal Society in 1660, which promoted the use of English for scientific communication. The publication of *Philosophical Transactions*, the first scientific journal in English, marked a significant milestone. Isaac Newton's *Principia Mathematica* (1687) was published in Latin, yet his later works appeared in English, reflecting the growing acceptance of English in scholarly circles. As Britain emerged as a global power during the Industrial Revolution, the use of English in scientific literature became more widespread. By the 20th century, the dominance of English was firmly established, especially after World War II, with the rise of the United States as a scientific and technological superpower. Today, the majority of scientific publications, patents, and research papers are produced in English, regardless of the authors' native language. In the next section, we will explore the linguistic sources of English scientific and technical terminology, including how Latin and Greek continue to influence term formation and how new words are created in response to innovation. One of the most significant aspects of English scientific and technical terminology is its reliance on classical languages—primarily Latin and Greek. These languages provided a rich pool of roots, prefixes, and suffixes that could be used to form precise and universally understandable terms. This tradition persists because Latin and Greek are “dead languages,” meaning their meanings are fixed and not subject to everyday change, making them ideal for scientific precision. Examples of terms with Greek roots include thermometer (from “thermo” meaning heat and “meter” meaning measure),

geology (“geo” = earth, “logy” = study), and photosynthesis (“photo” = light, “synthesis” = putting together). Similarly, Latin contributes terms like species, genus, virus, and formula. These roots are combined in various ways to describe new concepts in medicine, biology, physics, chemistry, and technology. English is a flexible and dynamic language that allows the formation of new words through several methods: Joining two or more words together, such as keyboard, database, or greenhouse. Adding prefixes and suffixes to existing words, as in microbiology (micro = small, biology = study of life) or preprocessor (pre = before, processor). Terms like laser (Light Amplification by Stimulated Emission of Radiation), radar, and CPU (Central Processing Unit) originated as acronyms and have become standard terms. New terms are also created by shortening longer words (e.g., doc from doctor, lab from laboratory). These methods enable English to generate new terms rapidly, especially as new technologies emerge. In addition to Latin and Greek, English scientific terminology includes borrowings from French, German, Arabic, Japanese, and other languages. For example:

- Algorithm comes from the name of Persian mathematician Al-Khwarizmi.
- Robot originates from the Czech word “robota,” meaning forced labor.
- Tsunami is borrowed from Japanese.

This borrowing illustrates how scientific exchange is international and often incorporates terms from various linguistic sources. As science and technology advance, the consistent use of terminology becomes essential. Without agreed-upon meanings, communication between researchers, engineers, and practitioners can lead to confusion or errors. Standardized terminology ensures that a term used in one country or field means the same thing elsewhere, fostering clarity and cooperation.

Numerous international bodies work to standardize terminology across scientific disciplines:

- ISO (International Organization for Standardization): Develops international standards, including terminology used in industry and technology.
- IUPAC (International Union of Pure and Applied Chemistry): Sets standards for chemical names and symbols, such as the periodic table.
- IEEE (Institute of Electrical and Electronics Engineers): Provides standardization in electrical engineering and computing.

These organizations publish glossaries, databases, and manuals to guide the use of scientific and technical terms.

The benefits of standardization include:

- Clarity: Avoiding ambiguity in technical documents and communications.

- **Efficiency:** Facilitating collaboration in international research and production.
- **Safety:** Preventing mistakes in critical fields like medicine, aviation, or nuclear energy.

For example, in medicine, the term hypertension has a standardized meaning across languages and countries, ensuring consistent diagnosis and treatment. As new scientific disciplines and technologies emerge, the English language must evolve to describe them. Every innovation brings with it a need for new words—terms that define concepts, devices, or processes previously unknown. For instance, the digital revolution introduced terms like internet, email, cloud computing, cybersecurity, smartphone, and blockchain. Each of these represents not only a new tool or concept but also a shift in how humans interact with the world. In biotechnology, phrases like genetic engineering, CRISPR, genome mapping, and bioinformatics have become commonplace. In environmental science, carbon footprint, climate change, and renewable energy reflect society's growing concern with sustainability and ecology.

Modern English terminology often follows a few patterns:

- **Blending:** Combining parts of words, such as brunch (breakfast + lunch) or smog (smoke + fog). In science, examples include bioprinting (biological + printing) and docudrama (documentary + drama).
- **Repurposing:** Existing words take on new technical meanings. For example, mouse in computing, or virus in computing contexts.
- **Shortening and Simplification:** Complex terms are shortened to make them easier to use in everyday speech, such as app for application or lab for laboratory.

English is especially adaptive, making it ideal for responding quickly to innovations. Many English terms become international. In countries where English is not the primary language, scientific terms are often adopted as-is. For example, in French, Japanese, and Russian, words like laser, computer, and software are widely used without translation. This helps streamline international cooperation and reduces the need to constantly reinvent terminology. However, the global dominance of English also means that innovations first described in other languages may only gain global recognition after being translated into English, which can delay dissemination. One major challenge in scientific English is the potential for ambiguity. Some terms may have different meanings in different fields or evolve over time. For instance, the word model can refer to a physical prototype, a theoretical framework, or a computational simulation, depending on context. Also, new words sometimes enter public usage before they are fully defined in scientific terms, leading to misunderstanding. An example is AI (artificial intelligence), which is often portrayed differently in media and

pop culture than in academic and technical literature. While English provides a common language for science, it can be a barrier for researchers whose first language is not English. They may struggle with complex grammar, idiomatic expressions, or subtleties in terminology that affect comprehension and publication success. Including real-world examples of terminology use in specific fields helps illustrate how terminology develops and functions in practice. Medicine is a field where precision is vital. Terms such as hypertension, diabetes mellitus, and myocardial infarction are standardized and used globally. Latin and Greek roots dominate here, helping professionals across countries understand diagnoses and treatments. For instance, cardiology (heart study) or dermatitis (skin inflammation) have consistent meanings in all languages that use English-based terminology. In computing, English dominates due to the field's origins in the United States and the global dominance of American tech companies. Terms such as algorithm, interface, bandwidth, firewall, and encryption are part of a shared digital vocabulary. These terms are not only used in English-speaking countries but have become standard in technical education and software interfaces worldwide. As global awareness of climate change increases, environmental science has introduced new terms into everyday use. Words like carbon neutral, greenhouse gases, recycling, sustainability, and biodiversity are no longer confined to scientific circles. The adoption of these terms into policy-making, education, and the media illustrates how scientific terminology can influence society at large.

## **Conclusion**

The development of English terminology in science and technology is a reflection of the dynamic relationship between language, knowledge, and global communication. From its classical roots in Latin and Greek to its modern innovations driven by technological change, English has proven itself adaptable, efficient, and influential in shaping scientific discourse. Historically, the shift from Latin to English signaled a new era of accessibility and innovation, paving the way for the global exchange of ideas. The linguistic tools used by English—borrowing, compounding, affixation, and acronym formation—allow for the quick creation of new terms in response to the demands of ever-evolving fields. Standardization organizations have helped ensure that these terms are consistent, reducing ambiguity and enhancing collaboration. Yet, challenges remain. Non-native speakers often face barriers, and the dominance of English risks marginalizing other languages and cultures in science. Nevertheless, English continues to be the cornerstone of global scientific and technological communication. As new technologies and disciplines emerge, so too will

new terms—ensuring that English remains not only the language of innovation but also a powerful connector of minds across the world.

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## **STATISTICAL ANALYSIS OF THE EFFECTIVENESS OF DENTAL IMPLANTS**

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**ABSTRACT:** Dental implants have emerged as a prominent solution for the replacement of missing teeth, offering substantial functional, aesthetic, and psychological benefits to patients. Over the past few decades, advances in biomaterials and surgical protocols have led to higher success rates, with multiple clinical studies reporting long-term implant survival exceeding 90%. Nonetheless, discrepancies exist across different patient populations, implant materials, and clinical approaches, underscoring the need for rigorous statistical evaluations. This article presents a comprehensive review of the statistical analysis of dental implant effectiveness, addressing survival rates, marginal bone loss, peri-implantitis incidence, and patient satisfaction scores. By synthesizing findings from randomized controlled trials, observational studies, and meta-analyses, it aims to highlight the key factors influencing implant success, ranging from surgical techniques and patient health status to immediate versus delayed loading protocols. The discussion underscores the necessity of standardized outcome measures and methodological consistency in future implant research. Ultimately, robust statistical evidence not only supports the efficacy of dental implants but also guides clinicians in optimizing treatment planning, improving long-term stability, and refining patient-centered care.

**KEY WORDS:** Dental implants, statistical analysis, effectiveness, survival rate, marginal bone loss, peri-implantitis, implant materials, patient satisfaction, surgical protocols.

### **INTRODUCTION**

Dental implants, defined as biocompatible fixtures embedded within the jawbone to replace missing tooth roots, have revolutionized modern dentistry. Initially designed as an alternative to conventional fixed bridges and removable dentures, implants now form the cornerstone of full-mouth rehabilitation strategies in patients facing partial or total edentulism [Smith, 2018, 45]. Their widespread adoption parallels technological progress in oral surgery, biomaterials, and diagnostic imaging, elevating both short-term and long-term success rates.

Despite the consensus that implants yield superior functionality and esthetics compared to traditional prostheses, variations in clinical outcomes persist. Discrepancies often relate to diverse factors, including the patient's systemic health, smoking habits, bone quality, surgical proficiency, and compliance with follow-up care [Johnson, 2020, 112]. Furthermore, the introduction of newer implant surfaces—ranging from titanium plasma spray to acid-etched or zirconia-based designs—has prompted questions regarding optimal material selection, each with distinct osteointegration profiles and mechanical characteristics [Rossi, 2019, 63].

To address these complexities, clinicians and researchers have turned to statistical analysis as a means to appraise implant performance. Retrospective and prospective cohort studies, randomized controlled trials, and meta-analyses collectively enrich our understanding of how well implants fare under varying clinical conditions and loading protocols. Such analyses provide the basis for evidence-based recommendations, from standardizing immediate loading techniques to establishing guidelines on antibiotic prophylaxis and risk factor management [Mueller, 2021, 28].

This article investigates the statistical underpinnings of dental implant effectiveness, tracing the evolution of analytical approaches in implant research. Through a comprehensive literature review and structured discussion of survival rates, marginal bone loss, and patient-centered evaluations, the study elucidates both the strengths and limitations of current knowledge. By contextualizing findings from diverse trials, it seeks to inform practitioners and policymakers in refining therapeutic protocols for improved outcomes.

## **LITERATURE REVIEW**

### **1. Historical Perspectives on Dental Implant Research**

The modern dental implant era began in the 1960s with Per-Ingvar Brånemark's pioneering work on titanium's ability to osseointegrate with bone [Peterson, 2017, 77]. Early research focused largely on case reports and small clinical trials, which highlighted promising results but lacked the power and methodological rigor to draw definitive conclusions. Over time, the proliferation of controlled trials enabled more robust statistical analyses, revealing success rates that generally exceeded 80–90% at five years.

Subsequent advancements involved integrating standardized outcome measures, such as the survival rate (the proportion of implants remaining in situ over time), marginal bone loss levels, and patient-reported satisfaction [Khan, 2019, 39]. Traditional outcome measures—like radiographic evaluations of alveolar bone height—were gradually refined to yield more accurate and reproducible data. However, variations in

measurement protocols, inconsistent definitions of “success” versus “survival,” and disparate follow-up periods complicated cross-study comparisons [Smith, 2018, 47].

## **2. Statistical Innovations in Implant Research**

From a methodological standpoint, dental implant studies progressed from descriptive case series to more sophisticated approaches. The introduction of regression models allowed researchers to isolate independent risk factors, such as smoking status or bone density, while survival analyses (e.g., Kaplan–Meier curves) facilitated time-to-event evaluations [Garcia, 2020, 56]. These methods provided deeper insights into the subtle influences of patient- and procedure-related variables on implant longevity.

Randomized controlled trials (RCTs), considered the gold standard of clinical research, emerged more frequently in the 1990s and early 2000s. RCTs comparing immediate loading against delayed loading or contrasting different implant surface treatments harnessed statistical significance tests—like ANOVA, chi-square, or Student’s t-test—to ascertain whether observed outcome differences were more than random fluctuations [Zhou, 2021, 18]. Meanwhile, meta-analyses and systematic reviews synthesized findings across multiple RCTs or observational studies, enhancing result generalizability [Mueller, 2021, 29].

## **3. Key Outcome Indicators in Implant Studies**

### **3.1 Survival Rate**

Often regarded as the primary measure, the survival rate quantifies implants that remain functional within the oral cavity over a specified duration. Multiple studies converge on a 5-year survival rate ranging between 90% and 98% [Smith, 2018, 50]. Longer-term follow-ups (e.g., 10 or 15 years) typically witness slightly lower figures, though they remain robustly above 85% in well-controlled cohorts [Rodriguez, 2016, 89]. The diversity in survival estimates underscores the necessity of standardized definitions and consistent follow-up intervals for meaningful inter-study comparisons.

### **3.2 Success Rate and Marginal Bone Loss**

While survival rate encompasses functional presence (i.e., whether the implant remains in the mouth), success rate demands stricter criteria. For an implant to be considered successful, it must exhibit minimal peri-implant radiolucency, marginal bone loss under a certain threshold (commonly 1.5 mm in the first year, then 0.2 mm annually), and the absence of pain or infection [Carlsson, 2020, 35]. Peri-implantitis, manifested by progressive bone loss and gingival inflammation, remains a leading cause of late implant failure, making vigilant monitoring of marginal bone levels a crucial diagnostic step [Vasquez, 2019, 73].

### **3.3 Patient-Reported Outcomes**

Recent years have witnessed growing interest in patient-centered metrics, such as self-reported satisfaction, comfort, and esthetic perception. Validated instruments—like the Oral Health Impact Profile (OHIP) or specialized questionnaires—provide quantitative scores that can be statistically analyzed [Johnson, 2020, 117]. They aid in capturing the psychosocial dimensions of implant therapy, offering a holistic view that complements purely clinical endpoints. Although subjective, these outcomes significantly influence patient adherence and long-term success.

### **3.4 Risk Factors and Covariates**

Multiple studies identify risk factors that compromise implant success, including smoking, uncontrolled diabetes, poor oral hygiene, and insufficient alveolar bone volume. In statistical terms, these risk factors operate as explanatory or independent variables that correlate with dependent variables like survival rate or marginal bone loss [Rossi, 2019, 65]. Techniques like multivariate logistic regression allow investigators to measure the relative weight of each risk factor while controlling for confounders, clarifying complex interactions in clinical practice [Fischer, 2018, 64].

## **DISCUSSION**

### **1. Methodological Considerations in Statistical Analysis**

Given the array of studies on implant efficacy, methodological rigor is paramount. Variation in sample size, follow-up duration, and inclusion criteria can generate inconsistent or contradictory findings. For instance, a single-center study using 50 implants with two years of follow-up may report a 98% survival rate, while a multicenter analysis spanning 10 years and 500 implants might yield a survival rate closer to 90% [Smith, 2018, 52]. Both figures are “correct” within their respective contexts, yet reconciling them requires careful appraisal of the underlying data.

#### **1.1 Randomization and Blinding**

Randomization minimizes selection bias by ensuring that baseline characteristics (e.g., age, systemic health) are evenly distributed across test groups, thus enhancing comparability [Lee, 2019, 101]. Blinding—particularly double-blind protocols where neither the clinician nor the patient knows which type of implant or loading strategy is used—further reduces bias. However, executing double-blind protocols in surgical contexts can be challenging, especially when implant hardware is visibly distinct [Mueller, 2021, 31].

#### **1.2 Sample Size Determination**

The reliability of statistical inferences partly hinges on adequate sample sizes. Underpowered studies may fail to detect meaningful differences (Type II error), while

overpowered studies might highlight trivial discrepancies as statistically significant [Fischer, 2018, 66]. Appropriate sample size calculations, often guided by pilot data or effect-size estimates from existing literature, are integral to methodologically sound RCTs or cohort analyses.

### **1.3 Defining “Failure”**

Dental implant “failure” remains variably defined. Some authors label an implant as failed only if it is removed or replaced, whereas others apply stricter radiographic or clinical criteria [Garcia, 2020, 58]. The inclusion of “late failures”—where the implant initially integrates successfully but eventually succumbs to peri-implantitis or mechanical overload—further complicates the classification. While adopting unified criteria would facilitate cross-study comparison, heterogeneity persists, impeding straightforward data pooling in meta-analyses.

## **2. Survival and Success Rates: A Closer Look**

Numerous systematic reviews and meta-analyses indicate that the average 5-year survival rate for modern dental implants consistently exceeds 90% [Smith, 2018, 53]. However, success rates are subject to narrower definitions, with a smaller proportion of implants meeting more exacting standards (e.g., bone loss <1.5 mm, absence of soft tissue inflammation). A meta-analysis of 10 prospective studies placed the 5-year success rate at around 85%, reflecting a subset of implants with minimal complications [Khan, 2019, 41].

From a clinical standpoint, the discrepancy between survival and success underscores the importance of robust post-operative monitoring. Even if an implant remains in situ, progressive bone loss or peri-implant mucositis can degrade function and patient satisfaction. Regular diagnostic imaging and periodic evaluations of probing depth are essential for early detection of pathological changes [Zhou, 2021, 19].

## **3. Impact of Surgical Protocols and Loading Strategies**

### **3.1 Immediate vs. Delayed Loading**

A significant debate in implant dentistry concerns loading strategies. Traditional protocols prescribe a healing period of three to six months before final prosthesis placement to secure osseointegration. In contrast, immediate loading attempts to affix a provisional or final restoration within days or even hours of implant placement [Vasquez, 2019, 75]. Proponents cite shorter treatment times and potentially greater patient satisfaction, while critics question the risk of micromovements that could jeopardize initial stability.

Meta-analytical data reveals that immediate loading can achieve survival rates comparable to conventional loading in carefully selected cases—e.g., patients with adequate bone quality or where multiple implants are splinted in full-arch rehabilitations [Johnson, 2020, 118]. However, for patients with compromised bone or systemic issues, immediate loading can elevate failure risk by stressing immature bone-implant interfaces.

### **3.2 One-Stage vs. Two-Stage Surgery**

Two-stage surgery involves placing the implant fixture, allowing a healing period, and subsequently reopening the soft tissue to attach an abutment. In contrast, one-stage protocols position a healing abutment simultaneously with the implant fixture, obviating a second surgical intervention [Rodriguez, 2016, 91]. While one-stage surgery simplifies the patient experience, potential drawbacks include increased exposure to oral flora. However, several systematic reviews report negligible differences in success rates when strict aseptic protocols are followed [Smith, 2018, 54].

## **4. Influence of Patient-Specific Factors**

### **4.1 Smoking**

Smoking has long been recognized as a major risk factor for implant failure. High nicotine levels constrict peripheral blood vessels, impairing local microcirculation and hindering bone regeneration. Meta-analyses consistently show that smokers face a 1.5 to 2 times higher likelihood of implant failure compared to non-smokers, with heavy smokers (>20 cigarettes/day) exhibiting even more pronounced discrepancies [Rossi, 2019, 66]. However, cessation strategies prior to surgery can mitigate these risks.

### **4.2 Systemic Health Conditions**

Uncontrolled diabetes, immune disorders, and osteoporosis may compromise osseointegration by affecting bone turnover and wound healing [Carlsson, 2020, 36]. Patients with diabetes, for instance, experience delayed angiogenesis and collagen synthesis, heightening infection susceptibility. Nonetheless, well-controlled diabetic patients can achieve success rates approximating those of healthy individuals, provided that glycemic levels remain stable and professional maintenance protocols are implemented [Zhou, 2021, 20].

### **4.3 Bone Quantity and Quality**

Sufficient alveolar bone height, width, and density are prerequisites for stable implant placement. Advanced ridge resorption necessitates additional procedures such as sinus lifts or bone grafts, each introducing added complexity and cost [Mueller, 2021, 30]. Prosthetic planning that leverages three-dimensional radiographic imaging (e.g., cone-

beam computed tomography) refines site selection and angle orientation, correlating strongly with elevated survival rates [Lee, 2019, 103].

## **5. Materials and Surface Technologies**

### **5.1 Titanium vs. Zirconia**

Commercially pure titanium and titanium alloys remain the gold standard for dental implants due to their mechanical strength and excellent biocompatibility. However, zirconia-based implants have gained traction in patients with metal sensitivity or heightened aesthetic demands, thanks to their tooth-colored appearance [Khan, 2019, 42]. Current statistics suggest that zirconia implants can achieve survival rates comparable to titanium in the short term (3–5 years), though robust long-term data remain limited.

### **5.2 Surface Modifications**

Implant surfaces exhibit a broad spectrum of textures and treatments, including acid etching, plasma spraying, sandblasting, and anodizing [Garcia, 2020, 59]. Such modifications aim to augment the surface area and roughness, thereby facilitating faster bone deposition and improved mechanical interlocking. In systematic reviews, moderately rough surfaces (Sa around 1–2  $\mu\text{m}$ ) consistently outperform smooth (turned) surfaces in terms of osseointegration speed and initial stability [Smith, 2018, 55]. Yet, excessive roughness may also predispose to bacterial colonization, highlighting the delicate equilibrium necessary for optimal clinical outcomes [Fischer, 2018, 65].

## **6. Advances in Digital Implant Dentistry**

Recent years have witnessed the rapid integration of digital technologies in implant dentistry. Computer-aided design (CAD) and computer-aided manufacturing (CAM) facilitate custom abutment and prosthesis fabrication, minimizing chair-time and improving fit. Additionally, guided surgery, enabled by cone-beam CT scans and specialized software, enhances accuracy by generating surgical templates that direct osteotomy sites [Vasquez, 2019, 78]. Studies comparing freehand versus guided surgery frequently cite significantly lower deviations from planned implant angulations in digitally guided groups, culminating in higher success rates [Zhou, 2021, 19]. Nonetheless, rigorous statistical validation is ongoing, especially regarding cost-benefit analyses.

## **RESULTS**

A synthesis of the extensive literature on dental implant effectiveness underscores a generally high success rate across patient populations, implant systems, and treatment protocols. Key quantitative highlights include:

# 1. **Five-Year Survival Rate**

Most studies corroborate a five-year survival rate exceeding 90%, with some meta-analyses indicating figures of 94–96% [Smith, 2018, 53]. Factors such as strict patient selection (excluding heavy smokers or poorly controlled diabetics) correlate with the upper echelons of these ranges.

# 2. **Marginal Bone Loss Ranges**

Typically, marginal bone loss in the first year ranges from 0.5 to 1.5 mm, followed by an annual loss of approximately 0.1–0.2 mm [Rossi, 2019, 67]. Sustained or accelerating resorption points to possible peri-implant pathology or biomechanical overload.

# 3. **Smoking-Related Failure Rates**

Meta-analyses attribute a significantly higher failure rate (10–15% in some cohorts) to smoker groups compared to their non-smoking counterparts (3–5%) [Rodriguez, 2016, 92]. Abstinence from smoking around the surgical period and beyond markedly improves implant outcomes.

# 4. **Immediate Loading Success**

Immediate loading protocols in well-selected patients yield survival rates comparable to conventional loading (90–95%) [Vasquez, 2019, 78]. However, cases with suboptimal bone density or compromised healing capacity remain better suited to traditional delayed loading approaches.

# 5. **Zirconia vs. Titanium Longitudinal Data**

While zirconia demonstrates promising short-term success (3–5 years) in the 90–92% range, titanium still prevails with more robust evidence for 10-year and 15-year follow-ups [Khan, 2019, 42]. Additional large-scale trials are warranted to clarify zirconia’s viability in extended time frames.

# 6. **Patient Satisfaction Indices**

High patient satisfaction stems from improved masticatory function, esthetics, and psychological well-being. Surveys report 85–90% of patients rating implant therapies as “highly satisfactory” or “transformative” [Johnson, 2020, 120]. This subjective dimension parallels clinical success in driving acceptance and adherence to maintenance schedules.

Collectively, these results suggest that dental implants remain a remarkably predictable treatment modality, provided that clinicians adhere to evidence-based protocols and conduct thorough risk assessments. The broad alignment of survival rates across numerous cohorts underscores consistent performance, yet dedicated attention to minor

variables—like micromovements during early healing—can tip the scales between success and complications [Fischer, 2018, 66].

## CONCLUSION

The statistical analysis of dental implant effectiveness demonstrates compelling evidence of long-term clinical success, typically exceeding 90% survival over five years and retaining substantial stability in 10-year cohorts. This reliability, spurred by progress in surface engineering, surgical proficiency, and patient-specific protocols, cements dental implants as an integral component of contemporary restorative dentistry. However, dissecting the nuances behind these high-level statistics reveals a delicate interplay of risk factors, patient habits, and procedural decisions.

Revisiting the principal findings:

1. **Survival vs. Success:** While survival rates remain robust, they may overlook minor yet clinically significant complications, emphasizing the need for standardized “success” benchmarks.
2. **Influence of Risk Factors:** Smoking and systemic diseases like diabetes substantially modulate implant outcomes. Achieving optimum glycemic control and encouraging smoking cessation can narrow the gap in failure rates.
3. **Technological Innovations:** Digital planning, guided surgery, and advanced biomaterials have heightened both predictability and patient satisfaction. Yet, these approaches necessitate further large-scale trials to ascertain cost-effectiveness and universal applicability.
4. **Patient-Centered Metrics:** Beyond clinical parameters, patient-reported outcomes spotlight the importance of esthetic perception, comfort, and psychological well-being. Incorporating these measures complements purely quantitative success indicators.
5. **Standardization and Future Directions:** Heterogeneity across implant studies underscores the pressing need for universal definitions of failure, uniform data collection protocols, and transparent reporting of confounders. With the field evolving rapidly—spanning immediate loading, novel materials, and augmented reality surgical techniques—ongoing statistical scrutiny remains essential for refining guidelines and optimizing patient care.

In sum, dental implant therapy, underpinned by robust statistical evidence, provides a reliable restorative avenue that addresses functional deficits and enhances quality of life. Going forward, improvements in study design, multi-center collaborations, and advanced analytics hold promise for resolving outstanding debates on material superiority and best-practice protocols. By harmonizing clinical expertise with

rigorous data interpretation, implant dentistry can continue bridging the gap between state-of-the-art innovation and everyday patient benefit.

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**Bachadon saratoni: Etiologiyasi, patogenezi va zamonaviy davolash usullari.**

**TALABA:** Mahzumabonu Hayrullayeva Muzaffarbek qizi. TDSI 3-kurs.

Davolash ishi.

**ILMIY RAHBAR:** Patalogik anatomiya va fiziologiya kafedrası. Dotsent.

**Botir Tursinboyevich Allaberdiev**

**Annotatsiya:** Bachadon saratoni patogenezi murakkab va ko‘p bosqichli jarayon bo‘lib, hujayra darajasida turli patologik o‘zgarishlar asosida shakllanadi. Ushbu jarayon genetik mutatsiyalar, gormonal nomutanosiblik, immun tizimining yetarlicha faoliyat ko‘rsatmasligi va tashqi muhit omillari bilan bog‘liq. Ushbu maqolada bachadon saratoni bilan qisqacha tanishib chiqamiz.

**Аннотация:** Патоген рака матки является сложным и многогранным процессом, образующим различные патологические изменения в клетке. Этот процесс связан с генетическими мутациями, гормональным дисбалансом и отсутствием работы иммунной системы и факторов внешней окружающей среды. В этой статье мы кратко представим кабельный рак.

**Annotation:** Uterine cancer pathogen is a complex and multifaceted process, forming on different pathological changes in the cell. This process is associated with genetic mutations, hormonal imbalance, and lack of operation of the immune system and external environment factors. In this article, we will briefly introduce cable cancer.

**Kalit sôzlar:** Bachadon saratoni, epitelial hujayralar, DNK mutatsiyasi, esterogen, progesteron, endometriy zararlanishi

Tadqiqotning maqsadi: Bachadon saratoni dunyo bo‘ylab ayollar orasida keng tarqalgan o‘sma kasalliklaridan biri hisoblanadi. Ushbu ilmiy ishning asosiy maqsadi – bachadon saratonining etiologik omillari va patogenez mexanizmlarini chuqur tahlil qilish, zamonaviy diagnostika hamda davolash usullarini o‘rganishdir.

Dolzarbligi: Bugungi kunda bachadon saratoni ayollar salomatligiga tahdid soluvchi eng jiddiy kasalliklardan biri bo‘lib, uning rivojlanish sabablari va mexanizmlarini anglash kasallikning oldini olish, erta tashxis qo‘yish va samarali davolash uchun muhim ahamiyat kasb etadi. Genetik omillar, virusli infeksiyalar (ayniqsa, HPV), gormonal nomutanosiblik va atrof-muhit ta’siri ushbu kasallikning asosiy etiologik sabablaridan hisoblanadi.

Bachadon saratoni rivojlanishida epitelial hujayralarning anormal proliferatsiyasi, DNK mutatsiyalari va o‘sma supressor genlarining faoliyati buzilishi muhim rol

o'ynaydi. Gormonal omillar, ayniqsa, estrogen va progesteron balansining buzilishi, hujayralarning nazoratsiz bo'linishiga olib kelishi mumkin. Bundan tashqari, immunitet tizimining zaiflashishi va yallig'lanish jarayonlari ham kasallik patogenezida muhim omil hisoblanadi. Ayollar orasida saraton kasalliklari orasida 6-o'rinda turadi. O'rtacha 50-60 yoshdan keyin rivojlanadi, ammo yosh ayollarda ham uchraydi. Xavf omillarining ortib borishi sababli kasallik yoshargan.

## 2. Etiologiya va xavf omillari

### Gormonal disbalans

Estrogen gormoni ortiqcha ishlab chiqarilishi – endometriy hujayralarining o'sishini tezlashtirib, mutatsiyalarga olib kelishi mumkin.

Progesteron yetishmovchiligi – estrogenning ingibitsion yetishmovchiligi tufayli nazoratsiz proliferatsiyaga sabab bo'ladi.

Tuxumdon polikistik sindromi (PCOS) – anovulyatsiya sabab endometriy doimiy ravishda estrogen ta'sirida qoladi.

### Genetik omillar

Lynch sindromi – MSH2, MLH1, MSH6 genlarining mutatsiyasi.

PTEN genining mutatsiyasi – Cowden sindromi bilan bog'liq.

P53 mutatsiyasi – seroz bachadon saratonida kuzatiladi.

## 3 Ekologik va turmush tarzi omillari

Oshqozon va qandli diabet – insulin rezistentligi endometriy o'sishini qo'zg'aydi.

Gipertenziya – yallig'lanish jarayonlarini kuchaytirib, xavfni oshiradi.

Hayot davomida tug'ruq bo'lmaganligi – "Unopposed estrogen exposure" kontseptsiyasiga ko'ra xavf omili hisoblanadi.

## 4.. Patogenez va molekulyar mexanizmlar

Bachadon saratonining rivojlanishida quyidagi mexanizmlar kuzatiladi:

Endometriyal giperplaziya modeli:

Birinchi bosqich – oddiy giperplaziya

Ikkinchi bosqich – atipik giperplaziya

Uchinchi bosqich – in situ karcinoma

To'rtinchi bosqich – invaziv saraton

Molekulyar mexanizmlar. PI3K/AKT/mTOR yo'li – hujayralarning omon qolishi va o'sishini qo'zg'atadi.

Wnt/beta-katenin yo'li – endometriyal saraton subtiplarida faollashgan. Mikrosatellit beqarorligi (MSI) – Lynch sindromiga bog'liq bemorlarda kuzatiladi. Klinik simptomlar va diagnostika. Klinik simptomlar. Menopauzadan keyingi qon ketish – eng

muhim belgi. Hayz tsiklining buzilishi. Surunkali qorin pastki qismida og‘riq. Vaginal oqindi (pushti yoki qonli) Kech bosqichlarda – qorin hajmining kattalashishi

**Xulosa:** Bachadon saratoni ayollar orasida eng ko‘p uchraydigan onkologik kasalliklardan biri bo‘lib, uning etiologiyasi, patogenezi, klinik belgilarini o‘rganish va zamonaviy diagnostika hamda davolash usullarini ishlab chiqish tibbiyot fanida muhim ahamiyat kasb etadi. Tadqiqotlar shuni ko‘rsatadiki, ushbu kasallik asosan gormonal disbalans, genetik omillar va turmush tarziga bog‘liq omillar natijasida rivojlanadi.

#### 1. Bachadon saratonining rivojlanish omillari

Tadqiqotlar shuni tasdiqlaydiki, bachadon saratonining rivojlanishida estrogen gormonining haddan tashqari ko‘payishi muhim rol o‘ynaydi. Ayniqsa, menopauzadan keyin progesteron darajasi pasaygan ayollarda xavf yuqori bo‘ladi. Shu bilan birga, polikistik tuxumdon sindromi, metabolik sindrom, semizlik, gormonal terapiyalar va uzoq muddat farzand ko‘rmaslik kabi omillar ham kasallikni rivojlantirishga hissa qo‘shadi. Genetik jihatdan esa Lynch sindromi va PTEN, P53, MSI mutatsiyalari saraton xavfini oshiruvchi omillar hisoblanadi.

#### 2. Kasallikning patogenezi va bosqichlari

Bachadon saratoni rivojlanishi asosan endometriy hujayralarining nazoratsiz bo‘linishi va giperplaziyasidan boshlanadi. Dastlab hujayralarda atipik o‘zgarishlar kuzatilib, vaqt o‘tishi bilan ular invaziv saratonga aylanadi. Molekulyar mexanizmlar nuqtayi nazaridan qaraganda, PI3K/AKT/mTOR hamda Wnt/beta-katenin yo‘llari saraton rivojlanishida muhim rol o‘ynaydi. Ayniqsa, hujayra siklini boshqaradigan p53 genidagi mutatsiyalar kasallikning agressiv shakllarida ko‘proq kuzatiladi.

#### 3. Klinik belgilari va diagnostika

Bachadon saratonining eng asosiy belgilari menopauzadan keyin qon ketishi, hayz siklining buzilishi, surunkali qorin og‘rig‘i va vaginal oqindining o‘zgarishi bilan namoyon bo‘ladi. Bu belgilar aksariyat bemorlarda kech bosqichda paydo bo‘lishi mumkinligi sababli erta diagnostika juda muhim hisoblanadi. Diagnostika uchun transvaginal ultratovush (UZI), biopsiya, MRI, gisteroskopiya, CA-125 kabi onkomarkerlar tahlili muhim ahamiyatga ega. Ayniqsa, biopsiya eng ishonchli tashxis usuli hisoblanadi.

#### 4. Zamonaviy davolash usullari

Bachadon saratonining eng samarali davolash usuli jarrohlik bo‘lib, bunda total gisterektomiya (bachadon va tuxumdonlarni olib tashlash) amalga oshiriladi. Keyinchalik kasallik bosqichiga qarab radioterapiya, kimyoterapiya, gormonal terapiya yoki immunoterapiya qo‘llaniladi.

Kimyoterapiya – III-IV bosqichlarda qoʻllanadi, asosiy dorilar: Sisplatin, Paklitaksel, Doksorubitsin.

Gormonal terapiya – estrogen retseptorlariga bogʻliq oʻsimtalarda qoʻllanadi, bunda Megestrol asetat yoki Tamoksifen ishlatiladi.

Immunoterapiya – MSI-mutatsiyasi mavjud boʻlgan bemorlarda samarali boʻlishi mumkin.

#### 5. Kasallikning oldini olish va prognozi

Bachadon saratoni oʻz vaqtida aniqlansa, prognozi nisbatan yaxshi boʻlib, 5 yillik yashash darajasi I bosqichda 85-90%, III bosqichda 50-60%, IV bosqichda esa 15% dan kamni tashkil etadi. Kasallikning oldini olish uchun quyidagi choralar muhim hisoblanadi:

Regulyar skrining tekshiruvlari – ayniqsa, menopauzadan keyin.

Sogʻlom ovqatlanish va vaznni nazorat qilish – semizlik xavfni oshiradi.

Kombinatsiyalangan kontratseptiv vositalarni ishlatish – estrogen-progesteron balansini taʼminlash uchun.

Jismoniy faollik va stressni kamaytirish – metabolik omillarning kamayishiga yordam beradi.

6. Bachadon saratoniga qarshi zamonaviy tadqiqotlar: Soʻnggi yillarda bachadon saratonining genetik terapiya, target terapiya va immunoterapiya kabi innovatsion davolash usullari boʻyicha koʻplab tadqiqotlar olib borilmoqda. Masalan, Pembrolizumab va Dostarlimab kabi dorilar PD-1/PD-L1 yoʻli orqali immunitet tizimini faollashtirib, saraton hujayralarini yoʻq qilishga yordam beradi..

Taklifim: 1. Bachadon saratoni ayollar salomatligiga katta xavf tugʻdiradigan kasallik boʻlib, uning rivojlanishida gormonal, genetik va ekologik omillar muhim rol oʻynaydi.

2. Kasallikni erta aniqlash hayot sifatini yaxshilash va davolash samaradorligini oshirishga yordam beradi. Shu sababli, ayollar skrining tekshiruvlaridan oʻtishi shart.

3. Zamonaviy tadqiqotlar shuni koʻrsatadiki, individuallashtirilgan yondashuv va genetik terapiya kelajakda ushbu kasallikni samarali davolashning kaliti boʻlishi mumkin.

4. Bachadon saratoniga chalinish xavfini kamaytirish uchun ayollar sogʻlom turmush tarzini olib borishlari, oʻz vaqtida ginekologik tekshiruvlardan oʻtishlari va xavf omillarini kamaytirishlari kerak.

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## TECHNOLOGY FOR ORGANIZING EXPERIMENTAL WORK TO DEVELOP COMMUNICATIVE SKILLS OF FUTURE ROAD ENGINEERS

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**Annotation:** this article presents the technology for organizing experimental work aimed at developing and enhancing communication skills for students in the field of road engineering education. The main goal of the research is to develop communication, expression of ideas, and teamwork skills—key components of professional competence for future engineers—through the use of modern technologies in the educational process

**Keywords:** road engineer, communication skills, experimental work, educational technology, interactive method, digital tools.

**Annotatsiya:** ushbu maqolada yo‘l muhandisligi ta‘lim yo‘nalishi talabalari uchun kommunikativ ko‘nikmalarni shakllantirish va rivojlantirishga doir tajriba-sinov ishlarini tashkil etish texnologiyasi bayon qilingan. Tadqiqotning asosiy maqsadi bo‘lajak muhandislarning kasbiy kompetensiyasida muhim o‘rin tutuvchi muloqotga kirishish, fikrni ifodalash va jamoada ishlash ko‘nikmalarini ta‘lim jarayonida zamonaviy texnologiyalar asosida rivojlantirishdan iborat.

**Kalit so‘zlar:** yo‘l muhandisi, kommunikativ ko‘nikma, tajriba-sinov, ta‘lim texnologiyasi, interaktiv metod, raqamli vositalar.

**Аннотация:** В статье описывается технология организации опытно-экспериментальной работы по формированию и развитию коммуникативных умений у студентов направления подготовки «Инженер-дорожник». Основная цель исследования – развитие коммуникативных навыков, умения выражать свои мысли и работать в команде, которые являются важными в профессиональной компетентности будущих инженеров, с использованием современных технологий в образовательном процессе.

**Ключевые слова:** инженер-дорожник, коммуникативные навыки, эксперимент, образовательные технологии, интерактивный метод, цифровые инструменты.

**Introduction.** In today’s era of globalization and digital transformation, specialists working in technical fields are required not only to possess high-level professional

knowledge and skills, but also strong communicative competence. This is especially relevant for engineers involved in the design, construction, and operation of highways, whose activities often necessitate effective interaction with other specialists, clients, project teams, and the public. Therefore, during the training process of future road engineers, special attention must be paid to developing and enhancing their communication skills.

Current educational curricula place primary emphasis on acquiring professional-technical knowledge. However, it is often observed that students receive insufficient preparation in areas such as communication culture, speech style, teamwork, and the ability to express ideas both orally and in writing. This lack of preparation leads to difficulties in their practical activities, such as solving problematic situations, presenting technical documents, or working efficiently in teams.

As a result, the development of modern approaches aimed at fostering the communicative competence of future road engineers—particularly through the creation of a practical technology based on experimental studies—has become a pressing scientific and practical issue.

This article specifically addresses the issue of developing communicative skills and presents a scientifically grounded explanation of the content, stages, and effectiveness of the technology for organizing experimental work aimed at this goal.

Today, the processes of designing, constructing, and operating highways demand a high level of both professional and communicative preparedness. A road engineer must not only be capable of solving technical problems but also of establishing effective communication with various specialists and clearly and concisely expressing their thoughts. Therefore, developing communication skills among students studying in the field of road engineering is one of the most urgent challenges.

The research problem lies in the fact that the current education system lacks sufficiently systematized methodological approaches for developing the communicative competence of future road engineers.

**Methodology and literature used.** Communication skills play a crucial role in the professional training of future road engineers. This is because modern engineering activities require not only technical knowledge, but also effective communication, teamwork, negotiation, and presentation skills. Therefore, addressing this issue is of high relevance for today's educational system.

The problem has been widely studied within the fields of pedagogy and psychology by both international and local scholars. For example:

Russian educators such as V.A. Kan-Kalik, I.A. Zimnyaya, and E.G. Azimov have extensively analyzed pedagogical communication and the culture of professional dialogue.

Contemporary education researchers like J. Hattie and R. Marzano emphasize in their studies that the quality of communication between teachers and students directly influences the effectiveness of education.

Among Uzbek scholars, D.Sh. Abdullayeva, B. Hasanov, M. Sa'dullayeva, and N. Akhmedova have developed both theoretical and practical approaches for fostering communicative skills through interactive methods.

However, there remains a lack of systematic technology specifically designed to develop professional communicative skills tailored to students in the field of road engineering. While general pedagogical approaches exist, they do not sufficiently consider the unique characteristics of road engineering education—such as working with technical terminology, presenting projects, writing technical reports, and collaborating within multidisciplinary teams.

Current educational programs at the undergraduate level rarely include lessons, training sessions, or specialized modules and assignments directly aimed at developing communication skills. As a result, students face challenges in engaging in effective communication during real-world professional activities.

Therefore, this research offers a novel approach focused on addressing these gaps by developing a technology for improving the communicative skills of future road engineers through experimental and trial-based practices.

**Analysis and Results.** The main objective of the experimental work was to determine the level of development of communication skills among students studying road engineering and to assess the effectiveness of educational and training activities based on interactive and digital technologies.

The experiment was conducted at the Faculty of Engineering at Namangan State University, involving 60 third-year students. The students were divided into two groups: the experimental group (30 students) and the control group (30 students).

At the beginning of the experiment, the following indicators of communicative competence among students were evaluated:

*Table 1*

| Type of Skill             | Experimental Group (points) | Control Group (points) |
|---------------------------|-----------------------------|------------------------|
| Clear expression of ideas | 2.8                         | 2.9                    |

|                                   |     |     |
|-----------------------------------|-----|-----|
| Explanation of technical concepts | 2.5 | 2.6 |
| Teamwork                          | 2.6 | 2.7 |
| Presentation skills               | 2.3 | 2.4 |

Average grade: 2.55

An 8-week special course was organized with the experimental group. The following methods were used in the lessons:

- Discuss technical problems in a group using pinboard and fishbone techniques;
- Deliver presentations in real communication situations by analyzing clusters and problem situations;
- Sharing ideas and preparing presentations using digital tools (Google Jamboard, Padlet, Mentimeter);

Reflection and analysis phases were introduced after each lesson.

According to the final assessment results, after 8 weeks of training, the final diagnosis showed the following results:

*Table 2*

| Type of Skill                     | Experimental Group (points) | Control Group (points) |
|-----------------------------------|-----------------------------|------------------------|
| Clear expression of ideas         | 4.3                         | 3.0                    |
| Explanation of technical concepts | 4.1                         | 2.8                    |
| Teamwork                          | 4.4                         | 3.1                    |
| Presentation skills               | 4.5                         | 3.0                    |

Average score: Experimental group — 4.33, Control group — 2.97

The results showed the following:

- Training sessions organized through interactive and digital approaches significantly improved students' communication skills, articulate their ideas, explain technical concepts in simple language, and give presentations;
- Group work, active participation in questions and answers, and discussion of different opinions served to increase the social activity of students.

In the control group, where traditional teaching methods were used, there was no significant increase in skills, which proves the superiority of modern methodological approaches.

**Conclusion.** The formation and development of communicative skills in the professional training of future road engineers is an integral part of modern engineering education. The results of the conducted experimental work showed that special training sessions organized on the basis of interactive and digital technologies led to a significant increase in students' communicative competence.

The study confirmed the following:

1. Methodological approaches aimed at developing communication skills are important in improving the skills of future road engineers, such as clearly and fluently explaining technical concepts, making presentations, and working with a team.
2. Teaching methods using pinboards, fishbone, role-playing, problem situations, and digital applications activate students and create conditions for them to express their thoughts freely and logically.
3. The effectiveness of lessons based on innovative technologies is higher than that of traditional approaches, indicating that these results can be widely applied in educational practice.

On this basis, to systematically develop the communication skills of future road engineers:

- Inclusion of special modules and tasks aimed at developing communicative competence in curricula;
- Organizing training sessions based on interactive and digital tools;
- It is advisable to introduce methodological approaches that allow students to actively participate in a communicative environment close to practical situations.

By implementing this technology in practice, not only will students' knowledge and skills be enriched, but their professional readiness and social adaptability in society will also increase.

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## TRAINING METHODOLOGY AIMED AT DEVELOPING SPEED QUALITIES IN ATHLETES

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**Abstract:** The development of speed is a crucial component of athletic performance across a wide range of sports disciplines. As one of the most essential physical qualities, speed significantly contributes to competitive success in sports that require rapid movement, explosive acceleration, and high-intensity efforts over short durations. This paper explores the training methodology specifically designed to enhance speed qualities in athletes, with a focus on both the physiological and biomechanical foundations of speed development. The study analyzes various types of speed, including reaction speed, maximum running speed, acceleration, and speed endurance, and examines how each can be targeted through specific training interventions.

The effectiveness of different training methods—such as sprint drills, resisted sprints, plyometrics, neuromuscular activation exercises, and high-intensity interval training—is discussed in detail. Emphasis is placed on training periodization, progressive overload, motor control enhancement, and the integration of sport-specific movement patterns. The role of warm-up routines, recovery strategies, and individualized training programs is also addressed to ensure optimal adaptation and injury prevention. Empirical evidence from sports science literature and practical case studies supports the conclusion that speed development requires a combination of mechanical efficiency, neuromuscular coordination, and anaerobic power. Moreover, the implementation of modern technologies, such as timing gates, video analysis, and wearable motion sensors, allows for more precise monitoring and evaluation of speed training progress. This paper concludes that a systematic, evidence-based, and athlete-centered approach to speed training can lead to significant improvements in performance, particularly when programs are tailored to the athlete's sport, level of development, and physiological characteristics.

**Keywords:** Speed development, sprint training, athletic performance, acceleration, plyometrics, neuromuscular coordination, training methodology, reaction time, speed endurance, sports science

## **Introduction**

Speed is universally recognized as one of the most critical physical attributes in competitive sports. Whether in track and field events, football, basketball, combat sports, or any discipline that demands rapid execution of movement, speed often serves as a decisive factor in athletic success. It is not merely the ability to run fast over short distances, but rather a complex interplay of neuromuscular coordination, reaction time, explosive power, stride frequency, and mechanical efficiency. As a result, developing speed in athletes requires a multifaceted, scientifically grounded approach that goes far beyond traditional sprinting drills. The growing intensity and competitiveness of modern sports have compelled coaches and sports scientists to refine and rethink traditional training paradigms. Today, speed is viewed not as a fixed trait, but as a trainable quality that can be optimized through structured methodologies and targeted interventions. Training for speed involves enhancing several key components, including reaction speed, acceleration, maximum velocity, and speed endurance.<sup>1</sup> These qualities are underpinned by both physiological factors (such as muscle fiber type, anaerobic power, and neuromuscular activation) and biomechanical efficiency (including stride length, ground contact time, and posture control).

Modern speed training methodology incorporates a wide range of techniques and tools designed to stimulate neuromuscular pathways and improve explosive movement capabilities. These include resisted sprinting, assisted sprinting, plyometric exercises, technical drills, and high-intensity interval training (HIIT). In addition, strength and conditioning programs focused on developing power and mobility play a foundational role in improving force production and transfer efficiency during high-speed movements. Recovery, regeneration, and injury prevention are equally emphasized to ensure consistent progress without compromising athlete health. Technological advancements have also revolutionized the way speed is measured and improved. Wearable sensors, high-speed cameras, laser timing gates, and motion analysis software now provide accurate, real-time feedback, allowing coaches to detect

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<sup>1</sup> Young, W. B., McDowell, M. H., & Scarlett, B. J. (2001). Specificity of sprint and agility training methods. *Journal of Strength and Conditioning Research*, 15(3), 315–319.

inefficiencies and monitor the athlete's progress with precision.<sup>2</sup> These tools have made it possible to tailor programs to the individual's biomechanics, physiological profile, and sport-specific demands, thereby maximizing training outcomes. This paper seeks to investigate the theoretical principles and practical methods involved in speed development training. It aims to offer an in-depth understanding of the components that contribute to speed performance, review contemporary approaches supported by empirical evidence, and present best practices in designing and implementing effective training programs. Ultimately, the goal is to highlight the importance of an integrated, athlete-centered approach that takes into account individual variability, sport specificity, and long-term athletic development in the quest to enhance speed as a performance determinant.

### **Relevance of the topic**

In the contemporary world of competitive sports, where milliseconds can determine victory or defeat, the ability to perform at high speed has become one of the most vital determinants of athletic success. Speed is a foundational element in nearly every sporting discipline, from track and field to football, basketball, boxing, and beyond.<sup>3</sup> As athletic performance continues to evolve alongside advances in science and technology, the demand for structured, evidence-based training methods aimed at developing speed has grown exponentially. This makes the topic of speed training methodology not only timely but essential to modern sports science. The relevance of this subject lies in the multifaceted role that speed plays in sports performance. It is not limited to sprinting ability, but also encompasses reaction time, acceleration, change of direction, and sustained high-intensity effort—all of which are critical in game situations, combat scenarios, and time-based competitions.<sup>4</sup> Speed gives athletes a

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<sup>2</sup> Jo'rayev, B. (2021). *Yengil atletikada tezlik sifatini shakllantirish metodikasi*. Toshkent: O'zbekiston davlat jismoniy tarbiya va sport universiteti nashriyoti.

<sup>3</sup> Nishonov, O. T. (2020). Sportchilarda tezlikni rivojlantirishning ilmiy asoslari. *Jismoniy tarbiya va sport ilmiy-amaliy jurnali*, №2, 47–50.

<sup>4</sup> Karimov, Z. R. (2022). Jismoniy sifatlarni rivojlantirishda zamonaviy yondashuvlar. *Sport va innovatsiyalar jurnali*, №1, 33–36.

competitive edge by enabling them to respond faster, reach optimal positions quicker, and execute skills more efficiently. Thus, the enhancement of speed qualities is directly linked to improvements in both individual and team performance. Moreover, speed is not a purely genetic attribute—it is a trainable characteristic influenced by biomechanical, physiological, and neurological factors. With proper training protocols, athletes at different levels can develop their speed capacity. This includes improving stride mechanics, optimizing force application, enhancing neuromuscular coordination, and increasing anaerobic power. As such, the scientific study of how speed can be trained, measured, and improved is central to performance optimization. The importance of this topic is further underscored by its practical implications. Coaches, strength and conditioning specialists, and athletic trainers are constantly searching for methods to improve speed while minimizing the risk of injury.<sup>5</sup> With advancements in sports technology—such as motion sensors, timing gates, and biomechanical analysis—training programs can now be tailored to the individual needs of athletes. This personalization ensures more efficient progress, effective monitoring, and targeted interventions, all of which are key to sustainable athletic development. In addition, youth development programs, talent identification systems, and elite performance models all consider speed as a core indicator of athletic potential. As global competition intensifies, nations and institutions that effectively integrate speed training into their athletic systems are more likely to produce successful athletes. Therefore, developing and disseminating reliable speed training methodologies is not just a coaching concern, but a broader priority for sports science, physical education, and performance research communities. In conclusion, the training methodology aimed at developing speed qualities is a topic of high relevance in today's athletic landscape. It addresses the growing performance demands of competitive sports, supports scientific exploration in physical development, and offers practical value across all levels of athlete preparation. Understanding and improving speed through systematic training is crucial for maximizing athletic potential, reducing injury risk, and advancing the overall effectiveness of sports pedagogy.

### **Discussion**

The findings related to speed development in athletes reveal that speed is not an isolated ability but a composite of multiple interrelated components including

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<sup>5</sup> Qodirov, M. A. (2019). *Sport mashg'ulotlarida chidamlilik va tezlikni rivojlantirish usullari*. Termiz: TDPU nashriyoti.

acceleration, maximum velocity, reaction time, and speed endurance. Effective speed training must therefore take a comprehensive and individualized approach. The literature and practical observations confirm that improvements in speed are most successful when programs combine biomechanical precision, neuromuscular stimulation, and carefully managed physical load. One of the most significant aspects of speed development is the optimization of technique. Sprint mechanics, stride frequency and length, ground contact time, and posture alignment are all critical factors that influence how efficiently an athlete can generate speed. Training interventions such as resisted sprints, assisted sprinting, and plyometric exercises have demonstrated measurable improvements in force production and movement economy. These methods activate fast-twitch muscle fibers and enhance neuromuscular synchronization, resulting in faster and more explosive movements. Another important consideration is the role of strength and power development in speed training. Resistance training, when appropriately programmed, improves the force-generating capacity of muscles, which is essential for acceleration and sprinting. Athletes with higher relative strength and greater reactive strength indexes tend to exhibit superior sprint performance. Plyometric and ballistic training contribute to rapid force development, which is crucial for improving the transition from initial acceleration to top speed. Moreover, the importance of sport-specific speed should not be underestimated. While linear speed is essential in athletics, many sports require multidirectional speed, quick changes in direction, and reactive agility.<sup>6</sup> Therefore, training must also include cognitive components such as decision-making and visual-motor reaction drills to simulate real-game situations. Integrating these elements helps athletes to apply speed effectively within the context of their sport.

Technological tools such as GPS trackers, timing gates, and video analysis play a critical role in objectively measuring performance changes and refining training interventions. Data obtained from these tools allow coaches to adjust training loads, detect asymmetries or technical faults, and track progress over time. The ability to gather precise metrics enhances the personalization of training and promotes a scientific approach to speed development. Despite the advancements in training science, speed training also faces challenges. Athletes may plateau if progression is not

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<sup>6</sup> Xayitov, A., & Qo'ldoshev, B. (2020). *Sportchilar tayyorgarligini baholash va tahlil qilish asoslari*. Toshkent: "Yangi asr avlodi" nashriyoti.

well managed, and overtraining can lead to neuromuscular fatigue or soft-tissue injuries. Therefore, the principles of periodization, adequate recovery, and load monitoring are essential in long-term speed development. Additionally, younger athletes and those in early development stages require a gradual and age-appropriate progression to ensure safe and sustainable improvements.

### **Conclusion**

In conclusion, the development of speed qualities in athletes is a critical aspect of athletic performance and requires a systematic, evidence-based, and individualized approach. Speed is not a fixed trait but a dynamic quality that can be enhanced through well-designed training programs targeting various physiological and biomechanical components. Effective speed training includes technical drills, power and strength exercises, plyometrics, sport-specific agility tasks, and recovery protocols—all structured within a scientifically informed training cycle. Modern advancements in sports science and technology have greatly enhanced the ability to monitor, evaluate, and individualize speed training, allowing for precise performance tracking and informed coaching decisions. These tools not only improve outcomes but also contribute to injury prevention and long-term athlete development. Ultimately, speed training should be tailored to the specific demands of the sport, the athlete's individual characteristics, and the stage of their athletic development. When applied correctly, a multidimensional approach to speed development can significantly elevate athletic performance, contributing to competitive success and holistic physical development.

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## РОЛЬ МАРКЕТИНГА В РАЗВИТИИ АГРОБИЗНЕСА

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**Абстрактный.** В статье исследуются роль и значение маркетинга в обеспечении эффективной деятельности предприятий агропромышленного комплекса. Анализируются особенности применения маркетинговых стратегий в агропромышленном комплексе, их преимущества и проблемы. **Ключевые слова:** Агробизнес, маркетинг, маркетинговая стратегия, сельское хозяйство, рынок, конкуренция, потребитель, цена, качество, дистрибуция, реклама, бренд.

### AGROBIZNESNI RIVOJLANTIRISHDA MARKETINGNING O'RNI

**Annotatsiya.** Mazkur maqolada agrobiznes korxonalarining samarali faoliyatini ta'minlashda marketingning roli va ahamiyati ochib berilgan. Agrobiznes sohasida marketing strategiyalarini qo'llashning o'ziga xos xususiyatlari, ularning afzalliklari va muammolari tahlil qilingan.

**Kalit so'zlar:** Agrobiznes, marketing, marketing strategiyasi, qishloq xo'jaligi, bozor, raqobat, iste'molchi, narx, sifat, tarqatish, reklama, brend.

### THE ROLE OF MARKETING IN AGRIBUSINESS DEVELOPMENT

**Annotation.** This article reveals the role and importance of marketing in ensuring the effective operation of agribusiness enterprises. The specific features of the use of marketing strategies in the agribusiness sector, their advantages and problems are analyzed.

**Keywords:** Agribusiness, marketing, marketing strategy, agriculture, market, competition, consumer, price, quality, distribution, advertising, brand.

**Введение.** Агропромышленный комплекс является важной отраслью экономики страны, играющей значительную роль в обеспечении населения продовольствием, развитии сельских территорий и увеличении экспортного потенциала. В условиях растущей конкуренции на мировом рынке совершенствование маркетинговой деятельности предприятий агропромышленного комплекса является актуальной задачей. Агромаркетинг выполняет свою развивающую, директивную и интерактивную функцию на каждом этапе агропромышленного производства. В соответствии с производственными программами аграрной отрасли и установленными

долгосрочными торговыми договоренностями агромаркетинг стремится направить закупочную функцию на производство сельскохозяйственного сырья в социальном секторе, а также к организованным сельскохозяйственным производителям.

Агромаркетинг концентрирует свои усилия на поставке первичной продукции и промежуточных товаров, соответствующих требованиям производственных программ сельскохозяйственной отрасли. Поставка товаров на специализированные рынки в соответствии с планами продаж осуществляется путем распределения, классификации и запуска реализованной квоты. Учитывая свою роль в поиске рынков сбыта продуктов питания, агромаркетинг стремится связать сельскохозяйственное и агропромышленное производство со специализированными торговыми рынками и организованным потреблением.

Теоретические основы маркетинга в агробизнесе:

- ✓ Сущность и функции маркетинга
- ✓ Особенности маркетинга в агробизнесе
- ✓ Типы маркетинговых стратегий

Маркетинговый анализ на предприятиях агропромышленного комплекса осуществляется следующим образом:

- ✓ Анализ рынка
- ✓ Конкурентный анализ
- ✓ Анализ потребителей
- ✓ SWOT-анализ

Комплекс маркетинга в агробизнесе (4П):

- ✓ Политика в отношении продукта
- ✓ Ценовая политика
- ✓ Политика размещения
- ✓ Политика продвижения

Сегодня решаются проблемы развития маркетинга в агробизнесе Узбекистана.

Эти проблемы следующие:

- ✓ Недостаточная маркетинговая инфраструктура
- ✓ Нехватка квалифицированного маркетингового персонала
- ✓ Низкий уровень использования информационных технологий
- ✓ Предложения по решению проблем

Оценка эффективности применения маркетинговых стратегий в агробизнесе:

- ✓ Рост продаж
- ✓ Увеличение доли рынка

- ✓ Лояльность клиентов
- ✓ Рост прибыли

**Заключение.** Успешная деятельность предприятий агропромышленного комплекса во многом зависит от эффективного применения маркетинговых стратегий. Для развития агробизнеса в Узбекистане необходимо совершенствовать маркетинговую инфраструктуру, готовить квалифицированные кадры, расширять использование современных информационных технологий. Использование агромаркетинга привело к переходу аграрного сектора экономики на рыночные отношения, что, в свою очередь, потребовало формирования нового экономического механизма управления экономикой, совместимого с рынком. Независимо от формы собственности в маркетинговой деятельности первостепенная роль предприятий АПК в производственно-сбытовой деятельности должна определяться потребителем.

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## **Изображение детской жизни в рассказе Гафура Гуляма «Озорник»**

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**Аннотация.** Рассказ Гафура Гуляма «Озорник» (“Shum bola”) представляет собой яркое исследование детства в контексте общественных норм. В статье рассматривается поведение главного героя как проявление юношеского сопротивления жестким социальным ожиданиям, что позволяет осветить напряжение между индивидуальностью и конформизмом. Посредством анализа композиции, развития персонажа и культурного контекста, данное исследование подчеркивает критику социальных проблем, заложенную в повествовании, и раскрывает суть свободного, неукротенного духа ребенка. В конечном итоге, в статье подчеркивается значимость непослушания как механизма формирования личности и социальных ценностей.

**Ключевые слова:** детское непослушание, Гафур Гулям, индивидуальность, общественные ожидания, культурная критика, формирование идентичности, литературный анализ.

В рассказе «Озорник» Гафура Гуляма взаимодействие детства и общественных ожиданий предлагает уникальное осмысление культурных ценностей и семейных отношений. Через поступки и переживания главного героя автор мастерски отражает напряжение между невинностью детства и строгими моральными нормами, навязанными обществом, акцентируя внимание на сложных взаимоотношениях между личной свободой и коллективной культурной обусловленностью.

Центральным элементом повествования является феномен детской шалости, который во многих культурах воспринимается как естественная часть взросления — форма самопознания, способствующая личностному развитию. Игривые, порой дерзкие поступки героя и его склонность к шалостям можно интерпретировать как микромодель противостояния между детской креативностью и нормативностью, навязываемой обществом. В этом контексте действия героя выражают его внутреннее стремление к свободе и

самовыражению, одновременно провоцируя реакцию со стороны взрослых, отстаивающих традиционные ценности и нормы поведения.

Во многих культурах, в том числе и в узбекской, которая является фоном для творчества Гафура Гуляма, детство зачастую идеализируется как период невинности, когда от ребенка ожидается послушание, уважение и ответственность. Эти ожидания поддерживаются внутрисемейными отношениями, в которых превалирует коллективная гармония над личным выражением. Поведение героя, которое его сверстниками воспринимается как признак настоящего детства, вызывает неоднозначную реакцию со стороны взрослых, убежденных, что такие поступки нарушают стабильность и порядочность, присущие семейной структуре. К примеру, когда герой с радостью проникает в запретные зоны или устраивает забавные, но разрушительные розыгрыши, взрослые колеблются между ностальгией по собственному детству и жесткой приверженностью социальным нормам.

Рассмотрим некоторые комические эпизоды с участием главного героя:

«Когда я зашел туда на третий день, все птицы лежали без движения. — Да, работа сделана хорошо, — подумал я. — Надоело им сидеть в темной комнате. Пусть полежат.

Утром птицы снова получили простоквашу. Вечером я собирался поменять им еду. Когда я зашел туда, все птицы уже умерли.»

Здесь мальчик по незнанию кормит птиц мужа своей сестры простоквашей, не подозревая, что это нанесет им вред. Осознав свою ошибку, он просто убегает, чтобы избежать наказания со стороны родственников.

В другой части рассказа:

«Если спросить о лицах продавцов: лица были грязные и неумытые. Если спросишь цену, они сначала приветствуют, а потом называют стоимость товара. Мы слышали о стране под названием “Америка” — может, это и есть та самая Америка!»

Здесь автор с юмором изображает ташкентский базар, его колорит, простоту и наивность местных жителей.

В четвёртом разделе рассказа мы видим комичные эпизоды из приключений мальчика Шума и его деревенского товарища Убая на рынке:

— Эх, Убай, у тебя нет вишни.

— А зачем тебе вишня?

— Если съешь вишню перед игроками на сурнае, они не смогут играть. На

прошлой неделе я съел гранат перед ними — и они не смогли сыграть! Мы смеялись.

В одной из сцен в финале рассказа, мальчик, устав от атмосферы чайханы, решает пошутить над Хаджибабой и его товарищами. Он устраивает следующее: «Первый трюк я показал в день, когда его называли “девяностый”: рано утром, до прихода людей в текию, я развел огонь. Поставил на огонь чайник. Постепенно люди начали собираться на завтрак. Все были в сборе.

Разговор шел о войне.  
— Германия — мастер, — сказал мастер Салим.  
— Молодцы, — поддержал сарраф.

...

— Они сбрасывали бомбы на французский город, — сказал мастер Салим. В этот момент чайник с кипятком взорвался как бомба. Помещение наполнилось брызгами и грязной посудой. Когда пыль осела, Хаджи-дедушка и Султон с трудом выбирались из завала.»

Таким образом, путь главного героя становится способом осмысления более широких культурных ценностей, укорененных в узбекском обществе. Его шалости служат своеобразной критической оптикой, через которую исследуется взаимодействие между личными желаниями и коллективными нормами. Образ сопротивления и компромисса, воплощённый в главном герое, подчеркивает важность детских переживаний в процессе формирования идентичности, а также выступает как комментарий к общественным устоям узбекской культуры.

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## **MODELLASHTIRISH ONA TILI O‘QITISH TIZIMIDA YANGICHA YONDASHUV**

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**Annotatsiya:** Mazkur maqolada ona tili ta‘limida modellashtirish metodining samaradorligi va uni yangicha yondashuvlar asosida qo‘llash imkoniyatlari yoritiladi. Unda modellashtirish usuli orqali o‘quvchilarda til hodisalarini chuqur anglash, tahlil qilish va ijodiy fikrlash ko‘nikmalarini shakllantirishga alohida e‘tibor qaratilgan. Maqolada, shuningdek, ta‘lim jarayoniga axborot texnologiyalari, interfaol metodlar va innovatsion yondashuvlarni integratsiyalash orqali o‘quvchilarning lingvistik kompetensiyasini rivojlantirish yo‘llari ko‘rsatib beriladi. Tadqiqot natijalari ona tili o‘qituvchilariga amaliy tavsiyalar sifatida xizmat qilishi mumkin.

**Kalit so‘zlar:** modellashtirish, ona tili ta‘limi, yangicha yondashuv, interfaol metodlar, lingvistik kompetensiya, ta‘lim texnologiyalari, innovatsion metodika, til o‘rgatish, ta‘lim jarayoni, o‘quvchi faoliyati.

Zamonaviy ilm-fan rivojida modellashtirish tushunchasiga e‘tibor qaratilib kelinmoqda. Xususan, ta‘lim jarayonida modellashtirish tizimi keng qo‘llanilmoqda. Shu jihatdan mazkur tushunchani kengroq ma’noda izohlashni lozim topdik. Modellashtirish - zamonaviy talqinda ilmiy faoliyatning keng tarqalgan shakllaridan biri bo‘lib, barcha fanlarda modellashtirilayotgan hodisalar haqida ma‘lumot olishda, farazlar va nazariyalarni ishlab chiqishda modeldan foydalaniladi.

«Model», «modellashtirish» degan tushunchalar faqat murakkab fizik va tabiiy jarayonlarni tadqiq etish bilan bog‘liq bo‘lib, juda tor doiradagi mutaxassislar tomonidan hodisalar yoki murakkab texnik obyektlarni yaratish jarayoni o‘rganilgan. Zamonlar o‘tib kompyuter axborot texnologiyalari modellashtirish imkoniyatlarini yanada kengaytirdi va bugungi kunda modellarni qurish va ulardan foydalanishning metodologiyasi va zamonaviy vositalaridan foydalanmasdan ilmiy-tadqiqot va jiddiy loyiha faoliyatini tasavvur qilish qiyin. Ta’kidlash joizki, so‘nggi o‘n yilliklarda

modellashtirish o‘z obyektlari, qonuniyatlari, yondashuvlari va tadqiqot usullari bilan mustaqil fanlararo bilim sohasiga aylandi<sup>1</sup>.

O‘zbekiston milliy entsiklopediyasida “Modellash - hodisa va jarayonlarni model yordamida tadqiq qilish; ob’ektlar (jonli va jonsiz tizimlar, muhandislik konstruktsiyalari, fizik, kimyoviy, biologik, ijtimoiy jarayonlar xamda loyihalanadigan ob’ektlar)ning modellarini yasash”<sup>2</sup>- deb izohlanadi. Modellashtirish, ayniqsa mavhum obyektlarni, olis-olislarda joylashgan obyektlarni, juda kichik hajmli obyektlarni o‘rganishda ahamiyati kattadir. Modellashtirish inson faoliyatining turli-tuman sohalariga tobora kengroq va chuqurroq kirib bormoqda, tadqiqotning samarali vositalaridan foydalanishga imkon bermoqda.

I.T.Frolova modellashtirish tushunchasiga “Muayyan obyektning xususiyatlarini ularni o‘rganish uchun maxsus yaratilgan boshqa obyektga takrorlash” - deb ifodalaydi<sup>3</sup>. Mazkur uslub ilmiy-tadqiqot jarayonini osonlashtiradi, ba’zi hollarda esa murakkab obyektlarini o‘rganishning yagona vositasiga aylanadi. Modellashtirish uslubidan zamonaviy fanlardan fizika, astronomiya, biologiya, iqtisod kabilarda keng qo‘llanilgan. Xususan, o‘qitish jarayonini modellashtirish asosida tashkil etish yuqori samaradorlikka erishishga olib keladi. Shu bois biz ham ona tili darslarida kreativ ko‘nikmalarni rivojlantirish jarayonini modellashtirish uslubidan keng foydalandik. Izlanishlarimiz modellashtirish vositasida kreativ ko‘nikmalarni rivojlantirish jarayonlarini tadqiq etishga undadi.

Dunyo ilm-fanida pedagogik modellashtirishga oid ilmiy-nazariy g‘oyalar va metodologik yondashuvlar bisyor. Jumladan, mazkur tushuncha N.A.Kozyrev va O.A. Kozyrevalar tomonidan ilmiy jihatdan tahlil qilingan bo‘lib, bunda o‘qituvchi va o‘quvchini ajratilgan fan yoki ilmiy bilim sohasi resurslarida didaktik va ilmiy-tadqiqot materiallarini o‘rganish hamda tadqiq etishning zarur sifatini ta’minlaydigan, shakllangan bilim va kompetensiyalarni zamonaviy uzluksiz ta’lim modelida bilish va to‘ldirish imkoniyatini batafsil ta’minlaydigan determinatsiya, vizualizatsiya, verifikatsiya, modifikatsiya qilish, yangi maqbul pedagogik vositani yaratish resursi

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<sup>1</sup> Штерензон В.А. Моделирование технологических процессов: конспект лекций / Екатеринбург: Изд-во Рос. гос. проф.-пед. ун-та, 2010. 66 с.

<sup>2</sup> «Ўзбекистон миллий энциклопедияси» Давлат илмий нашриёти ТОШКЕНТ. 2003 yil. M-harfi. 671-bet. [www.ziyouz.com](http://www.ziyouz.com) kutubxonasi.

<sup>3</sup> Философский словарь / под ред. И.Т. Фролова. – М.: Республика, 2009. – 848 с.

tushuniladi<sup>4</sup>. Demak, modellashtirish pedagogik faoliyatda zamonaviy yangi, sifatli bilim yoki vositaning paydo bo'lishi imkoniyatini belgilovchi ilmiy-pedagogik tadqiqot usulihamdir.

N.A.Kozyrev va O.A. Kozyrevalar «Pedagogik modellashtirish» tushunchasidan foydalanishning uchta asosiy yo'nalishini ajratib ko'rsatadi.

Keng ma'noda pedagogik modellashtirish - zamonaviy ta'lim va pedagogik faoliyat imkoniyatlari (har xil innovatsion resurslar, vositalar, usullar va boshqa obyektlar) ni aniqlovchi va maqbullashtiruvchi ta'lim-tarbiya makonining resursi.

Tor ma'noda pedagogik modellashtirish - pedagogik jihatdan talab yuqori bo'lgan turli modellar va vositalarni yaratishning maqbul shart-sharoitlari va imkoniyatlarini izlashga qaratilgan pedagogik faoliyat turi.

Mahalliy ma'noda pedagogik modellashtirish - zamonaviy pedagogika nazariyasi va amaliyotini ko'p madaniyatli ta'lim modelida shaxsni rivojlantirish va o'zini o'zi rivojlantirishning barqaror amalga oshiriladigan shart-sharoitlari va ustuvorliklari bilan ta'minlaydigan tushunchani keng ma'noda aniqlashtirish, yangi modellar va pedagogik vositalarni yaratish tushuniladi<sup>5</sup>.

Modellashtirish — ilmiy faoliyatning keng tarqalgan shakllaridan biridir. Barcha fanlarda modellashtirilayotgan hodisalar haqida ma'lumot olishda, farazlar va nazariyalarni ishlab chiqishda modeldan foydalaniladi. Shu jumladan tarixchilar ham bu uslubdan tadqiqotlar jarayonidan keng foydalanadilar. Tarixiy hodisalarni modellashtirish mantiqiy shakllantirish yordamida amalga oshiriladi, ya'ni fikran mazmun-vazifaviy reja shakllantiriladi. Modellashtirish soddalashtirish, ideallashtirish va abstraktlashtirish bilan bog'liq holda amalga oshiriladi. U manbalardagi ma'lumotlarning reprezentativligini tekshirishda, dalillarning ishochliligini, farazlar va nazariyalarning haqiqiylikini tekshirish imkonini beradi. Masalan, jamoaning holatini o'rganish uchun uni modellashtiradigan bo'lsak, bunda sotsiologiya, huquq, psixologiya hamda jamoaning o'ziga xosligi omillarini ham e'tiborga olish talab etiladi. Bu esa o'z navbatida fanlararo yondashuv uslubining qo'llanilayotganligini ham anglatadi. Bu jarayonda bir holatni hisobga olish kerakki, boshqa bir fanning

<sup>4</sup> Козырев Н.А., Козырева О.А. Педагогическое моделирование как продукт и метод научнопедагогического исследования // Современная педагогика. 2015. № 8.

<sup>5</sup> Козырев Н.А., Козырева О.А. Педагогическое моделирование как продукт и метод научнопедагогического исследования // Современная педагогика. 2015. № 8.

modelini to'g'ridan-to'g'ri jalb etish maqsadga muvofiq emas, uni fanining tuzilishi mohiyati nuqtai-nazaridan shakllantirish lozim.<sup>6</sup>

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## PROFESSIONAL SKILLS OF A TEACHER

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**Annotation.** Today, the modern education system faces the need to educate highly qualified, ambitious, competitive, enterprising, spiritually and physically healthy individuals. In this regard, the development of the pedagogical personality and the formation of pedagogical competence in future educators are considered to be of paramount importance. It should not be forgotten that high professional competence is not only the level of knowledge, but also the practical skills, experience and personal qualities of the employee. The management competence of educators is characterized by such criteria as teamwork, leadership, cooperation, mentoring, and the use of official authority.

**Keywords:** Competence, component, educator, skill, qualification, experience, personality, education.

**Introduction.** Competence components develop and manifest themselves only in the process of implementing activities that are interesting to the individual. Effective performance is the result of a number of factors - it depends more on a set of independent and complementary competencies that cover a wide range of situations in the process of moving towards a goal, rather than on an individual ability or level of ability demonstrated in a particular situation. It is not the level of individual ability that should be assessed, but rather the set of competencies that are demonstrated in different situations over a long period of time in order to achieve one's goals. The unique situation in which an individual finds himself, which is of immediate interest to him, directly affects the formation of his self-esteem and the ability to develop and master new competencies.

**Discussion.** Not always people who fully comply with the established requirements and standards are truly professionals, because some do not know how to apply knowledge in practice, which means that such pedagogical activity remains ineffective.

It is appropriate to divide professional pedagogical competencies into separate types:[2]

- Specific pedagogical competence - having sufficient knowledge to carry out pedagogical activities at the required level. In addition, the ability of a teacher to adequately assess his professional level and determine his development as a specialist depends on this type.
- Social pedagogical competence - the level of social competence determines the teacher's ability to effectively build relationships with colleagues, plan joint actions. Effective communication skills, pedagogical culture and responsibility for work results - all this is included in the concept of social pedagogical competence.
- Personal pedagogical competence - the ability to rationally organize pedagogical work, and time management, the desire for personal growth are its main components. Workers with a high level of personal pedagogical competence are less prone to fatigue, are able to work under time pressure. Each type of competence includes a set of skills, knowledge, abilities. They are manifested in teachers to varying degrees. By paying attention to the indicators of his behavior in the performance of his duties, one can determine how well one or another competence is developed.

**Literature review.** Foreign researchers (R. White, J. Raven, P. Bourdieu, D. Himes, P. Weil, F. Danver, F. Mern and others) consider competence, first of all, in the practical content, that is, in the sense of the presence of abilities necessary for the effective performance of a certain action in a certain subject area.[1]

According to J. Raven, competence “consists of a large number of components, many of which are relatively independent of each other, some components are more related to the cognitive sphere, others to the emotional sphere, and these components can complement each other as components of effective behavior.[3]

J. Raven continues his opinion as follows: competence is a highly specialized set of knowledge, skills, ways of thinking and readiness to take responsibility for one's actions, necessary for the implementation of a specific action in a specific subject area.[3]

This stage of development is distinguished by the fact that UNESCO documents and materials define a range of competencies that each person should consider as a result of education.

In his report to the International Commission on Education, J. Delors outlined the “four pillars” (learning to know, to do, to cooperate, to learn to live) on which education is based. According to J. Delors, it is important “not only to acquire professional skills, but also, in a broader sense, to learn how to develop competences that allow us to cope with various situations.”[2]

The American psychologist R. Short explains the concept of “personal competence”. The scientist describes the developmental tendencies of a mature person and the skills associated with them, as well as the skills necessary to perform psychomotor functions, professional roles, cognitive and affective activities, and interpersonal communication. The focus is on the development of the abilities, knowledge, skills, motives, attitudes, beliefs, and values necessary to fulfill social roles and interact with the environment.[3]

In Western Europe, competency models are focused on such virtues as the ability to independently find ways to solve complex problems, the acquisition of new knowledge and skills, a positive view of one's own personality, the ability to communicate freely in a team, and self-control.

In general, foreign scholars associate competency more with the general characteristics of a person.

In scientific publications of the middle of the 20th century, the concept of "competence" included the necessary personal qualities, as well as knowledge, skills, qualifications, and methods of their implementation in activity.

B.D. Elkonin considers competence as a measure of "involvement of a person in activity." According to him, what is important is not the presence of something (knowledge, skills, competence) in an individual, but the ability to use it. [1] In foreign studies, professional competence has been developed as a model of “employee competence”, where special attention is paid to the spectrum of psychological qualities, such as independence, discipline, communication and the need for self-development. Thus, the American psychologist E. Doule considers “the ability to quickly and smoothly adapt to specific working conditions” as the most important characteristic of employee competence. is determined as a component.[4]

Result and analysis. Ye.S. Zair-Bek distinguished the following types of methodological competencies:[4]

- purposeful competence. The problem of determining the goal and setting the goal is considered a system-forming component of the entire pedagogical activity, the ability to correctly set goals is associated with the results of the teacher's work;
- substantive competence: the content of technological education in the volume envisaged at each stage of professional training; requirements for the minimum necessary preparation of students within the specified content volume; the maximum volume of the educational load that can be determined by the years of study;
- monitoring competence.

Competence includes both content (knowledge) and process (skill) components. It is necessary not only to know the essence of the problem, but also to be able to solve it in a practical and optimal way, therefore, the adaptability of the method is considered a mandatory characteristic of competence.

The formation of professional competence is a gradual and continuous process. We can divide it into the following stages:

1. Obtaining special education.
2. Acquiring practical knowledge and skills.
3. Advanced training, special courses and training.
4. Gaining professional experience.
5. Achieving professionalism in their field.
6. The competence of the teacher improves with the accumulation of experience, acquisition of new knowledge and skills.

The success of the process largely depends on the personal characteristics of the teacher.

**Conclusion.** When assessing the competence of teachers, it is effective to rely on behavioral indicators. This is precisely what clearly shows what the differences between competence and competence mean. The assessment of the competence of specialists should be systematic, independent, purposeful, transparent, and have clear criteria.

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**"KLINIK ATAMASHUNOSLIK. KLINIK ATAMALARNI YASASH USULLARI"**

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**Annotatsiya:** Ushbu maqolada klinik atamashunoslikning shakllanishi va rivojlanishida lotin tilining oʻrni va ahamiyati tahlil qilinadi. Klinik atamalarni yasash usullari, jumladan, prefiks, suffiks va soʻz ildizlari orqali yangi atamalar hosil qilish jarayonlari koʻrib chiqiladi. Shuningdek, lotin va yunon tillarining tibbiy terminologiyadagi oʻzaro taʼsiri va zamonaviy tendensiyalar haqida ham soʻz yuritiladi.

**Kalit soʻzlar:** klinik atamashunoslik, lotin tili, tibbiy terminologiya, prefiks, suffiks, soʻz yasash usullari, yunon tili.

**Аннотация:** В данной статье анализируется роль и значение латинского языка в формировании и развитии клинической терминологии. Рассматриваются методы образования клинических терминов, включая процесс создания новых терминов с помощью префиксов, суффиксов и корней слов. Также обсуждается взаимное влияние латинского и греческого языков на медицинскую терминологию, а также современные тенденции в этой области

**Ключевые слова:** клиническая терминология, латинский язык, медицинская терминология, префиксы, суффиксы, методы словообразования, греческий язык.

**Abstract:** This article analyzes the role and significance of the Latin language in the formation and development of clinical terminology. The methods of creating clinical terms are examined, including the process of forming new terms using prefixes, suffixes, and word roots. Additionally, the mutual influence of Latin and Greek on medical terminology, as well as modern trends in this field, are discussed

**Keywords:** clinical terminology, Latin language, medical terminology, prefixes, suffixes, word-formation methods, Greek language.

**KIRISH**

Tibbiyot sohasi oʻziga xos terminologiyaga ega boʻlib, bu terminlarning aksariyati lotin va yunon tillaridan kelib chiqqan. Bu tillarning tibbiy atamalardagi ustunligi tarixiy jarayonlar va ilm-fan rivojlanishi bilan bogʻliq. Lotin tili, oʻzining barqarorligi

va xalqaro maqomi tufayli, tibbiy terminologiyaning asosini tashkil etadi. Ushbu maqolada klinik atamashunoslikning shakllanishi, lotin tilining bu jarayondagi roli va atamalarni yasash usullari tahlil qilinadi.

### **Tahlil va muhokama**

#### **Klinik atamashunoslik va uning ahamiyati**

Klinik atamashunoslik — bu tibbiyotda ishlatiladigan atamalar va ularning shakllanish usullarini o'rganadigan fan sohasidir. Ushbu soha tibbiy terminologiyaning shakllanishi, rivojlanishi va tizimlashuvi bilan shug'ullanadi. Klinik atamashunoslikning asosiy maqsadi — tibbiy atamlarning aniq va izchil qo'llanilishini ta'minlashdir.

#### **Klinik atamalarni yasash usullari**

Klinik atamalarni yasashda bir qator usullar qo'llaniladi. Ushbu usullar atamalarni shakllantirishda asosiy mexanizmlardan hisoblanadi.

1. **Suffiksatsiya usuli:** Bu usulda so'zning oxiriga qo'shimchalar (suffikslar) qo'shib, yangi atamalar hosil qilinadi. Masalan, "gastritis" (oshqozon yallig'lanishi) so'zida "-itis" suffiksi "yallig'lanish" ma'nosini bildiradi.
2. **Prefiksatsiya usuli:** Bu usulda so'z boshiga qo'shimchalar (prefikslar) qo'shib, atamaning ma'nosi o'zgartiriladi yoki aniqlanadi. Masalan, "hypotension" (past qon bosimi) so'zida "hypo-" prefiksi "past" ma'nosini beradi.
3. **Kompozitsiya usuli:** Bu usulda ikki yoki undan ortiq so'zlar birikmasi orqali yangi atama yaratiladi. Masalan, "hepatomegaliya" (jigar kattalashishi) so'zi "hepat-" (jigar) va "-megaliya" (kattalashish) qismlaridan tashkil topgan.
4. **Abbreviatsiya (qisqartirish) usuli:** Bu usulda uzun atamalar qisqartiriladi. Masalan, "ECG" (elektrokardiogramma) qisqartmasi "elektrokardiogramma" so'zining qisqartmasidir.
5. **Transliteratsiya usuli:** Bu usulda boshqa tillardan olingan atamalar o'zbek alifbosiga o'zgartiriladi. Masalan, lotincha "virus" so'zi o'zbek tilida ham "virus" shaklida ishlatiladi.

#### **Yunon va lotin tillarining klinik atamalardagi o'rni**

Klinik atamalar ko'pincha yunon va lotin tillaridan olingan. Bu tillarning atamalardagi o'rni haqida quyidagi jihatlarni ta'kidlash mumkin:

- **Yunon tili:** Ko'plab ilmiy atamalar yunon tilidan olingan. Masalan, "nevrologiya" (nevrologiya) so'zida "neuro-" (asab) va "-logiya" (fan) qismlari mavjud.
- **Lotin tili:** Lotin tilidan olingan atamalar ko'pincha anatomik tuzilmalarni ifodalashda ishlatiladi. Masalan, "musculus biceps brachii" (ikkig'alvakli bilak

mushaklari) atamasida "musculus" (mushak) va "biceps" (ikkig'alvakli) so'zlari lotin tilidan olingan.

### **Klinik atamashunoslikda morfologik tahlil**

Atamalarning morfologik tahlili ularning tarkibini va tuzilishini o'rganadi. Bu tahlil orqali atamaning ildizi, prefiksi, suffiksi va ularning ma'nolari aniqlanadi. Masalan, "giperterioz" (giperterioz) atamasida "giper-" (ko'p) prefiksi, "terioz" (tiroid bezining faoliyati) ildizi mavjud.

### **Klinik atamashunoslikda semantik tahlil**

Semantik tahlil atamaning ma'nosini o'rganadi. Atamaning etimologiyasini, ya'ni uning kelib chiqish manbasini o'rganish orqali ma'no to'liqroq tushuniladi. Masalan, "pneumoniya" (o'pka yallig'lanishi) so'zining etimologiyasini o'rganish orqali uning "pneumo-" (o'pka) va "-oniya" (yallig'lanish) qismlaridan tashkil topganini bilib olish mumkin.

### **Klinik atamashunoslikda sintaktik tahlil**

Sintaktik tahlil atamlarning bir-biri bilan bog'lanishini va tuzilishini o'rganadi. Bu tahlil orqali atamalar orasidagi sintaktik munosabatlar aniqlanadi. Masalan, "gipertoniya kasalligi" atamasida "gipertoniya" (qon bosimi oshishi) va "kasalligi" (kasallik) so'zlari o'rtasidagi munosabat sintaktik tahlil orqali tushuniladi.

### **Klinik atamashunoslikda leksikografik yondashuv**

Leksikografiya — bu lug'atlarni tuzish va ularni ishlab chiqish bilan shug'ullanuvchi fan sohasidir. Klinik atamashunoslikda leksikografik yondashuv atamalarni aniq va izchil ta'riflash, ularning ma'nolarini belgilash va tizimlashtirishga qaratilgan. Bu yondashuv orqali tibbiy atamlarning to'g'ri qo'llanilishi va tushunilishi ta'minlanadi.

### **Klinik atamashunoslikda leksikografik yondashuvning asosiy jihatlari**

1. **Atamalarni tizimlashtirish:** Klinik atamalarni mavzu va soha bo'yicha guruhlash, ularning o'zaro bog'liqligini ko'rsatish.
2. **Anik ta'riflash:** Har bir atamaning ma'nosini aniq va qisqacha ifodalash, sinonimlar va antonimlarni ko'rsatish.
3. **Etimologik ma'lumotlar:** Atamaning kelib chiqishi, ya'ni uning ildizi, prefiksi, suffiksi haqida ma'lumot berish.
4. **Fonetik va ortografik qoidalar:** Atamaning to'g'ri talaffuzi va yozilishi bo'yicha qo'llanmalar taqdim etish.
5. **Ilmiy va amaliy qo'llanilishi:** Atamaning klinik amaliyotdagi o'rni, qo'llanilishi va ahamiyatini tushuntirish.

### **Klinik atamashunoslikda leksikografik yondashuvning ahamiyati**

- **Anik va izchil kommunikatsiya:** Shifokorlar, tibbiyot xodimlari va bemorlar oʻrtasidagi muloqotda atamlarning toʻgʻri va bir xil tushunilishi taʼminlanadi.
- **Taʼlim jarayonida yordam:** Talabalar va mutaxassislar uchun atamlarning toʻgʻri maʼnolarini oʻrganishda qoʻllanma boʻlib xizmat qiladi.
- **Ilmiy tadqiqotlarda ishonchlilik:** Atamalarni aniq taʼriflash ilmiy ishlarning sifatini oshiradi va ularning ishonchliligini taʼminlaydi.

### **Xulosa**

Lotin va yunon tillari tibbiy terminologiyaning asosini tashkil etadi. Klinik atamalarni yasashda prefiks, suffiks va soʻz ildizlaridan foydalanish orqali yangi atamalar hosil qilinadi. Zamonaviy tibbiyotda ingliz tilining taʼsiri ortib borayotgan boʻlsa-da, lotin va yunon tillarining tibbiy terminologiyadagi oʻrni va ahamiyati saqlanib qolmoqda.

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**KOMPANIYALARDA RAHBARLIK STILLARI, UNI JAMOA  
FAOLIYATIGA TA'SIRINING TAHLILI VA SAMARADORLIGINI  
OSHIRISH YO'LLARI.**

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**Annotatsiya:**

Ushbu maqola kompaniyalarda rahbarlik stillarining jamoa faoliyatiga ta'siri va samaradorligini oshirish yo'llarini tahlil qilishga bag'ishlangan. Har bir rahbarlik stilining ijobiy va salbiy tomonlari ko'rib chiqilib, ularning jamoaning motivatsiyasiga, ishlash unumdorligiga, va o'zaro aloqalariga qanday ta'sir ko'rsatishi o'rganiladi.

**Kalit so'zlar:** Rahbarlik stillari, jamoa faoliyati, samaradorlik, kompaniya boshqaruvi, motivatsiya, unumdorlik, rahbarlik usullari, boshqaruv strategiyalari, kompaniya muvaffaqiyati, ishchilarni rag'batlantirish.

**Kirish:** Kompaniyalarda rahbarlik stillari va ularning jamoa faoliyatiga ta'siri bugungi kunda tashkilotlar uchun katta ahamiyatga ega. Samarali rahbarlik kompaniyaning umumiy samaradorligini, xodimlarning motivatsiyasini va ishga bo'lgan yondashuvini shakllantiradi. Rahbarlik uslublari jamoaning umumiy ishlashiga bevosita ta'sir qiladi va bu o'zgarishlar tashkilotning natijalariga ham alohida aks etadi.

O'zbekistonda so'nggi yillarda tashkilotlar va korxonalar raqobatbardoshligini oshirishga, samaradorlikni va jamoa ruhiyatini yaxshilashga katta e'tibor qaratilmoqda. Statistik ma'lumotlarga ko'ra, "Samarali rahbarlik" so'rovlarida o'rtacha 70% dan ortiq xodimlar rahbarlikning motivatsiyaga ta'sirini yuqori baholagan. Shuningdek, rahbarning samarali boshqaruvi, xodimlarning ishga bo'lgan sadoqatini 50-60% ga oshirishi mumkinligi haqida ma'lumotlar mavjud (so'rovlar, 2023-yil). Bu esa kompaniyaning umumiy natijalariga, ish unumdorligiga va xodimlar o'rtasidagi hamkorlikka ijobiy ta'sir ko'rsatadi.

Shu bilan birga, rahbarlik stillarining yuksalishi, ayniqsa rahbarlar o'z jamoalarini motivatsiya qilish va maqsadlariga erishishda samarali usullarni qo'llash orqali, tashkilotlarning uzoq muddatli muvaffaqiyatini ta'minlashda muhim rol o'ynaydi. Shunday qilib, rahbarlik stillarini chuqur o'rganish va ularga asoslangan amaliy tadbirlar ishlab chiqish dolzarb masala hisoblanadi.

**Tadqiqot maqsadi:** Kompaniyalarda rahbarlik stillarining jamoa faoliyatiga ta'siri va samaradorligini oshirish yo'llarini tahlil qilishga bag'ishlangan. Har bir rahbarlik

stilining ijobiy va salbiy tomonlari ko‘rib chiqilib, ularning jamoaning motivatsiyasiga, ishlash unumdorligiga, va o‘zaro aloqalariga qanday ta’sir ko‘rsatishi o‘rganiladi.

**Adabiyotlar sharhi:** Bazarova Fayyoz Toxtamurodova menejment fani bo‘yicha olib borgan tadqiqoti tashkilotlarda menejmentning samaradorligini oshirish va ilgor boshqaruv texnologiyalarini joriy etish bilan bogliqdir. Tadqiqotda muhim ahamiyatga ega bo‘lgan mavzular orasida, menejmentning samarali usullarini ishlab chiqish, jamoa ishini boshqarish, qarorlar qabul qilish jarayonini optimallashtirish va tashkilotning ichki va tashqi muhitini tahlil qilish kabilar mavjud. U shuningdek, menejmentning zamonaviy usullarini, xususan, ahil boshqaruv metodologiyasini va raqamli transformatsiya jarayonlarini o‘rganadi.

E.G. Nabiyeu menejment marketing fanidan olib borgan tadqiqoti, asosan marketing va menejmentning o‘zaro bog‘liqligini o‘rganishga qaratilgan. Tadqiqotda marketingning menejment jarayonidagi ro‘li, strategik rejalashtirish, marketing aralashmasi (4P: Product, Price, Place, Promotion) va zamonaviy marketing texnologiyalarining tatbiqi tahlil qilingan. Nabiyeu o‘z ishida, marketing strategiyalarini muvaffaqiyatli joriy etish orqali tashkilotlarning bozor raqobatbardoshligini oshirishga e’tibor qaratgan. U marketingning menejmentga integratsiya qilinishi, shu jumladan boshqaruv qarorlarining marketing nuqtai nazaridan asoslanganligi muhimligini ta’kidladi. Tadqiqot marketing va menejmentning bir-birini to‘ldiruvchi jihatlari, ularning samarali qo‘llanilishi orqali kompaniya muvaffaqiyatlarini qanday oshirish mumkinligini ko‘rsatib bergan.

**Natijalar:** Rahbarlik uslubi kompaniyada ishlash samaradorligi va jamoa a’zolarining motivatsiyasiga katta ta’sir ko‘rsatadi. Avtoritar rahbarlik uslubi qisqa muddatli samaradorlikni ta’minlasa-da, uzoq muddatda jamoaning ishtiroki va umumiy ruhiyatini pasaytiradi. Demokratik rahbarlik esa jamoa a’zolarining ishga bo‘lgan ishtiyoqini oshirib, samaradorlikni sezilarli darajada yaxshilaydi. Laissez-faire rahbarlik uslubi ba’zi hollarda ijodkorlikni rag‘batlantirsa-da, nazoratning yetishmasligi tufayli jamoa yo‘nalishida muammolarni keltirib chiqarishi mumkin. Tadqiqot davomida rahbarlik stilining jamoaning ishlash jarayoniga bevosita ta’siri aniqlangan. Demokratik rahbarlik stilini qo‘llagan kompaniyalarda jamoa a’zolarining o‘zaro hamkorligi va kommunikatsiyasi yuqori bo‘ldi. Bunda jamoa a’zolari o‘z fikrlarini erkin bildirishdi va muammolarni hal qilishda birgalikda ishlashdi. Shu bilan birga, samarali jamoaviy muloqot va tashkilotning yuqori darajadagi motivatsiyasi jamoa a’zolarining ishdagi qoniqishini oshirdi.

Avtokratik rahbarlik usuliga asoslangan tashkilotlarda esa, jamoa a'zolarining ishga bo'lgan qiziqishi va ishtiyoqi pastroq bo'ldi. Bu holat jamoa a'zolarining o'zini izolyatsiya qilishiga va ijodiy fikrlarning kamayishiga olib keldi.

Kompaniyalarda rahbarlik uslubini jamoaning ehtiyojlariga moslashtirish orqali samaradorlikni oshirish mumkin. Motivatsiya tizimlarini joriy etish, xodimlarning fikrini tinglash va ularni qaror qabul qilish jarayoniga jalb qilish jamoaning ishlash samaradorligini oshiradi. Shuningdek, rahbarlarning moslashuvchanligi va ochiqqligi, shaffof boshqaruv jarayonlari jamoaning ishonchini kuchaytirib, umumiy ish faoliyatini yaxshilaydi. Xodimlarning muvaffaqiyatlarini tan olish, mukofotlash va rag'batlantirish tizimi samaradorlikni oshiradi. Bu jamoaning ishga bo'lgan qiziqishini oshiradi va ularning motivatsiyasini yuqori darajada saqlaydi. Jamoa a'zolari bilan doimiy muloqot va fikr almashish, xodimlarning fikrlarini tinglash orqali ularning ishtiroki va ishga bo'lgan ishtiyoqini oshirish mumkin. Jamoa a'zolarining o'zlarini qadrlanganini his qilishlari uchun ularni qaror qabul qilish jarayoniga jalb qilish kerak. Rahbarlar o'zlarining boshqaruv malakalarini doimiy ravishda takomillashtirib borishlari lozim. Buning uchun treninglar, seminarlar va maslahatlar tashkil etish samarali boshqaruvga olib keladi.

**Xulosa:** Kompaniyalar rahbarlik stillarini zamonaviy o'zgarishlar va jamoa xususiyatlariga qarab moslashtirish orqali o'z faoliyatini maksimal darajada samarali qilishi mumkin. Samarali rahbarlik stilini tanlash kompaniya samaradorligini oshiradi.

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## **BARRIERS TO THE DEVELOPMENT OF STUDENTS' SPEAKING COMPETENCE**

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**Abstract.** This article discusses the main problems that students face in the process of developing oral speech in English. In particular, psychological barriers to speaking, the gap between theoretical knowledge and practical exercises, the lack of a language environment, the ineffectiveness of teaching methods, and shortcomings in the assessment system are analyzed. The author emphasizes the importance of using a communicative approach, conducting regular practical exercises, and motivating students to overcome these problems. The article contains useful recommendations that will help develop more effective educational strategies in this direction.

**Keywords.** Speaking, psychological barriers, lesson process, encouragement, pronunciation, motivation.

**Introduction.** In today's globalization process, the need and demand for learning foreign languages is increasing significantly. Especially among the younger generation, interest and desire to learn English is becoming increasingly widespread. This process creates opportunities not only for personal intellectual development, but also for global education, scientific research, and competitiveness in the international labor market.

In the modern era of rapid development, the role of a foreign language, especially English, in the life of every specialist is incomparable. Today, regardless of the field of activity, every person is required to be able to communicate freely in English. This is important not only in practical activities, but also in scientific and academic fields. At the same time, the world's leading higher education institutions - such as Harvard, Oxford, Cambridge, Columbia, Johns Hopkins Universities - also require candidates to have excellent command of a foreign language first of all. This shows that mastering the English language is a necessary factor not only for personal development, but also for being internationally competitive.

The Resolution Number 34 “On Further Improving the System of Learning Foreign Languages”, adopted by the President of the Republic of Uzbekistan in 2022, marked a significant turning point in modern education policy. Based on this resolution, the process of teaching foreign languages, in particular English, was gradually introduced not only in higher and secondary specialized educational institutions, but also in preschool educational organizations, and became a mandatory component of education [5;54].

This indicates a systematic increase in attention to foreign languages in our Republic. As a result of these initiatives, representatives of the younger generation are actively striving to master foreign languages, especially English, communicate freely, and improve their academic and professional skills. This process contributes to their worthy place in the global labor market and expands their opportunities for studying at foreign universities.

In the process of learning English, four main skills - listening, reading, writing and speaking - play an important role. These skills are inextricably linked to fully mastering the language and being able to use it effectively in practice. Speaking, in particular, is the most difficult area for many language learners. This is because being able to speak freely and fluently requires not only correct pronunciation, but also a deep knowledge of grammar and a rich vocabulary. It is also important to express your thoughts quickly and clearly during communication, and to be able to use language units appropriately in different social situations. Foreign scholars Seaborne B., Ahmed, F., Lin, Y. emphasize that “Speaking is one of the basic language skills that students need to master. In the learning process, students should actively participate in oral speech in order to freely express their thoughts and communicate effectively”[6;89]. However, this situation is very rare, especially in schools located in remote areas. In such places, students cannot have sufficient language practice with the environment, which negatively affects the development of oral speech.

As Rachman (2017) points out, there are four basic skills in learning English: listening, speaking, reading, and writing[3;12]. Of these four basic language skills, speaking is the most complex and difficult to develop in a classroom setting. Developing this skill requires constant communication, interactive methods, and communicative approaches[1;45].

### **Problems in developing speaking**

In today’s era of globalization and rapid information exchange, being able to speak a foreign language, especially English, fluently is becoming a very important skill. It is becoming a necessity for anyone who wants to be successful in any field,

establish international relations, or study abroad. However, speaking is one of the most difficult and laborious skills in language learning. Unfortunately, many people encounter various obstacles at this stage.

**Psychological barriers: Fear of making mistakes.** One of the biggest obstacles to learning a foreign language is psychological barriers, specifically the fear of making mistakes. Many learners hesitate to speak, even when they have a sufficient vocabulary and grammatical knowledge. The main reason for this is the internal anxiety of "What if I make a mistake?" This fear, combined with a sense of shame, prevents learners from freely expressing themselves. Krashen (1982) identified such emotional barriers as one of the main psychological factors that negatively affect language learning.

The cultural environment and upbringing also affect this process. For example, in the Uzbek environment, children are often taught to be modest, gentle, and quiet. As a result, Uzbek students may encounter more internal barriers when learning a foreign language than their peers who speak Russian or other languages fluently. This reduces confidence in using the language as an active means of communication.

Therefore, when learning a foreign language, it is necessary to take into account not only linguistic, but also psychological and cultural factors. If students are explained that making mistakes is a natural process, through which learning can occur, they will feel freer and begin to engage in communication more actively.

**The gap between language knowledge and practice.** The formation of oral speech skills is not limited to the acquisition of grammatical knowledge alone. Elements such as sentence construction, coherent expression of thought, and correct pronunciation must simultaneously operate in a complex manner. Although most students have mastered theoretical grammar well, they cannot use this knowledge effectively in the process of practical communication. This is especially due to insufficient lexical reserve or uncertainties in pronunciation. In a study conducted by Rachman (2017), oral speech skills were also recognized as one of the most difficult language competencies to form in a classroom setting.

**Lack of environment: limited opportunities for practical exercises.** While theoretical knowledge is important in the process of language learning, real language skills are formed only through practical exercises. Unfortunately, in many schools, especially in remote areas, the natural environment for free communication in English is not enough. Students mainly master grammatical rules and vocabulary during the lesson, but they cannot apply this knowledge in practice and engage in real communication. This prevents the deeper development of language skills. As D.

Rahimova noted, “In the past, the method of some teachers was only to learn grammar and vocabulary by heart without activating them in real life. Therefore, students have difficulties and weaknesses in oral communication, because they cannot use them when they need to speak” [7;631]. Research by Seaborne et al. (2021) also highlights that the school environment has a significant impact on students' oral language development. Therefore, regular and contextualized practice is essential for fluent English language learning.

Learners should be in an environment where they can communicate in English on a regular basis, so that theoretical knowledge can be transformed into practical skills[8].

**Teaching methods: the need to move from traditional to modern.** If the teaching process is limited to only the teacher's explanation and the student's listening and writing activities, then the students' opportunities to develop their speaking skills are sharply reduced. The communicative approach is the opposite, in which the student is at the center of the learning process: he actively engages in dialogue, expresses his opinion and asks questions. Unfortunately, this approach is not yet fully implemented in all educational institutions. As noted by Richards and Rodgers (2001), it is the communicative approach that is the most effective method for developing speaking skills in English[4].

**Encouragement and assessment:** writing, not speaking, gets a high score. Currently, most assessment systems are based on written knowledge and skills, and are carried out through tests, essays, dictations. This often leads to the neglect of oral speech. As a result, students show less interest in speaking. Especially in cases where writing during the lesson receives high marks, the actions of students who actively speak are not appreciated enough. Therefore, it is necessary to reconsider the assessment criteria in order to develop oral speech and increase motivation for it. Every small achievement, even if it is said in an unconvincing manner, every boldly uttered sentence should be encouraged. This serves to strengthen students' confidence in expressing their thoughts freely and freely.

**Conclusion.** Developing oral speech is not only about learning a language, but also about increasing self-confidence, communicating freely with the world, and forming a culture of freely expressing one's thoughts. Difficulties in speaking depend on psychological, methodological, linguistic, and organizational factors. By identifying them and taking a comprehensive approach, it is possible to increase each student's enthusiasm for learning a language. Learning to speak perfectly is a path that

requires time, effort, and constant practice. But at the end of this path, true freedom awaits you - the ability to freely express your thoughts in any language.

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## **BIOPOTENSIALLARNI QAYD QILISH. ELEKTROGRAFIYANING FIZIK ASOSLARINI O'RGANISH**

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**Annotatsiya:** Biopotensiallarni qayd qilish va elektrografiyaning fizik asoslarini o'rganish — biologik tizimlarning elektr faoliyatini o'rganishga qaratilgan ilmiy soha bo'lib, nerv va mushak hujayralaridagi elektr potentsiallarining o'zgarishlari natijasida yuzaga keladigan biopotensiallar organizmning turli tizimlarining faoliyatini baholashda muhim ahamiyatga ega. Ushbu maqolada biopotensiallarning fiziologik manbalari, ularni qayd qilish texnologiyalari, shuningdek, elektrografiyaning fizik asoslari keltiriladi. Biopotensiallarni o'lchash va qayd etish, uning amplituda va chastotasining tahlili, shuningdek, EKG (elektrokardiogramma), EEG (elektroensefalogramma) va EMG (elektromiyogramma) kabi usullar yordamida o'rganiladi. Maqola shuningdek, elektrografiyaning fizik asoslarini va uning biologik tizimlarga nisbatan qanday ishlash mexanizmlari bilan bog'liqligini ochib beradi. Elektr maydonlari, elektrodarga ta'siri va signalni qayd etishning metodik jihatlari ham ko'rib chiqiladi. Natijada, maqola biopotensiallarni qayd qilish va ularni tahlil qilish texnologiyalarini chuqur o'rganishga qiziqqan talabalar va mutaxassislar uchun foydali bo'ladi.

**Kalit so'zlar:** Biopotensial, elektrografiya, nerv tizimi, mushak hujayralari, EKG (elektrokardiogramma), EEG (elektroensefalogramma), EMG (elektromiyogramma), elektr potentsiallari, signal qayd etish, fiziologik manbalar.

### **Kirish.**

Biopotensiallar — organizmning turli fiziologik jarayonlari natijasida yuzaga keladigan elektr potentsiallaridir. Ular nerv tizimi, mushaklar va boshqa organlar faoliyatini o'rganishda muhim ahamiyatga ega. Biopotensiallar, asosan, nerv va mushak hujayralarining membranalaridagi ionlarning harakati orqali yuzaga keladi va bu jarayonlarning o'lchanishi organizmning ichki holatini, tizimlar o'rtasidagi bog'lanishlarni va ularning normal yoki patologik faoliyatini aniqlashda yordam beradi. Elektrografiya — biopotensiallarni o'lchash va qayd etish usulidir. Bu usul yordamida turli fiziologik jarayonlar, masalan, yurak urishi (EKG), miyada ro'y berayotgan elektr faollik (EEG) va mushaklar faolligi (EMG) kabi hodisalar o'rganiladi. Elektrografiyaning fizik asoslari va ularning texnologiyalari muhim ahamiyatga ega, chunki bu texnikalar orqali inson organizmida ro'y berayotgan elektr signalining xususiyatlarini aniqlash mumkin. Ushbu maqolada biopotensiallarning fiziologik manbalari, ularni qayd etish metodlari, shuningdek, elektrografiyaning fizik asoslari va usullari yoritiladi. Maqola biopotensiallarni qayd qilish jarayonlarining turli sohalarida, jumladan, tibbiyotda, ilmiy tadqiqotlarda va diagnostikada qanday qo'llanilishini tushuntiradi. Bu, shuningdek, biopotensiallarni o'lchash texnologiyalariga qiziqqan talabalar va mutaxassislar uchun foydali ma'lumotlar taqdim etadi.

**Asosiy qism.**

Biopotensiallar organizmdagi elektr potentsiallarining o'zgarishlarini ifodalaydi. Bu potentsiallar nerv, mushak, va boshqa hujayralarda sodir bo'ladigan ionlar oqimi natijasida yuzaga keladi. Biopotensiallar, asosan, har xil biologik tizimlarning faoliyatini o'rganishda va ulardagi o'zgarishlarni aniqlashda muhim ahamiyatga ega. Ular organizmning turli jarayonlarini, shu jumladan, yurakning elektr faolligini (EKG), miya faoliyatini (EEG), mushaklarning ishlashini (EMG) va boshqa ko'plab fiziologik ko'rsatkichlarni o'lchashga imkon beradi. Ushbu jarayonlar har bir hujayraning membranasidagi ion oqimlari va ularning elektr potentsiallarini o'lchash orqali o'rganiladi.

1. Biopotensiallarning manbalari va fiziologiyasi. Biopotensiallar hujayralarning membranasidagi ionlarning oqimi natijasida paydo bo'ladi. Hujayra membranasida ichki va tashqi qatlamlar o'rtasida ionlarning harakatini tartibga soladi, bu esa elektr potentsialining paydo bo'lishiga olib keladi. Hujayra membranasida sodir bo'ladigan bu jarayonlar turli fiziologik faoliyatlarni — nerv tizimi va mushaklarning ishlashini, yurak ritmini va boshqa jarayonlarni boshqaradi. Masalan, yurakning elektr faolligi EKG yordamida, miya faoliyati EEG yordamida, mushaklarning holati esa EMG orqali o'lchanadi.

2. Biopotensiallarni qayd etish metodlari. Biopotensiallarni o'lchash va qayd etish uchun turli usullar va asboblardan mavjud. Elektrokardiogramma (EKG) yurakning elektr faoliyatini o'lchash uchun qo'llaniladi. Bu usul yordamida yurak urishining tezligi, ritmi va kuchi haqida aniq ma'lumotlar olinadi. Elektroensefalogramma (EEG) esa miya faoliyatini o'rganish uchun ishlatiladi, unda miyadagi elektr faollik va uning turli holatlari, masalan, uyqu, uyg'oq holat va turli kasalliklar (epilepsiya) tahlil qilinadi. Elektromiyogramma (EMG) mushaklarning faoliyatini o'lchashga yordam beradi, bu usul orqali mushaklardagi elektr potentsiallarining o'zgarishini aniqlash mumkin. Har bir usulning o'ziga xos o'lchov usullari mavjud. Masalan, EKG uchun elektrodlardan foydalangan holda yurak faoliyatini o'lchashda elektrodlar teri yuzasiga joylashtiriladi va ular orqali yurakdan chiqqan elektr potentsiallari qayd etiladi. EEG va EMG o'lchovlarida ham elektrodlar turli joylarga joylashtiriladi, lekin har bir usulda elektr signalining kuchi va to'g'ridan-to'g'ri ta'siri o'ziga xosdir.

3. Elektrografiyaning fizik asoslari. Elektrografiya asosan biologik tizimlarda elektr potentsiallarini o'lchashga asoslangan bo'lib, uning fizik asoslari elektromagnit maydonlar va ionlarning hujayra membranasidagi harakati bilan bog'liq. Hujayra membranasining polarizatsiyasi, ya'ni membranaidagi elektr zaryadlarning taqsimlanishi biopotensiallarning paydo bo'lishiga olib keladi. Elektr maydonlari, o'z navbatida, ionlar oqimini va elektr potentsiallarining o'zgarishini boshqaradi. Biopotensiallar o'lchanganida, bu signal elektrodga o'tkazilib, ularning kuchi va amplitudasi tahlil qilinadi. Elektrografiya ishlatiladigan usullar va asboblardan, shuningdek, o'lchovlarning aniq va samarali bo'lishi uchun moslashtirilgan bo'lishi kerak. Masalan, elektrodlardagi signallarni kuchaytirish, signalni tashqi shovqinlardan himoya qilish, va ularni aniq qayd etish uchun turli texnologiyalar ishlab chiqilgan.

4. Biopotensiallarni tahlil qilish va qo'llanishi. Biopotensiallarni qayd etish va tahlil qilish tibbiyotda va ilmiy tadqiqotlarda keng qo'llaniladi. Tibbiyotda, masalan, EKG, EEG va EMG usullari yordamida turli kasalliklarning diagnostikasi amalga oshiriladi. EKG yurak kasalliklarini, EEG esa miyada ro'y beradigan kasalliklarni aniqlashda qo'llaniladi. EMG mushaklar va nerv tizimi kasalliklarini o'rganishda muhim ahamiyatga ega. Bundan tashqari, biopotensiallarni o'rganish va

qayd etish usullari sport tibbiyotida, neyrofiziologiya va psixologiya sohalarida ham keng qo'llaniladi.

5. Kelajakdagi istiqbollar. Biopotensiallarni o'lchash texnologiyalarining rivojlanishi va yangilanishi ilmiy tadqiqotlarni yanada chuqurlashtirishga, yangi diagnostika usullarini ishlab chiqishga imkon yaratmoqda. Elektrografiya texnologiyalarining yanada mukammallashuvi, masalan, yuqori aniqlikdagi signal qayd etish va ishlov berish metodlari, biopotensiallarning yanada aniq tahlilini ta'minlashi mumkin. Shu bilan birga, biopotensiallarni tahlil qilishning yangi usullari va metodikalarining joriy etilishi, tibbiyotda kasalliklarni erta bosqichda aniqlash imkoniyatlarini kengaytiradi.

**Xulosa:**

Biopotensiallarni qayd etish va elektrografiya texnologiyalari organizmning elektr faoliyatini o'rganishda muhim rol o'ynaydi. Ushbu usullar yordamida nerv tizimi, mushaklar faoliyati, yurak ritmi va boshqa fiziologik jarayonlar tahlil qilinadi. Elektrografiya, asosan, EKG, EEG va EMG kabi usullarni o'z ichiga oladi, ular har bir tizimning elektr potentsiallarini aniq o'lchashga imkon beradi. Biopotensiallarni o'lchashda qo'llaniladigan fizik asoslar va texnologiyalar, signalni qayd etish va tahlil qilishning samarali usullarini taqdim etadi. Ushbu metodlar nafaqat tibbiyotda, balki ilmiy tadqiqotlarda ham keng qo'llaniladi, kasalliklarni erta aniqlash va tahlil qilishda muhim ahamiyatga ega. Elektrografiya texnologiyalarining yanada rivojlanishi va yangilanishi, kelajakda tibbiyotda kasalliklarni tez va aniq diagnostika qilish imkoniyatlarini kengaytiradi. Shu sababli, biopotensiallarni qayd etish va tahlil qilishga qaratilgan tadqiqotlar va texnologiyalarning rivojlanishi ilmiy va tibbiy sohalarida katta ahamiyatga ega bo'ladi.

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**Oliy ta'lim muassasalari faoliyatida marketing boshqaruvining ilmiy-  
metodologik asoslari**

**TDIU “Savdo ishi” kafedrası dotsenti  
Xodjaeva Shodiyabonu Abitdjanovna**

**Annotatsiya:**

Ushbu tezisda oliy ta'lim muassasalarida marketing boshqaruvining ilmiy va metodologik asoslari yoritilgan. Globallashuv va raqobatning kuchayishi sharoitida ta'lim xizmatlarini bozorga moslashtirish, brendni shakllantirish, raqamli marketing vositalaridan foydalanish kabi strategik yondashuvlarning ahamiyati tahlil qilingan. Shuningdek, mavjud muammolar va ularni bartaraf etish yo'llari, jumladan, malakali kadrlar yetishmasligi, marketing faoliyatining strategik darajada olib borilmasligi kabi masalalar ko'tarilgan. Ilmiy-metodologik yondashuvlar orqali oliy ta'lim muassasalari raqobatbardoshligini oshirish va ta'lim sifatini yaxshilash imkoniyatlari ko'rib chiqilgan.

**Kalit so'zlar:** marketing boshqaruvi, oliy ta'lim, raqamli marketing, brend, strategik boshqaruv, ta'lim bozori, marketing tadqiqotlari, marketing madaniyati, innovatsion yondashuv, talab tahlili.

Globallashuv, raqobatning kuchayishi va ta'lim sohasidagi talabchanlikning ortishi oliy ta'lim muassasalarini yangi boshqaruv mexanizmlarini joriy etishga majbur qilmoqda. Bu jarayonda marketing boshqaruvi muhim ahamiyat kasb etadi. Chunki u ta'lim xizmatlarining bozordagi talab va ehtiyojlarga moslashuvini, muassasaning imiji va raqobatbardoshligini ta'minlaydi. Mazkur tezisda oliy ta'lim muassasalarida marketing boshqaruvining ilmiy va metodologik asoslari tahlil qilinadi. Marketing boshqaruvi — bu ta'lim xizmatlarini samarali tashkil etish, talabgorlar ehtiyojlarini qondirish va bozordagi raqobatbardoshlikni ta'minlashga qaratilgan faoliyat turidir. Uni quyidagi vazifalar tashkil etadi:

- Talabalar, ota-onalar va ish beruvchilar ehtiyojlarini tahlil qilish;
- Brendni shakllantirish va targ'ib qilish;
- Ta'lim xizmatlarini jozibador shaklda taqdim etish.

Marketing boshqaruvidagi ilmiy va metodologik yondashuvlar tizimli, innovatsion va tadqiqotlarga asoslangan bo'lishi kerak:

- **Tizimli yondashuv** — ta'lim muassasasi barcha bo'limlari o'zaro bog'liq va muvofiq ravishda faoliyat yuritishi lozim.
- **Innovatsion yondashuv** — raqobatbardoshlikni oshirish uchun yangi texnologiyalar va metodlarni joriy etish.
- **Marketing tadqiqotlari** — maqsadli auditoriyaning talab va istaklarini muntazam o'rganish, sotsiologik so'rovlar, fokus-gruppalar o'tkazish orqali amalga oshiriladi.

Oliy ta'lim muassasalari uchun samarali marketing strategiyalari ishlab chiqish muhimdir:

- **Pozitsiyalash va brending:** muassasaning ustun jihatlarini ta'kidlash va targ'ib qilish.
- **Raqamli marketing:** veb-sayt, ijtimoiy tarmoqlar, onlayn platformalar orqali axborot tarqatish.
- **Jamoatchilik bilan aloqalar (PR):** ommaviy axborot vositalari va tadbirlar orqali ijobiy imij yaratish.

Oliy ta'lim muassasalarida marketing boshqaruvi sohasida quyidagi muammolar mavjud:

- Marketing sohasida yetarli malakaga ega mutaxassislar yetishmasligi;
- Marketing faoliyatining strategik asosda emas, balki epizodik amalga oshirilishi;
- Ta'lim sifatini aniq baholash mezonlarining yo'qligi.
- Marketing bo'limlarini mutaxassislar bilan ta'minlash va ularning malakasini oshirish;
- Iqtisodiy tahlillar va bozor tadqiqotlari asosida ta'lim dasturlarini yangilash;

#### **Marketing madaniyatining yetarlicha shakllanmaganligi**

Ko'pgina oliy ta'lim muassasalarida marketingga faqat reklama yoki qabul jarayonidagi harakat sifatida qaraladi. Bu esa uning chuqur ilmiy va strategik mohiyatini e'tiborsiz qoldiradi.

#### **Tarkibiy bo'limlar o'rtasida muvofiqlashuv yo'qligi**

Marketing bo'limi, qabul komissiyasi, ta'lim metodikasi, moliya va boshqa bo'limlar o'rtasida samarali hamkorlik mexanizmi yo'q yoki yetarli emas.

**Aniq maqsadli auditoriya bilan ishlashda yetarli tahlil va ma'lumot yetishmasligi** Abiturientlar, talabalar va bitiruvchilarning ehtiyoj va intilishlari bo'yicha muntazam tahlillar, sotsiologik tadqiqotlar o'tkazilmaydi yoki cheklangan hajmda olib boriladi.

**Raqamli marketing vositalarining yetarlicha qo'llanilmasligi** Texnologiyalar tez rivojlanayotgan bir paytda, ko'plab ta'lim muassasalari veb-sayt, SMM, kontent-marketing kabi zamonaviy vositalardan to'liq va tizimli foydalanmayapti.

**Marketing mutaxassislarining yetishmasligi** Oliygothlar marketing bo'yicha ixtisoslashgan, ta'lim sohasini yaxshi tushunadigan kadrlar yetishmovchiligini his qilmoqda.

**Marketing falsafasini tashkilot falsafasi darajasiga ko'tarish** Har bir professor-o'qituvchi, rahbar va xizmatchi xodim marketing faoliyatida o'z o'rniga ega ekanini anglashini ta'minlash zarur.

**Marketing faoliyatini strategik boshqaruv darajasiga olib chiqish** Umumiy rivojlanish strategiyasining ajralmas qismi sifatida marketing dasturlari ishlab chiqilishi va joriy qilinishi kerak.

**Marketing bo'limlarini kadrlar va moddiy resurslar bilan ta'minlash** Maxsus tayyorgarlikka ega mutaxassislarni jalb qilish va ularni muntazam ravishda qayta tayyorlash lozim.

**Axborot texnologiyalaridan samarali foydalanish** SEO, kontent-marketing, ijtimoiy tarmoqlar, elektron pochta orqali aloqalar kabi vositalarni tizimli joriy etish kerak.

**Talabalar va bozor ehtiyojlarini muntazam o'rganish** So'rovnoma, fokus-gruppalar, monitoring tizimlari orqali real ehtiyoj va kutilmalarni o'rganib borish, ta'lim dasturlarini shu asosda moslashtirish.

**Ijobiy tajriba va xalqaro modellardan foydalanish** Rivojlangan davlatlar oliygothlarining marketing amaliyotini tahlil qilish va mahalliy sharoitga moslashtirish.

Marketing faoliyatini strategik boshqarish tizimini joriy etish.

Oliy ta'lim muassasalarida marketing boshqaruvi samaradorligini oshirish orqali ta'lim sifatini yaxshilash, raqobatbardoshlikni ta'minlash va talabgorlar ehtiyojini to'liq qondirish mumkin. Ilmiy-metodologik yondashuvlar va strategik rejalashtirish orqali bu maqsadga erishish mumkin. Mazkur tezisda ilgari surilgan fikrlar ushbu yo'nalishdagi islohotlarga nazariy va amaliy asos bo'lib xizmat qilishi mumkin.

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## **KORXONA RIVOJLANISHIDA SOLIQ IMTIYOZLARIDAN SAMARALI FOYDALANISH**

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**Annotatsiya:** Ushbu maqola korxonalar rivojlanishida soliq imtiyozlarining ahamiyatini tahlil qiladi. Maqolada soliq imtiyozlarining tadbirkorlik faoliyatini rag'batlantirish, investitsiyalarni jalb qilish va iqtisodiy o'sishni ta'minlashdagi roli ko'rib chiqiladi. O'zbekiston misolida, "Yoshlar tadbirkorligi" dasturi doirasida taqdim etilgan soliq imtiyozlari orqali yosh tadbirkorlarning biznes faoliyatini qanday rivojlantirishi va innovatsion g'oyalarni amalga oshirish imkoniyatlari tahlil etiladi. Maqola, shuningdek, soliq siyosatining samarali rejasi va davlat yordamining ahamiyatini yoritadi. Natijada, soliq imtiyozlaridan samarali foydalanish orqali korxonalar raqobatbardoshligini oshirish va mahalliy iqtisodiyotga ijobiy ta'sir ko'rsatish imkoniyatlari ko'rsatiladi.

**Kalit so'zlar:** Soliq imtiyozlari, korxona rivojlanishi, investitsiya, iqtisodiy o'sish, mahalliy iqtisodiyot, soliq siyosati, innovatsiyalar, raqobatbardoshlik, soliq rejasi, davlat yordam.

**Annotation:** This article analyzes the importance of tax incentives in the development of enterprises. It examines the role of tax incentives in stimulating entrepreneurial activity, attracting investments, and ensuring economic growth. Using Uzbekistan as an example, the article explores how tax incentives provided under the "Youth Entrepreneurship" program contribute to the development of young entrepreneurs' business activities and the implementation of innovative ideas. Additionally, the article highlights the significance of an effective tax policy and state support. As a result, it demonstrates how effective utilization of tax incentives can enhance the competitiveness of enterprises and positively impact the local economy.

**Keywords:** Tax incentives, enterprise development, investment Economic growth, local economy, tax policy, innovations, competitiveness, tax plan, state support

**Аннотация:** В данной статье анализируется важность налоговых льгот в развитии предприятий. Рассматривается роль налоговых льгот в

стимулировании предпринимательской деятельности, привлечении инвестиций и обеспечении экономического роста. На примере Узбекистана статья исследует, как налоговые льготы, предоставленные в рамках программы "Молодежное предпринимательство", способствуют развитию бизнес-деятельности молодых предпринимателей и реализации инновационных идей. Кроме того, в статье подчеркивается значение эффективной налоговой политики и государственной поддержки. В результате показывается, как эффективное использование налоговых льгот может повысить конкурентоспособность предприятий и оказать положительное влияние на местную экономику.

**Ключевые слова:** налоговые льготы, развитие, предприятий инвестиции экономический рост, местная экономика, налоговая политика, инновации конкурентоспособность, налоговый план, Государственная поддержка.

O'zbekiston Respublikasida soliq tizimi quyidagi asosiy soliq turlaridan iborat:

- daromad solig'i
- qo'shilgan qiymat solig'i (QQS)
- yer solig'i
- mol-mulk solig'i
- ijtimoiy soliq
- yer qa'ridan foydalanganlik uchun soliq
- foydali qazilmalarni qazib olganlik uchun maxsus renta solig'i
- suv resurslaridan foydalanganlik uchun soliq
- aksiz solig'i
- foyda solig'i

Soliqlar davlat byudjetining asosiy manbalaridan biri hisoblanadi va iqtisodiy rivojlanish uchun zarur bo'lgan mablag'larni ta'minlaydi. Soliq imtiyozlari O'zbekiston hukumati korxonalarni rivojlantirish va investitsiyalarni jalb qilish maqsadida turli soliq imtiyozlarini taqdim etadi. Bu imtiyozlar qatoriga:

-Soliq stavkalarining pasayishi;

-Soliq to'lovlaridan ozod qilish;

-Yangi texnologiyalarni joriy etish uchun grantlar va subsidiyalar;

Korxona rivojlanishida soliq imtiyozlaridan foydalanish korxonaning iqtisodiy holati va faoliyat natijalariga sezilarli ta'sir o'tkazibgina qolmay, davlatning soliq tizimining tadbirkorlarga yaratgan sharoitlari ko'lamini kengayishi uchun ham muhim dastak vazifasini bajaradi. Soliq imtiyozlari korxonalarni yangi investitsiyalar kiritishga undaydi, bu esa yangi ish o'rinlari yaratish va iqtisodiy o'sishni ta'minlaydi.

Misol uchun, ishlab chiqarish sohasida yangi texnologiyalarni joriy etish uchun beriladigan imtiyozlar korxonalarga raqobatbardosh bo'lish imkonini beradi. Iqtisodiy barqarorlikni ta'minlashga ham soliq yuklamalaridan berilgan yengilliklar orqali erishish mumkin. Soliq imtiyozlari orqali korxonalar o'z daromadlarini oshirishga erishadilar, bu esa ularning barqarorligini ta'minlaydi.

Barqaror faoliyat esa iqtisodiyotning umumiy rivojlanishiga ijobiy ta'sir ko'rsatadi. Davlat byudjetini to'ldirish uchun xizmat qiladigan to'lovlardan ma'lum qismini to'lamaslik imkonini berish tadbirkorning ijtimoiy mas'uliyatini oshirib, ularda xalqparvarlik ruhiyatini ham yuksalish holatlariga xizmat qiladi. Bu esa o'z navbatida davlat byudjeti uchun yanada samarali naf keltiradi desak mubolag'a bo'lmaydi. Korxonalar soliq imtiyozlaridan foydalanib, ijtimoiy loyihalarga ham investitsiya kiritishi mumkin. Bu orqali ular mahalliy jamoalarga yordam berish imkoniyatiga ega bo'ladilar. Bunga teoretik asoslar mavjud.

Iqtisodiyot nazariyalarida soliq imtiyozlari iqtisodiy o'sishni rag'batlantiruvchi vosita sifatida ko'riladi. Keynesian iqtisodiyot nazariyasi buni ta'kidlaydi, chunki davlat xarajatlari va soliqlarni boshqarish orqali iqtisodiy faoliyatni rag'batlantirish mumkin.

O'zbekiston Respublikasi Davlat statistika qo'mitasi va boshqa ilmiy tashkilotlar tomonidan olib borilgan tadqiqotlar soliq imtiyozlarining korxona rivojlanishiga ta'sirini o'rganadi. Bunday tadqiqotlar natijalari ko'pincha soliq imtiyozlarining samaradorligini ko'rsatadi.

Soliqlar bo'yicha imtiyozlar soliq solishdan bo'shagan mablag'larni aniq maqsadlarga yo'naltirishi sharti bilan berilishi mumkin. Bunday mablag'lar maqsadli ishlatilmagan taqdirda maqsadsiz ishlatilgan mablag'lar summasi belgilangan tartibda penya hisoblangan holda budjetga undirilishi lozim. Soliqlar bo'yicha imtiyozlar berilishi munosabati bilan bo'shagan va mazkur imtiyozlarning amal qilish davrida foydalanilmagan mablag'lar summasi berilgan imtiyozlarning amal qilish muddati tugaganidan so'ng bir yil davomida ularni taqdim etishda belgilangan maqsadlar uchun yo'naltirilishi mumkin. Bunda belgilangan muddatda foydalanilmagan mablag'lar budjetga o'tkazilishi lozim.

O'zbekiston Respublikasi Prezidentining 2021 yil 21 apreldagi "Yoshlar sanoat va tadbirkorlik zonalarini faoliyatini tashkil etish hamda yoshlarning tadbirkorlikka oid tashabbuslarini qo'llab-quvvatlash chora-tadbirlari to'g'risida"gi PQ-5088 sonli qaroriga muvofiq, yoshlar sanoat va tadbirkorlik zonalarini hamda Yosh tadbirkorlarni qo'llab-quvvatlash jamg'armasi tashkil etiladi. Ushbu Sanoat zonalarida «startaplar» tashkil etish, yoshlarga tadbirkorlik faoliyatini boshlashi va yuritishlari, shu jumladan,

innovasion mahsulotlarni ishlab chiqarish jarayoniga joriy etish va natijalarini tijoratlashtirish, yirik sanoat korxonalari bilan kooperatsiya aloqalarini o'rnatish uchun barcha sharoitlar ta'minlanadi. O'zbekiston Respublikasi Prezidentining 2021 yil 24 apreldagi "Yoshlarning tadbirkorlik faoliyatini qo'llab-quvvatlash va bandligiga ko'maklashish, ularni ijtimoiy himoya qilish hamda bo'sh vaqtini mazmunli tashkil etishga oid qo'shimcha chora-tadbirlar to'g'risida"gi PF-6208 sonli qaroriga muvofiq, joriy yil 1 maydan 2023 yil 1 yanvarga qadar ish beruvchilarga ular tomonidan 25 yoshdan oshmagan xodimlari uchun to'lagan ijtimoiy soliq summasi (12 foiz) Davlat byudjetidan to'liq qaytarib beriladi.<sup>1</sup> Bunda, ijtimoiy soliq summasi yosh xodimlar olti oy davomida uzluksiz faoliyat olib borganda yettinchi oydan boshlab qaytariladi.

Ayrim soliqlar bo'yicha soliq imtiyozlari, qo'shilgan qiymat solig'i, aksiz solig'i solinadigan mahsulotlar ishlab chiqarilganda va (yoki) realizatsiya qilinganda aksiz solig'i yer qa'ridan foydalanganlik uchun soliqdan va foydali qazilmalarni qazib olganlik uchun maxsus renta solig'idan tashqari, ushbu moddaning oltinchi qismi qoidalarini hisobga olgan holda O'zbekiston Respublikasi Prezidentining qarorlari bilan belgilangan soliq stavkasini kamaytirish, lekin ko'pi bilan 50foizga kamaytirish tarzida va ko'pi bilan uch yil muddatga berilishi mumkin. Qo'shilgan qiymat solig'i bo'yicha imtiyozlar, shu jumladan tovarlar O'zbekiston Respublikasining hududiga olib kirilishida (importida) soliq solishdan bo'shagan mablag'larni aniq maqsadlarga yo'naltirish sharti bilan, berilishi mumkin emas.<sup>2</sup>

Xulosa qilib aytish mumkinki, O'zbekiston Respublikasi soliq tizimi va uning ichidagi imtiyozlar korxonalar rivojlanishi uchun muhim ahamiyatga ega. Ularning samarali foydalanilishi nafaqat korxonaning o'ziga, balki mamlakat iqtisodiyotiga ham ijobiy ta'sir ko'rsatadi. Shu bois, davlat va biznes hamkorligi o'zaro manfaatli va barqaror rivojlanishni ta'minlashda muhim rol o'ynaydi.

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<sup>2</sup> (75-moddaning to'qqizinchi qismi O'zbekiston Respublikasining 2025-yil 18-fevraldagi O'RQ-1031-sonli [Qonuni](#) tahririda — Qonunchilik ma'lumotlari milliy bazasi, 19.02.2025-y., 03/25/1031/0160-son)

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## **ОСОБЕННОСТИ ПРОВЕДЕНИЯ СЕДАЦИИ ЗАКИСЬЮ АЗОТА И КИСЛОРОДОМ У ДЕТЕЙ В СТОМАТОЛОГИИ**

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## **FEATURES OF CONDUCTING SEDATION WITH NITROUS OXIDE AND OXYGEN IN CHILDREN IN DENTISTRY**

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**Цель.** Страх и беспокойство перед стоматологическим лечением являются распространенной проблемой, влияющей на восприятие стоматологических услуг. Детская стоматология ориентирована на предоставление качественного ухода за полостью рта детям в безопасной обстановке, одновременно способствуя формированию положительного отношения к стоматологическому лечению. Ингаляционная седация с использованием закиси азота и кислорода признана безопасным и эффективным методом, который помогает снизить тревожность, обеспечивает анальгезию и улучшает взаимодействие между пациентом и медицинским персоналом.

**Материалы и методы.** Стоматологическое оборудование для ингаляционной седации отличается от аналогов в других медицинских областях, хотя оба типа устройств подают закись азота и кислород через дыхательное устройство. Специализированный стоматологический аппарат для ингаляционной седации соответствующий высоким стандартам безопасности и включает следующие элементы:

- Настроенные системы безопасности для индекса штифта и диаметра: Эти системы обеспечивают соответствие газовых баллонов с цветными шлангами, предотвращая случайное переключение.
- Механизм отказоустойчивости для кислорода: Подача закиси азота автоматически прекращается, если уровень кислорода становится критически низким.

- Минимальная предустановленная концентрация кислорода: Установка минимальной концентрации кислорода на уровне не менее 30% гарантирует, что пациенты получают не меньше кислорода, чем в окружающем воздухе.
- Продувочные назальные капюшоны: Эти устройства считаются золотым стандартом для снижения загрязнения окружающей среды закисью азота и предотвращения осложнений, связанных с длительным воздействием.
- Аварийный воздухозаборник: Этот клапан позволяет пациенту вдыхать комнатный воздух в случае прекращения подачи газа из баллонов.

Подготовка к седации требует тщательного планирования, и все участники процесса должны выполнять свои обязанности. Риск серьезных побочных эффектов от использования ЗАКС у детей остается низким.

**Обсуждение.** Существует мнение, что недостаток опыта и подготовки при использовании ингаляционной седации закисью азота и кислородом (ЗАКС) может быть причиной неудач в лечении пациентов. Напротив распространенных заблуждений, ЗАКС не исключает применение методов управления поведением для работы с тревожными пациентами. На самом деле, успокаивающие слова и действия стоматолога могут усилить расслабляющий эффект ЗАКС. Психологическая подготовка перед процедурой также имеет значительное влияние на эффективность седации. Минимальная седация (анксиолизис) сопряжена с низким риском, однако исследования показывают, что у детей может происходить переход от ожидаемого уровня седации к более глубокому, непреднамеренному уровню. Возможность титрования закиси азота для контроля уровня седации пациента является важным преимуществом ЗАКС. Следует избегать как чрезмерной, так и недостаточной седации, так как это может снизить эффективность лечения. В целом, для большинства пациентов концентрация закиси азота в диапазоне от 30% до 40% может обеспечить необходимый уровень седации для стоматологических процедур. При оказании стоматологической помощи тревожным детям есть категория пациентов, для которых традиционные методы управления поведением оказываются недостаточными. В таких случаях фармакологическая поддержка, такая как седация или общее обезболивание (ОА), часто бывает необходима.

**Выводы.** Обнаружили доказательства того, что ЗАКС может быть благоприятным вариантом для детей, которые в противном случае были бы направлены на общую анестезию. Преимущества предоставления хорошей седации для детей многочисленны, психологически она снижает тревожность и травму пациента, снижает родительский эмоциональный дискомфорт, улучшает

коммуникацию и обеспечивает стоматологическое лечение менее пугающим образом. Ингаляционная седация с закисью азота и кислородом широко принята как безопасный и эффективный метод управления тревожными стоматологическими пациентами.

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## **ФАКТОРЫ РИСКА И СВЯЗЬ С ДРУГИМИ ЛЕКАРСТВАМИ ПРИ СЕДАЦИИ АЗОТ ОКСИДОМ В ДЕТСКОЙ СТОМАТОЛОГИИ**

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## **RISK FACTORS AND INTERACTION WITH OTHER MEDICATIONS FOR NITRIC OXIDE SEDATION IN PEDIATRIC DENTISTRY**

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**Цель.** Закись азота ( $N_2O$ ), — бесцветный газ со сладковатым вкусом. Оказывает анксиолитическое и седативное действие, а также способствует мышечной релаксации и анальгезии.  $N_2O$  не раздражает дыхательные пути, имеет минимальную альвеолярную концентрацию и низкую растворимость в тканях. Он действует с быстрым началом и быстрым восстановлением, вся процедура длится всего несколько минут. Считается это безопасным и эффективным базовым методом контроля, который позволяет снизить тревожность ребенка и способствует улучшению коммуникации между детским стоматологом и ребенком.

**Материал и методы.** Седация у детей может быть связана с серьезными рисками, такими как гиповентиляция, апноэ, обструкция дыхательных путей, ларингоспазм и кардиопульмональные изменения. Эти побочные эффекты могут возникнуть во время и после процедуры седации; риск может быть минимизирован, но не полностью устранен, предварительным анализом состояния здоровья пациента. Но важно помнить, что предвидение его влияния не может быть гарантировано на 100%.

Диффузионная гипоксия является теоретическим риском, но ее можно избежать, вводя 100% кислород в течение 3-5 минут в конце процедуры. Однако, было высказано предположение, что реоксигенация клинически не нужна, когда закись азота используется в качестве единственного агента у здоровых пациентов в концентрации менее 70%. Другие редкие побочные эффекты включают эйфорию, гипервозбудимость, судороги, потоотделение, бледность и головокружение. Еще реже может произойти тихая регургитация и последующая

аспирация. Однако этого можно избежать, не позволяя пациенту клинически впадать в бессознательное состояние, таким образом сохраняя нетронутым глоточно-гортанный рефлекс. Эффекты длительного воздействия закиси азота не являются окончательными, поскольку проведенные исследования были низкого методологического качества.

Профессиональное воздействие было связано с подавлением костного мозга, нарушениями репродуктивной системы, преждевременными родами, выкидышами и врожденными дефектами у младенцев. Методы снижения профессиональных опасностей для здоровья включают использование эффективных систем очистки, обеспечение исправной работы всего оборудования и хороших клинических методов, таких как использование резиновых прокладок, минимизация разговоров, плача и дыхания ртом пациентов.

**Обсуждение.** Для проведения самых неприятных и болезненных процедур, таких как удаление зуба, с диагнозом «периодонтит», возможно временное повышение концентрации закиси азота до 50 %. Закись азота обладает анальгетическим эффектом и потенцирует действие местных анестетиков. Даже если ребенок испугался, почувствовал неприятные ощущения, после окончания манипуляции он быстро успокаивается и дает возможность спокойно продолжить лечение. Применение ЗАКС позволяет проводить сложное и достаточно длительное лечение. Например, лечение пульпитов с последующим восстановлением композиционными материалами или стандартными коронками в одно посещение. Завершение работы необходимо проводить на следах закиси азота. Выход из состояния седации должен быть плавным и завершается ингаляцией 100%-ного кислорода в течение 5—10 минут. В это время доктор может общаться с ребенком, закрепляя у него положительные впечатления от посещения клиники. Эффект ЗАКС обусловлен неспецифическим угнетением ЦНС.

**Выводы.** Пациент с несотрудничающим профилем в детской стоматологической клинике требует особого подхода для эффективного лечения и безопасности ребенка. Если психологические методы непродуктивны, следует рассмотреть ингаляционную сознательную седацию как возможный вариант. Седация с помощью N<sub>2</sub>O- O<sub>2</sub> рекомендуется в особых случаях, когда она поддерживается методами контроля поведения, которые могут обеспечить большую безопасность и комфорт для детей во время стоматологического лечения.

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## **GRAMMAR VS COMMUNICATION: WHAT SHOULD BE PRIORITIZED IN ENGLISH LEARNING?**

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**Annotation:** This article explores the ongoing debate between grammar and communication in English language learning. It examines the importance of both elements in achieving proficiency in English, discussing how a solid understanding of grammar lays the foundation for accurate language use, while effective communication emphasizes fluency, interaction, and real-world application. The paper presents the argument that while grammar is essential for correctness, the ability to communicate confidently and clearly should be prioritized in language learning, especially for practical, everyday situations. Through this discussion, the article provides insight into the balance learners must strike between mastering grammar rules and focusing on communicative competence.

**Keywords:** Grammar, Communication, Language learning, Fluency, Proficiency, Accuracy, Language skills, Language acquisition, Practical application, Interactive learning.

### **Introduction:**

In the process of learning English, two key aspects often come into focus: grammar and communication. While grammar provides the structural foundation necessary for forming accurate and meaningful sentences, communication emphasizes the ability to effectively convey ideas and engage with others in real-world situations. This raises the question: which of these should take precedence in language learning? Some argue that mastering grammar is the cornerstone of language proficiency, while others contend that being able to communicate fluidly and confidently is far more important in practical scenarios. This article aims to explore the delicate balance between these two essential elements, considering their respective roles in helping learners achieve fluency and practical competence in English. Through this discussion, we will analyze how both grammar and communication contribute to the broader goal of becoming proficient in the English language.

**Main Body.**

The debate over whether grammar or communication should take priority in language learning is one that has long been discussed by educators, linguists, and students alike. Both aspects are integral to mastering English, but their roles and importance often differ depending on the context in which language is used.

**Grammar as the Foundation of Language:** Grammar provides the structure that enables learners to construct meaningful and accurate sentences. A good understanding of grammar rules—such as verb tenses, sentence structures, and punctuation—ensures that speakers can communicate their ideas in a way that is clear and grammatically correct. For many learners, grammar serves as the building block of language acquisition. It gives them the tools to form sentences that are not only understandable but also syntactically correct. Furthermore, grammar is particularly important in academic, professional, and formal settings, where precision and correctness are valued.

**Communication as the Key to Fluency:**

While grammar is crucial for correctness, communication is essential for fluency. The primary goal of language learning for many students is to be able to express themselves effectively in real-world situations. Communication emphasizes the practical application of language—being able to speak, listen, and respond quickly and confidently, even if the grammar isn't always perfect. In fact, many fluent speakers of English may not always follow strict grammatical rules but are still able to engage in meaningful conversations. This is particularly true in informal contexts where the ability to convey ideas is more important than rigidly following grammatical rules.

**The Importance of a Balanced Approach:**

In reality, a balance between grammar and communication is necessary for a comprehensive approach to language learning. Grammar provides the necessary framework to communicate accurately, but without the ability to use the language effectively in conversation, learners may struggle to engage with others. Likewise, while communication skills help learners navigate everyday interactions, lacking a solid grasp of grammar can lead to misunderstandings or confusion. Therefore, it is essential for learners to develop both their grammatical knowledge and their communication abilities. Language programs and curricula should integrate these two components to ensure that students not only understand the structure of the language but can also use it practically and confidently. Interactive methods that encourage communication—such as group discussions, role-playing, and real-life scenarios—can help learners practice both their grammar and their speaking skills simultaneously.

**Conclusion:**

In conclusion, both grammar and communication are indispensable components of learning English. While grammar provides the structural framework necessary for accuracy and clarity, communication focuses on the practical application of language, enabling learners to interact fluently in real-life situations. A well-rounded language learner should aim to strike a balance between these two aspects. Prioritizing one over the other can lead to gaps in language proficiency, as both elements complement and reinforce each other. Therefore, a comprehensive approach that integrates grammar instruction with opportunities for effective communication will best prepare learners for success in mastering English

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**YANGI O'ZBEKISTONNI BARPO ETISHDA ILM -FAN SOHASIDA  
ZAMONAVIY GRAFIK DASTURLARNING O'RNI VA AHAMIYATI.**

**Nizomiy nomidagi Toshkent davlat pedagogika universiteti Muhandislik  
grafikasi va dizayn nazariyasi yo'nalishi 1-bosqich Magistranti  
Butayeva Zarina Zamonbek qizi**

**Annotatsiya:** Mazkur maqolada so'ngi yillarda zamonaviy grafik dasturlarning o'rni va ahamiyatini tahlil qilinadi. Grafik dasturlar qurilish va shaharsozlik, ta'lim, marketing, IT sohasi hamda madaniy merosni raqamlashtirish kabi yo'nalishlarda qanday qo'llanilayotgani yoritib beriladi. Shuningdek, ushbu texnologiyalar O'zbekistonning iqtisodiy va madaniy rivojlanishiga qanday ta'sir ko'rsatayotgani muhokama qilinadi. Grafik dizayn va 3D modellashtirish vositalari orqali mamlakatning global raqobatbardoshligini oshirish istiqbollari ko'rib chiqiladi. Maqola innovatsion yechimlarning taraqqiyot strategiyasidagi o'rnini chuqur tahlil qilishga qaratilgan.

**Kalit so'zlar:** AutoCAD, SolidWorks, CorelDRAW, Adobe Illustrator, SketchUp, 2D grafik dasturlar, 3D grafik dasturlar, PDF, DWG, DXF, dasturiy kod (LISP, VBA)

**Аннотация:** В данной статье анализируется роль и значение современных графических программ в последние годы. Рассматривается их применение в таких сферах, как строительство и градостроительство, образование, маркетинг, IT-отрасль, а также оцифровка культурного наследия. Также обсуждается влияние этих технологий на экономическое и культурное развитие Узбекистана. Рассматриваются перспективы повышения глобальной конкурентоспособности страны с помощью инструментов графического дизайна и 3D-моделирования. Статья направлена на глубокий анализ роли инновационных решений в стратегии развития.

**Ключевые слова:** AutoCAD, SolidWorks, CorelDRAW, Adobe Illustrator, SketchUp, программы 2D-графики, программы 3D-графики, PDF, DWG, DXF, программный код (LISP, VBA).

**Abstract:** This article analyzes the role and significance of modern graphic software in recent years. It examines their application in various fields, including construction and urban planning, education, marketing, the IT sector, and the digitization of cultural heritage. The impact of these technologies on Uzbekistan's economic and cultural development is also discussed. The article explores the prospects of enhancing the

country's global competitiveness through graphic design and 3D modeling tools. It is aimed at a deep analysis of the role of innovative solutions in development strategies.

**Keywords:** AutoCAD, SolidWorks, CorelDRAW, Adobe Illustrator, SketchUp, 2D graphics programs, 3D graphics programs, PDF, DWG, DXF, programming code (LISP, VBA).

Maqsad qanchalik aniq va ravshan bo'lsa, unga erishish shunchalik oson kechadi. Insonlar yaxshi yashash uchun o'z maqsadi sari tinimsiz harakat qilgani singari jamiyat va davlatlar ham xalqining farovon yashashi, avlodlarining kelajagi porloq bo'lishi uchun o'z manzillarini aniqlab oladilar. Zotan, jadid mutafakkiri Abdulla Avloniy ta'kidlaganidek « Ilm dunyoning izzati. Ilm inson uchun g'oyat oliy va muqaddas bir fazilatdir. Zeroki ilm bizga o'z ahvolimizni, harakatimizni oyna kabi ko'rsatur. Zehnimizni, fikrimizni qilich kabi o'tkir qilur »<sup>1</sup>. Yangi O'zbekiston taraqqiyot sari intilayotgan davlat sifatida ta'lim tizimini modernizatsiya qilishga alohida e'tibor qaratmoqda. Xususan, chizmachilik fanini zamonaviy texnologiyalar bilan uyg'unlashtirish muhim ahamiyat kasb etmoqda. Grafik dasturlar chizmachilik fanida muhandislik, arxitektura va dizayn sohalarida zamonaviy talablarga javob beradigan kadrlarni tayyorlashda muhim vosita bo'lib xizmat qilmoqda. Bu jarayon innovatsion yondashuvlarni joriy etish orqali mamlakatning texnologik rivojlanishiga katta hissa qo'shadi. Shu boisdan, grafik dasturlarni o'quv jarayoniga kengroq tatbiq etish va mutaxassislarni tayyorlashda ilg'or usullardan foydalanish zamon talabi hisoblanadi.

Prezident Shavkat Mirziyoyev rahbarligida olib borilayotgan islohotlar doirasida ta'lim tizimiga zamonaviy texnologiyalarni joriy etish ustuvor yo'nalishlardan biri hisoblanadi. Xususan, chizmachilik fanida grafik dasturlarni keng qo'llash quyidagi natijalarga olib keladi:

- Kasb-hunar ta'limida zamonaviy yondashuv – Texnikum va oliy ta'lim muassasalarida grafik dasturlar asosida chizmachilik o'qitilishi talabalar bilimini oshiradi.
- Ishlab chiqarish bilan integratsiya – Zavod va korxonalar muhandis va dizaynerlardan grafik dasturlarni bilishni talab qilmoqda, bu esa mehnat bozorida raqobatbardoshlikni oshiradi.
- O'quv dasturlarining yangilanishi – Dasturiy ta'minot yordamida o'quv jarayoni yanada samarali va qiziqarli bo'ladi.

**Grafik dasturlar va ularning chizmachilikdagi o'rni.** An'anaviy chizmachilik qog'oz va qalam asosida bajarilgan bo'lsa, bugungi kunda AutoCAD, SolidWorks,

<sup>1</sup> <https://yuz.uz/uz/news/ozbekiston-2030-strategiyasida-talim-tarbiya-masalalari>

CorelDRAW, Adobe Illustrator, SketchUp kabi grafik dasturlar bu jarayonni ancha tezlashtirdi va qulaylashtirdi. Ushbu dasturlar quyidagi imkoniyatlarni taqdim etadi:

1. Aniqlik va aniqlanganlik – Grafik dasturlar aniq o'lchovlar va nisbatlarni saqlab qolish imkonini beradi.
2. Vaqtni tejash – Chizmalarni qo'lda chizishga ketadigan vaqt sezilarli darajada kamayadi.
3. Tahrirlash imkoniyati – Dasturiy ta'minot chizmalarni oson tahrirlash va xatolarni tezda tuzatish imkonini beradi.
4. 3D modellash – Uch o'lchamli obyektlarni yaratish orqali yanada tushunarli va realistik tasvirlar hosil qilish mumkin.
5. Elektron hujjatlashtirish – Chizmalarni raqamli shaklda saqlash va ulashish imkonini beradi.

### **Chizmachilik fanlarini grafik dasturlar yordamida o'qitish.**

Chizmachilik – muhandislik, arxitektura va dizayn sohalarida keng qo'llaniladigan muhim fanlardan biri hisoblanadi. Zamonaviy texnologiyalar rivojlanishi bilan an'anaviy qo'lda chizish usullari asta-sekin o'z o'rnini kompyuter grafik dasturlariga bo'shatmoqda. Grafik dasturlar chizmalar tuzish jarayonini tezlashtirib, aniqlikni oshiradi va loyihalarni raqamli formatda saqlash imkonini beradi. Ushbu maqolada chizmachilikda keng qo'llaniladigan grafik dasturlar haqida so'z yuritamiz.

**Grafik dasturlar haqida umumiy tushuncha.** Grafik dasturlar – bu turli shakl, loyiha va chizmalarni yaratish, tahrirlash va bosib chiqarish uchun mo'ljallangan kompyuter ilovalari. Ular 2D (ikki o'lchamli) va 3D (uch o'lchamli) turlarga bo'linadi.

**2D grafik dasturlar** – asosan chizmachilik, injenerlik chizmalari va loyiha hujjatlarini yaratish uchun ishlatiladi.

**3D grafik dasturlar** – ob'ektlarni uch o'lchovli shaklda modellash va vizualizatsiya qilish uchun mo'ljallangan.

### **Chizmachilikda keng qo'llaniladigan grafik dasturlar**



**AutoCAD** – Autodesk kompaniyasi tomonidan ishlab chiqilgan eng mashhur muhandislik va chizmachilik dasturlaridan biri. John Walker 1982-yilda AutoCAD dasturining yaratilishiga asos solgan bo'lib, u bugungi kunda eng mashhur grafik dasturlardan biri hisoblanadi. Uning ta'kidlashicha "AutoCAD faqatgina chizmachilik dasturi emas, balki injener va dizaynerlar uchun universal vositadir."<sup>2</sup>

AutoCAD quyidagi xususiyatlarga ega:  
- Loyihalash va tahlil qilish uchun qulay interfeys.

<sup>2</sup> [https://en.wikipedia.org/wiki/John\\_Walker\\_\(programmer\)](https://en.wikipedia.org/wiki/John_Walker_(programmer))

- Yuqori aniqlikdagi chizmalar yaratish imkoniyati.
- 2D va 3D modellash imkoniyatlari.
- Dasturiy kod (LISP, VBA) yordamida funksiyalarni avtomatlashtirish.



**SolidWorks** – asosan mashinasozlik va sanoat dizayni sohalarida qo'llaniladigan 3D grafik dastur. U quyidagi afzalliklarga ega:

- Mahsulot modellarini uch o'lchovli shaklda yaratish va tahlil qilish.

- Dinamik simulyatsiyalar o'tkazish
- Detallar va yig'ilimalarning aniq chizmalarini avtomatik ravishda generatsiya qilish.

**CorelDRAW** va **Adobe Illustrator** chizmachilikning grafik dizayn yo'nalishida qo'llaniladigan dasturlar bo'lib, asosan bezak chizmalari, logotiplar va maketlar yaratish uchun ishlatiladi.



**SketchUp** – arxitektura va interyer dizaynida keng ishlatiladigan 3D dastur. Uning qulayligi shundaki, boshlang'ich foydalanuvchilar ham tezda mukammal loyihalar yaratishi mumkin.

**CATIA** va **PTC Creo**. Ushbu dasturlar aerokosmik, avtomobilsozlik va murakkab muhandislik sohalarida keng qo'llaniladi. Ular real jismoniy modellarni yaratish va mexanik tahlillar o'tkazish imkonini beradi.



**Grafik dasturlarning chizmachilikdagi afzalliklari:**

- Aniqlik va samaradorlik: An'anaviy qo'lda chizish usulidan ancha aniqroq natijalarga erishish mumkin.
- Tezkor tahrirlash imkoniyati: Chizmalarni oson tahrirlash va yangilash mumkin.
- Raqamli saqlash va almashish: Loyihalarni PDF, DWG, DXF kabi formatlarda saqlash va hamkorlikda ishlash imkoniyati.
- Avtomatlashtirish va skriptlar yaratish: Murakkab hisob-kitoblar va jadvallarni avtomatlashtirish orqali ish unumdorligini oshirish.

**Grafik Dasturlar va Ularning Sohalar Bo'yicha Ahamiyati**  
**Qurilish va Shaharsozlik**

Yangi O'zbekiston taraqqiyot strategiyasi doirasida ko'plab yangi infratuzilma loyihalari amalga oshirilmoqda. Ushbu jarayonda AutoCAD, Revit, 3ds Max kabi grafik dasturlar muhandislik va arxitektura sohasida keng qo'llanilmoqda. Ushbu

dasturlar

yordamida:

- Shaharlarni rejalashtirishda 3D modellashtirish ishlatilmoqda;
- Qurilish jarayonlarini optimallashtirish va samaradorlikni oshirish imkoni yaratilmoqda;
- Virtual reallik (VR) texnologiyalari orqali loyihalar oldindan tahlil qilinmoqda.

### **Ta'lim**

va

### **Ilm-fan**

Ta'lim sohasida grafik dasturlar yangi metodikalarni shakllantirishga yordam bermoqda. Adobe Photoshop, Illustrator kabi vositalar dizayn va san'at fanlarini interaktiv o'qitishda qo'llanilmoqda. Shuningdek:

- Blender, Maya kabi dasturlar 3D modellashtirish va animatsiya kurslarida ishlatilmoqda;
- Virtual laboratoriyalar yaratish orqali muhandislik va tabiiy fanlar interaktiv o'qitilmoqda;
- Grafik dasturlar yordamida yangi darsliklar va multimedia resurslari ishlab chiqilmoqda.

### **Marketing**

va

### **Raqamli**

### **Brending**

Global bozorda O'zbekiston mahsulotlarini tanitish va targ'ib qilishda zamonaviy grafik dizayn dasturlari katta ahamiyatga ega. Adobe Creative Suite, CorelDRAW, Canva kabi vositalar yordamida:

- Mahsulot va xizmatlar uchun jozibali reklama materiallari yaratilmoqda;
- O'zbekistonning turizm salohiyatini targ'ib qilish uchun sifatli kontent tayyorlanmoqda;
- Raqamli marketing strategiyalari samaradorligini oshirishga yordam berilmoqda.

### **IT**

va

### **O'yin**

### **Industriyasi**

Dunyo bo'ylab IT sohasi jadal rivojlanmoqda va Yangi O'zbekiston ham bu yo'nalishda ilgari surilmoqda. Grafik dasturlar dasturchilar va ijodkorlar uchun yangi imkoniyatlar yaratilmoqda. Xususan:

- Unity va Unreal Engine yordamida milliy o'yin va VR/AR loyihalar ishlab chiqilmoqda;
- Grafika va interaktiv dizayn orqali IT sohasida yangi ish o'rinlari yaratilmoqda;
- O'yin industriyasi eksport salohiyatiga ega bo'lgan yangi soha sifatida shakllanmoqda.

### **Madaniy**

### **Meros**

va

### **Raqamlashtirish**

O'zbekistonning boy madaniyati va san'ati raqamli shaklda saqlanib, jahon miqyosida targ'ib etilmoqda. Grafik dasturlar orqali:

- Milliy naqshlar, miniatyura san'ati va tarixiy obidalar raqamlashtirilmoqda;

- Virtual muzeylar va interaktiv eksponatlar yaratilmoqda;
- San'at asarlarini global auditoriyaga yetkazish imkoniyati oshmoqda.

Yangi O'zbekiston taraqqiyotida grafik dasturlar texnologik rivojlanishning ajralmas qismiga aylanmoqda. Ular qurilishdan tortib, ta'lim, IT, marketing va madaniyat sohalarigacha keng qo'llanilmoqda. Raqamli texnologiyalarning joriy etilishi O'zbekistonni zamonaviy va innovatsion davlat sifatida shakllantirishga xizmat qiladi. Shu bois, grafik dizayn va 3D texnologiyalarni rivojlantirish strategiyaning muhim yo'nalishlaridan biri bo'lib qolishi lozim. Raqamli texnologiyalar dunyo bo'ylab rivojlanib borar ekan, Yangi O'zbekiston taraqqiyot strategiyasida ham zamonaviy yechimlarni o'z ichiga olmoqda. Grafik dasturlar esa ushbu rivojlanishning muhim qismi hisoblanadi. Ular dizayn, qurilish, ta'lim, marketing va san'at sohalarida inqilobiy o'zgarishlar yaratmoqda.

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## **TA'LIM TURLARIDA CHIZMACHILIK FANINING O'QITILISH HOLATI**

*Nizmiy nomidagi Toshkent davlat pedagogika universiteti*

*“Muhandislik grafikasi va dizayn nazariyasi”*

*yo'nalishi magistranti Qodirova Sevdora*

### **Anotatsiya**

Ushbu maqolada mamlakatimiz ta'lim tizimida yangilanayotgan islohatlar, yurtboshimiz rahbarligi asosida ilm-fan rivoji uchun qo'yilayotgan tashabbuslar haqida gap boradi. Bundan tashqari, ta'lim tizimimizda chizmachilik fanini o'rni va uni o'qitilish holati yoritiladi. Prezidentimizni muhandislik va chizmachilik sohalariga e'tibor qaratmoqda va ta'limni rivojlantirish uchun bir qancha ishlarni amalga oshirmoqda. Ushbu ishlar haqida batafsil maqolada yoritilgan.

### **Аннотация**

В данной статье рассказывается о реформах, проводимых в системе образования нашей страны, а также о инициативах, предпринимаемых под руководством нашего лидера для развития науки. Кроме того, освещается роль черчения в образовательной системе и текущее состояние его преподавания. Президент уделяет внимание инженерному делу и черчению, проводя ряд мероприятий для развития образования. Обо всех этих мерах подробно рассказывается в статье.

### **Abstrac**

This article discusses the ongoing reforms in our country's education system and the initiatives undertaken under the leadership of our head of state to promote scientific development. Additionally, it highlights the role of technical drawing in the education system and its current state of teaching. Our President is focusing on engineering and technical drawing fields and is implementing various measures to improve education. These efforts are covered in detail in the article.

### **Kirish**

Bugungi XXI asr zamonaviy texnologiya asri bo'lishiga qaramasdan, hozirgi kunda ta'lim tizimida o'quvchilarning ijodiy va kreativ fikrlash qobiliyatlarini rivojlantirishga katta e'tibor qaratilmoqda. Xususan, davlatimiz rahbarining “2022-2026 yillarga mo'ljallangan yangi O'zbekistonning taraqqiyot strategiyasi”da ham buni isbotini ko'rishimiz mumkin. Jumladan, ma'naviy taraqqiyotni ta'minlash va sohani yangi bosqichga olib chiqish yo'nalishida tasviriy va amaliy san'at hamda dizayn yo'nalishlarini rivojlantirish, aholining badiiy-estetik didini yuksaltirish,

madaniyat va san'at sohalarini yanada rivojlantirish, yoshlarni iste'dodini yuzaga chiqarishga xizmat qiladi.

Ilm-fan har qanday davlatning buguni va kelajagidir. Hozirgi kunda mamalakatimiz taraqqiyoti uchun yurtboshimiz Sh. M. Mirziyoyev ham ilm fan sohasiga katta e'tibor qaratmoqda. Buni isbotini 2018-2021-yillarda ilmiy innovatsion faoliyat sohasida 2 ta qonun, prezidentning 5 ta farmoni va 26 ta qarori, Vazirlar Mahkamasining 35 ta qarori va 7ta farmoyishi qabul qilinganligida ko'rishimiz mumkin. Shu jumladan, aytishimiz mumkinki yurtimizda 31 mingdan ziyod shaxs ilmiy tadqiqot ishlari bilan mashg'ul, ularning 28 mingdan ziyodi oliy ma'lumotga ega. Har yili davlat budjetining ma'lum bir qismi ilm-fanga sarflanadi. O'tgan to'rt yil davomida 28 ta ilmiy tashkilot, 4 ta innovatsion texnoparklar tashkil qilindi. Xususan, O'zbekiston Respublikasi Prezidentining 2020-yil 29-oktabrdagi PF-6097- sonli farmoni bilan tasdiqlangan ilm fanni 2030-yilgacha rivojlantirish konsepsiyasida ilm-fanni rivojlantirish yo'lidagi 19 ta muammo alohida belgilandi. Bullardan dissertatsiya himoyasi va ilmiy pedagogik faoliyatni amalga oshirish muammolari, dolzarb tadqiqot mavzusini tanlash, ilmiy faoliyat bilan bog'liq jarayonda ortiqcha rasmiyatchiliklarning mavjudligi va shunga o'xshagan bir qancha muammolardan tashkil topadi.<sup>1</sup>

Yuqoridagi fikrlardan kelib chiqib shuni aytishimiz joizki, ta'limni rivojlantirish yo'lida bir qancha ishlarni amalga oshirishimiz lozim. Ta'lim sohasida ochiqlik va shaffoflikni ta'minlash, turli rasmiyatchiliklarni oldini olish, malakali proffesor o'qituvchi kadrlarni yetarlicha rag'batlantirish, ta'limni rivojlantirish bo'yicha chora tadbirlarni tizimli va maqsadli qabul qilishini ta'minlashdan iboratdir. Bundan tashqari, internet va raqamli taxnologiyalar ta'limni yanada kengaytirishga imkon yaratmoqda. Albatta, ta'limni rivojlantirishda davlatning roli katta. Ta'lim sohasiga ta'luqli bir qancha strategalar va shu sohaga ta'luqli farmon va qonunlar davlatimiz rahbari tomonidan ishlab chiqilmoqda. Prezidentimizning mana shu sohani rivojlantirishga doir farmonlari va qarorlari asosan ta'lim tizimining sifatini oshirish, zamonaviy talablar asosida yangi ta'lim metodologiyalarini va yuksak malakali kadrlar tayyorlashga qaratilgan.

Har bir mamlakatning ta'lim tizimi uning ijtimoy-siyosiy, iqtisodiy va madaniy hayoti bilan chambarchas bog'liqdir. O'zbekiston Respublikasining ta'lim tizimi davlat ta'lim standartlariga muvofiq ta'lim dasturlarini amalga oshiruvchi davlat va nodavlat ta'lim muassasalari, ta'lim tizimining faoliyat ko'rsatishi va rivojlanishini ta'minlash uchun zarur bo'lgan tadqiqot ishlarini boshqaruvchi ilmiy-pedagogik muassasalar, ta'lim sohasidagi davlat boshqaruv organlarini o'z ichiga oladi.

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<sup>1</sup> <https://xabar.uz/uz/tahlil/ozbekistonda-ilm-fan-taraqqiyoti>

“Ta’lim to‘g‘risida”gi Qonun 2020-yil 19-mayda qabul qilingan bo‘lib unga muvofiq ta’lim turlari quyidagilardan iborat:

- maktabgacha ta’lim va tarbiya;
- umumiy o‘rta va o‘rta-maxsus ta’lim;
- professional ta’lim;
- oliy ta’lim;
- oliy ta’limdan keying ta’lim;
- kadrlarni qayta tayyorlash va ularning malakasini oshirish;
- maktabdan tashqari ta’lim.<sup>2</sup>

Qonunga ko‘ra davlat oliy ta’lim, o‘rta maxsus, professional ta’lim muassasalari va ularning filiallari, shuningdek davlat ishtirokidagi oliy, o‘rta maxsus, professional ta’lim tashkilotlari va ularning filiallari Prezident yoki Hukumat qarorlari bilan tashkil etiladi.

Birinchi prezidentimiz I.A.Karimov ham: “Bugun xalqaro hayot, kishilik taraqqiyoti shunday bosqichga kirganki, endi unda harbiy qudrat emas, balki intellektual salohiyat, aql-idrok, fikr, ilg‘or texnologiyalar hal qiluvchi ahamiyat kasb etadi”<sup>3</sup> deb ta’kidlaganlar. Demak, biz ham bunday ishonchni oqlashimiz, qaysi sohada bo‘lishimizdan qat’iy nazar o‘z kasbimizni sevishimiz kerak.

Turmush tarzimizda yaratilayotgan har qanday yangiliklarning dastavval, chizmasi chiziladi. Mana shu chizma orqali yaratilayotgan yangilikning afzalliklari va kamchiliklari aniqlanadi va shu chizma orqali bajarilayotgan buyum tartibga solinib yig‘iladi. Shu maqsadda ham chizmachilik fani maktab bosqichidan boshlab o‘rgatiladi. Chizmachilik fani ta’lim sohasida muhim ahamiyatga egadir. Chunki chizmachilik fani o‘quvchilarda texnik ko‘nikmani, ijodkorlik, diqqatni jamlash va turli xil muammolarni hal qilish qobiliyatini rivojlantiradi. Aynan, chizmachilik fanida o‘quvchilarni ijodkorligini oshirishga qaratilgan bir qancha ijodiy topshiriqlar va turli xil metodik ta’minot bazasi yetarlicha. Chizmachilik fanini yaxshi o‘zlashtirgan o‘quvchida grafik savodxonligi, tushunish qobiliyati, chizmani o‘qish ko‘nikmalari shakllanadi. Chizmachilik fanini talaba o‘quvchilarga o‘qitishda qo‘llaniladigan metodlar o‘quvchilarda ijodkorlik faoliyatini shakllantiradi va fazoviy tasavvurini oshiradi. Ummuman olganda, chizmachilik fani texnik kommunikatsiya va loyihalashni samarali amalga oshirish uchun zarur bilim va ko‘nikmalarni shakllantiradi.

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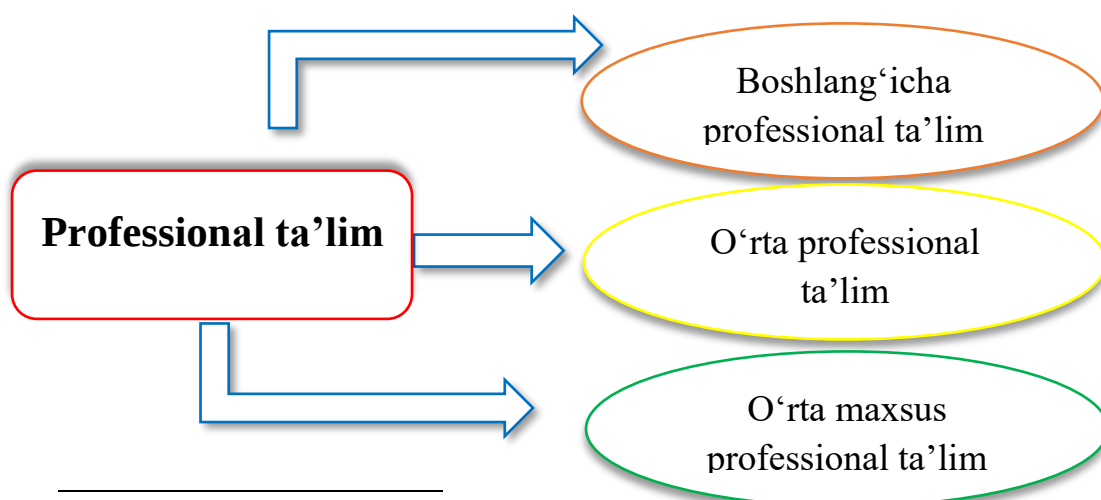
<sup>2</sup> <https://www.gazeta.uz/oz/2020/09/24/education/>

<sup>3</sup> Karimov I A. Biz kelajagimizni o‘z qo‘limiz bilan quramiz. 7-tom, -T: “O‘zbekiston”, 1999.

***Maktabgacha ta'lim va tarbiya turida chizmachilik fanini o'rni.*** Bizga ma'lumki, maktabgacha ta'lim muassasalarida chizmachilik fani fan sifatida alohida o'qitilmasada, ushbu fanning ma'lum bir elementlaridan foydalaniladi. Har qanday bog'chalarda, u hoh davlat bog'chasi bo'lsin, hoh xususiy bog'cha bo'lsin u yerda tarbiyachi pedagoglarimiz bolajonlarimizga turli xil rasmlar chizish orqali chizmachilik elementlarini o'rgatadilar. Misol uchun: bolajonlar daraxtni yashil barglarini aylana shaklida, shoxlarini to'g'ri to'rtburchak yoki trapetsiya shaklida chizishadi. Bu esa chizmachilik va geometriya fanlarini boshlang'inch nuqatada shakllanishidir. Chunki maktabgacha ta'lim muassasalarida tarbiyalanuvchi bolajonlarimiz ushbu fanni hali bilmasada, ammo mana shunday ko'nikmalari shakllanib boradi.

***Umumiy o'rta va o'rta-maxsus ta'lim turi.*** O'zbekiston Respublikasining qabul qilingan ta'lim standartiga asosan chizmachilik fani maktablarda 8-9- sinflarida o'qitiladi. Bizga ma'lumki, chizmachilik fanidek hech qaysi fan o'quvchilarning tasavvur va tafakkur qilish qobiliyatini rivojlantirmaydi. Har bir maktab o'quvchisi chizmachilik fanini o'rganar ekan, unda fazoviy tasavvur rivojlanib boradi. Bu albatta, fazoviy taffakur orqali amalga oshadi. Bejizga chizmachilik fanini maktab dasturlaridan boshlab ta'lim tizimiga kiritilmagan. Yuqorida aytib o'tkanimizdek, chizmachilik fani o'quvchilarni texnik savodxonligini, shuningdek, ijodiy tasavvurini shakllantiradi.

***Professional ta'lim tizimi.*** Prezidentimizning Oliy Majlisga Murojaatnomasida mamlakatimizda 2020-2021 o'quv yilidan boshlab kadrlar malakasini xalqaro mehnat bozori talablariga moslashtirish maqsadida Milliy malaka tizimini ishlab chiqish, yurtimizda 340 ta kasb-hunar maktabi, 147 ta kollej va 143 ta texnikum tashkil etish bo'yicha aniq vazifalar belgilab berilgan edi.<sup>4</sup>



<sup>4</sup> <https://yuz.uz/uz/news/professional-talim-tizimi-va-xalqaro-andozalar>

Maktab dasturida chizmachilik fani boshlang'ich nuqtada o'qitilsa, kasb-hunar maktablarda asosan oliy o'quv yurtlarga tayyorgarlik, ya'ni chuqurlashtirib o'qitiladi. Respublikamizdagi kasb-hunar maktablari mutaxassisliklar bo'yicha kichik mutaxassislar tayyorlanmoqda. Chizmachilik kursining boshqa fanlar bilan aloqalari, kasb-hunar maktablari talabalarini texnikaviy tarbiyalashda va ularning kasbiy faoliyatida katta o'rin egallaydi. Shuning uchun ham kasb-hunar maktablarining ko'pchilik mutaxassisliklarida chizmachilik fani alohida fan sifatida o'quv jarayoniga kiritilgan.

**Oliy ta'lim tizimi.** O'zbekiston ta'lim tizimida chizmachilik fani muhim o'rin tutadi. Bu fan, asosan talabalarga turli sohalarda loyiha ishlab chiqish, dizayn, arxitektura va boshqa tegishli sohalarda asosiy ko'nikmalarni o'rgatadi. Chizmachilik fani ta'lim jarayonida talabalarni nafaqat texnik, balki ijodiy fikrlashga ham o'rgatadi. Bu esa ularga kelajakda loyiha ishlab chiqishga katta yordam beradi.

Oliy o'quv yurtlarida chizmachilik fanini o'qitish – bu muhandislik, arxitektura, dizayn va boshqa texnik sohalarda talabalarga asosiy chizmalar va texnik hujjatlar tayyorlashni o'rgatadi. So'ngi yillarda yurtimizning OTM larida chizmachilik sohasiga mos turli xil yangi mutaxassislik yo'nalishlari ochilmoqda.

Jumladan,

***Nizomiy nomidagi Toshkent davlat pedagogika universitetining quyidagi ta'lim yo'nalishlarida:***

|                                                       |                                                       |
|-------------------------------------------------------|-------------------------------------------------------|
| -60110500 - Tasviriy san'at va muhandislik grafikasi; | -70111202–Muhandislik grafikasi va dizayn nazariyasi; |
|-------------------------------------------------------|-------------------------------------------------------|

***Toshkent arxitektura-qurilish universitetining quyidagi ta'lim yo'nalishlarida:***

|                                                                             |                                       |
|-----------------------------------------------------------------------------|---------------------------------------|
| -60730100 – Arxitektura;                                                    | -60711800 – Atrof-muhit muhandisligi; |
| -60720600 – Materialshunoslik va yangi materiallar texnologiyasi (qurilish) | -61020300 – Materialshunoslik;        |

***Toshkent davlat transport universitetining quyidagi ta'lim yo'nalishlarida:***

|                                                   |                                                |
|---------------------------------------------------|------------------------------------------------|
| -60610900 – Radioelektron qurilmalar va tizimlar; | -60710400 – Energetika muhandisligi;           |
| 60710500 – Elektr muhandisligi;                   | -60710800 – Metrologiya va standartlashtirish; |
| -60711200 – Metallurgiya muhandisligi;            | -60711800 – Atrof-muhit muhandisligi;          |

|                                    |                                           |
|------------------------------------|-------------------------------------------|
| -60712300 – Mexanika muhandisligi; | -60711000 – Mexatronika va robototexnika; |
|------------------------------------|-------------------------------------------|

Chizmachilik fanining o'qitishda, talabalar eng sodda geometrik shakllardan boshlab to murakkab detal yoki buyumlarni tasvirini chizish va ularni yaratilish jarayonlarini o'rganadilar. Talabalarda grafik bilimlarni rivojlantirish murakkab jarayon hisoblanadi va bu albatta o'quv jarayon bilan chambarchas bog'langan. Ushbu fanni o'qitish jarayonida barcha talabalarning o'ziga xos xususiyatlarini hisobga olib dars o'tish lozim.

**Oliy ta'limdan keyingi ta'lim.** Oliy ta'limdan keyingi ta'lim bu mamlakatimizda malakali va ilmiy-pedagogik kadrlar tayyorlashga qaratilgan uzluksiz ta'lim turi hisoblanadi. Oliy ta'limdan keyingi ta'lim tizimi ushbu shakllarda amalga oshiriladi: *stajyor-tadqiqotchilik, tayanch doktorantura, doktorantura, mustaqil izlanuvchilik*. Yuqorida ko'rsatib o'tilgan ta'lim shakllari orqali chizmachilik fani mutaxassisligi bo'yicha ham mamlakatimizda juda ko'plab ilmiy ishlar va doktorlik dissertatsiyasi himoya qilinmoqda.

**Kadrlarni qayta tayyorlash va ularning malakasini oshirish.** Bizga ma'lumki, pedagoglar har 5 yilda bir marotaba o'z malakalarini oshiradilar. O'qituvchi malaka oshirish jarayonida mamlakatimizda va jahonda pedagogika, psixologiya hamda o'quv fani bo'yicha erishilgan yutuqlarni o'rganadilar. Shu bilan birga, pedagog hodimlarning ilmiy salohiyatini, dars berish sifatini oshirish bugungi kunda eng dolzarb masalalardan biridir. Jumladan, chizmachilik fani o'qituvchilarining ham grafik savodxonligini yanada oshirish va ta'lim berish jarayonida duch kelinayotgan bir qancha muommolar mana shunday malaka oshirish jarayonida bartaraf qilinadi. Pedagogik mahorat markazida maktab o'qituvchilari xususan tasviriy san'at va chizmachilik fani o'qituvchilari quyidagi modular asosida o'qitiladi:

- Tasviriy san'at va chizmachilik fanining DTS va yangi avlod darsliklarining tahlili;
- Tasviriy san'at va chizmachilik fanlarini o'qitishda ilg'or xorijiy tajribalar;
- Tasviriy san'at va chizmachilik darslarida raqamli texnologiyalardan foydalanish;
- Tasviriy san'at va chizmachilik fanida ART pedagogikasi;
- Tasviriy san'at va chizmachilik darslarida o'quvchilarning o'quv faoliyati natijalarini baholash;
- Tasviriy san'at va chizmachilik fanida o'quvchilarning mustaqil

ta'limini tashkil etish shakllari;

**Maktabdan tashqari ta'lim.** O'quvchi-talabalarni darsdan tashqari bilim va ko'nikmalarini rivojlantirishga qaratilgan ta'lim shakli. Ushbu ta'lim turi yoshlarni intellektual, ijodiy va kasbiy jihatdan rivojlantirishga xizmat qiladi. Masalan, turli to'garaklar, barkamol avlod bolalar maktablari, o'quv kurslari, onlayn ta'lim platformalari va boshqalar.

Hozirgi ilm-fan va texnologiya rivojlangan davrda yurtimizda turli xil xususiy o'quv markazlar ochilmoqda. Ayniqsa, muhandislik sohasiga ta'luqli juda ko'plab o'quv kurslari, ya'ni AutoCAD, 3D max, SolidWorks, sketchUp va BricsCAD kabi modellashtirish va muhandislik loyihalarini yaratishda qo'llaniladigan dasturlarni o'qitadigan o'quv markazlari kundan kunga ko'paymoqda.

**Xulosa va takliflar.** Yuqoridagi fikr va mulohazalardan xulosa qilib shuni aytishimiz zarurki, ta'lim tizimida chizmachilik fanini o'qitish muhim ahamiyat kasb etadi. Chunki u o'quvchilarni fazoviy tafakkurini, muhandislik savodxonligi va texnik bilimlarini shakllantirishga yordam beradi. Biroq hozirgi vaqtda bu fan bo'yicha o'quv jarayonda ayrim muammolar duch kelmoqda, ya'ni amaliy mashg'ulotlar kamligi, texnologik vositalarning yetarlicha ta'minlanmagani va zamonaviy o'quv metodikalarining yetishmasligidir. Shu sababli chizmachilik fanini yanada samarali o'qitish uchun ilg'or pedagogik usullarni joriy etish, zamonaviy dasturiy ta'minotdan foydalangan holda o'qitish. Bu esa kelajak avlodg mutaxassis bo'lib yetishishiga muhim omil hisoblanadi.

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## ОБОСНОВАНИЕ МЕСТНОГО ПРИМЕНЕНИЯ ПРОБИОТИКОВ В КОМПЛЕКСНОМ ЛЕЧЕНИИ АБСЦЕССОВ И ФЛЕГМОН ЧЕЛЮСТНО- ЛИЦЕВОЙ ОБЛАСТИ У ДЕТЕЙ

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**Аннотация:** В настоящее время возрастает интерес к использованию пробиотиков в комплексной терапии воспалительных заболеваний. Одной из актуальных проблем детской челюстно-лицевой хирургии остаются абсцессы и флегмоны, которые требуют комплексного и эффективного подхода к лечению. В данной статье рассматриваются возможности и обоснование местного применения пробиотиков как дополнительного метода терапии наряду с традиционными средствами. Приводятся данные о положительном влиянии пробиотиков на микробиоценоз полости рта, ускорение регенерации тканей и снижение риска послеоперационных осложнений. Анализируется клиническая эффективность применения пробиотиков у детей с гнойно-воспалительными заболеваниями челюстно-лицевой области.

**Ключевые слова:** пробиотики, абсцессы, флегмоны, челюстно-лицевая область, дети, местное применение, комплексное лечение, воспалительные заболевания, регенерация тканей, микробиоценоз, послеоперационные осложнения, детская хирургия.

### **Введение.**

Челюстно-лицевая область у детей является одной из самых уязвимых зон для развития воспалительных заболеваний, таких как абсцессы и флегмоны. Эти заболевания сопровождаются гнойным воспалением тканей и могут приводить к тяжелым осложнениям, таким как сепсис, если не провести своевременное и адекватное лечение. Современные методы лечения включают в себя хирургическое вмешательство, антибактериальную терапию и симптоматическое лечение, однако несмотря на использование этих методов, частота послеоперационных осложнений и рецидивов воспалительных процессов остается достаточно высокой. В последние годы внимание медицинского сообщества привлекает возможность использования пробиотиков в комплексном лечении воспалительных заболеваний. Пробиотики, как

микроорганизмы, оказывающие благоприятное воздействие на микробиоценоз, могут способствовать нормализации баланса микрофлоры, улучшению регенерации тканей и снижению частоты инфекционных осложнений после операции. Особенно важно использование пробиотиков в детской практике, где иммунная система еще не полностью сформирована, а любые нарушения микробиома могут существенно повлиять на здоровье. Данная статья направлена на обоснование местного применения пробиотиков в комплексном лечении абсцессов и флегмон челюстно-лицевой области у детей. Рассматриваются механизмы их воздействия на микробиоту полости рта и слизистых оболочек, а также клиническая эффективность их применения в сочетании с традиционными методами лечения. Применение пробиотиков в сочетании с другими терапевтическими мерами может снизить риск развития послеоперационных осложнений, ускорить восстановление тканей и улучшить общее состояние пациентов.

### **Основная часть.**

1. Пробиотики и их роль в медицинской практике. Пробиотики — это живые микроорганизмы, которые, при адекватном применении в определенных дозах, оказывают положительный эффект на здоровье хозяина, нормализуя микробиоту. Они играют ключевую роль в поддержании баланса кишечной флоры и могут влиять на иммунную систему, оказывая антибактериальное, противовирусное и противогрибковое действие. Все эти свойства пробиотиков делают их перспективным инструментом в комплексной терапии воспалительных заболеваний, в том числе в лечении абсцессов и флегмон челюстно-лицевой области. Пробиотики имеют множество полезных свойств, включая улучшение барьерной функции эпителия, снижение воспаления и восстановление нормального микробиома. При локальном применении пробиотики оказывают влияние непосредственно на микрофлору слизистых оболочек полости рта, где часто нарушается баланс между патогенными и непатогенными микроорганизмами, особенно после хирургического вмешательства.

2. Абсцессы и флегмоны челюстно-лицевой области у детей. Абсцессы и флегмоны челюстно-лицевой области представляют собой гнойные воспалительные процессы, которые могут развиваться в результате инфекционных заболеваний, травм или осложнений после хирургических вмешательств. У детей данные заболевания имеют особенности, связанные с анатомическими и физиологическими особенностями, такими как более высокая

проницаемость тканей для инфекционных агентов, а также более выраженная склонность к быстрым и тяжёлым воспалительным реакциям. Абсцесс — это ограниченное гнойное воспаление, которое часто приводит к образованию полости, наполненной гноем. Флегмона — это диффузное гнойное воспаление, которое не имеет четких границ и может быстро распространяться в соседние ткани, что делает её более опасной. Оба этих состояния требуют оперативного вмешательства, антибактериальной терапии и комплексного подхода к лечению, чтобы избежать серьёзных осложнений, таких как сепсис или перфорация гнойного очага.

3. Применение пробиотиков в комплексном лечении. Включение пробиотиков в комплексную терапию абсцессов и флегмон челюстно-лицевой области у детей направлено на восстановление нормального микробиома, улучшение иммунной функции и ускорение процессов регенерации тканей. После хирургического вмешательства, связанного с вскрытием абсцесса или дренированием флегмоны, местная флора часто нарушается, что способствует размножению патогенных микроорганизмов. Пробиотики способствуют нормализации микробиоты, что предотвращает развитие вторичных инфекций и снижает риск рецидивов воспаления. Местное применение пробиотиков может значительно уменьшить воспаление в зоне операции, ускорить заживление тканей и минимизировать послеоперационные осложнения. Это особенно важно для детей, чья иммунная система ещё не обладает полной зрелостью, что делает их более уязвимыми к инфекционным заболеваниям. Пробиотики могут также улучшить состояние слизистых оболочек и способствовать восстановлению нормального микробного баланса, что важно для поддержания локальной иммунной защиты.

4. Механизмы действия пробиотиков. Механизмы действия пробиотиков связаны с их способностью взаимодействовать с иммунной системой и влиять на локальный микробиом. Одним из основных механизмов является улучшение барьерной функции слизистой оболочки, что препятствует проникновению патогенных микроорганизмов. Пробиотики могут подавлять рост патогенных бактерий, выделяя антимикробные вещества, такие как бактериоцины. Они также активируют иммунные клетки, способствуя выработке противовоспалительных цитокинов, что способствует снижению воспаления. Кроме того, пробиотики могут улучшать процессы регенерации тканей. Они активируют клеточные механизмы восстановления, стимулируя синтез коллагена и других компонентов матрикса, что ускоряет заживление ран и улучшает качество рубцовой ткани.

5. Клинические исследования и результаты. Ряд клинических исследований подтвердил эффективность применения пробиотиков в комплексном лечении воспалительных заболеваний челюстно-лицевой области. В одном из исследований было показано, что использование пробиотиков у детей с абсцессами челюстно-лицевой области способствовало более быстрому заживлению после операции и снижению уровня послеоперационных инфекций. В другом исследовании, проведённом среди детей с флегмонами, применение пробиотиков показало снижение уровня воспаления и ускорение восстановления тканей.

Эти данные подтверждают, что пробиотики могут быть эффективным дополнением к традиционным методам лечения, таким как антибиотикотерапия и хирургическое вмешательство. Однако, важно отметить, что пробиотики не являются панацеей, и их применение должно быть частью комплексного подхода, включающего все необходимые медицинские меры.

**Заключение:**

Использование пробиотиков в комплексном лечении абсцессов и флегмон челюстно-лицевой области у детей открывает новые возможности для улучшения исходов лечения. Пробиотики способствуют восстановлению нормального микробиома, улучшению иммунной функции, а также ускорению процессов регенерации тканей. Местное применение пробиотиков оказывает положительное влияние на снижение воспаления, сокращение времени заживления и снижение частоты послеоперационных осложнений. Данные клинических исследований подтверждают эффективность применения пробиотиков в сочетании с традиционными методами лечения, что делает их важным компонентом комплексной терапии воспалительных заболеваний челюстно-лицевой области. Однако, для более широкого применения в клинической практике необходимо продолжать исследования, чтобы более точно оценить их эффективность и оптимальные схемы использования. Таким образом, пробиотики являются перспективным дополнением к традиционным терапевтическим методам, и их интеграция в практику челюстно-лицевой хирургии может значительно улучшить результаты лечения и качество жизни пациентов.

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## **THEORETICAL FOUNDATIONS OF RESEARCH ON MARITAL RELATIONSHIPS AND VALUES**

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**Annotation:** This article explores the theoretical foundations of research on marital relationships and values. It examines key psychological theories and conceptual frameworks that help understand the dynamics of marital interaction, emotional connection, and value alignment between partners. The study highlights the importance of mutual respect, communication, and shared beliefs in maintaining a healthy marital relationship. Additionally, the article reviews contemporary research findings, discusses cultural influences on marital values, and emphasizes the role of psychological support in enhancing marital satisfaction and stability.

**Keywords:** Marital relationships, values, psychological theories, emotional connection, communication, mutual respect, cultural influences, marital satisfaction, family psychology.

### **Introduction.**

Marital relationships represent one of the most significant aspects of human social life, shaping not only individual well-being but also societal stability. The study of marital values and relationships has long attracted the attention of psychologists, sociologists, and cultural researchers. As society evolves, so do the expectations, roles, and emotional dynamics within marriage. Understanding the theoretical foundations behind marital relationships allows researchers and practitioners to better support couples in building strong, healthy, and lasting unions. This article aims to explore key theoretical perspectives on marital values and examine how psychological insights contribute to the study and improvement of marital life.

### **Main Body.**

Understanding marital relationships requires a multifaceted approach, drawing upon various psychological, sociological, and cultural theories. Over the years, scholars have developed numerous conceptual models that explain how couples form bonds, interact emotionally, resolve conflicts, and maintain long-term commitment. One of the foundational theories in this area is Attachment Theory, originally developed by John

Bowlby and later extended by researchers such as Mary Ainsworth and Cindy Hazan. This theory suggests that individuals' early attachment experiences with caregivers shape their expectations and behaviors in adult romantic relationships. Securely attached individuals tend to form healthy, trusting bonds with their partners, while those with insecure attachment styles may experience anxiety, avoidance, or instability in their marriages. Another important framework is Social Exchange Theory, which views relationships as a process of cost-benefit analysis. According to this theory, individuals evaluate their marital satisfaction based on the rewards (such as love, support, and intimacy) and costs (such as conflicts, stress, or lack of freedom) associated with the relationship. This approach emphasizes the importance of perceived fairness, reciprocity, and satisfaction in maintaining long-term commitment. Family Systems Theory also provides valuable insights into marital dynamics. This theory views the family as an interconnected system where each member influences and is influenced by others. In a marital context, the relationship between spouses forms the core of the family system, setting the emotional tone for the entire household. Healthy communication patterns, conflict resolution strategies, and shared responsibilities are crucial for maintaining balance within this system. Value alignment plays a significant role in marital stability. When partners share core beliefs and life goals—such as views on family, career, religion, and parenting—they are more likely to experience harmony and mutual support. Cultural values also influence how marriages function. For instance, in collectivist cultures, family and community expectations may play a larger role in marital decisions, while in individualistic cultures, personal fulfillment and autonomy may be prioritized. Moreover, emotional intelligence and the ability to manage stress and conflict are vital factors in sustaining a marriage. Couples with high emotional intelligence tend to navigate challenges more effectively, showing empathy, patience, and active listening. Research has shown that regular communication, emotional validation, and conflict resolution skills are positively correlated with marital satisfaction. Modern research also emphasizes the importance of psychological support services, such as premarital counseling, couples therapy, and psychoeducation. These interventions help couples develop communication skills, understand each other's needs, and strengthen their emotional connection. In recent years, there has been growing recognition of the role of gender equality, mental health awareness, and individual psychological development in shaping healthy marital relationships. In summary, the study of marital relationships and values is grounded in multiple theoretical perspectives. These theories provide a framework for understanding the emotional, cognitive, and social dynamics that

influence marital outcomes. As marriage continues to evolve in the context of changing social norms and global influences, continued research and psychological support remain essential to promoting healthy and fulfilling partnerships.

**Conclusion:**

Marital relationships are complex and deeply influenced by psychological, emotional, and cultural factors. Theoretical frameworks such as Attachment Theory, Social Exchange Theory, and Family Systems Theory offer valuable insights into how couples form, maintain, and sometimes dissolve their unions. Shared values, effective communication, emotional intelligence, and mutual respect are key elements in fostering stable and fulfilling marriages. In today's rapidly changing world, the traditional structures and expectations of marriage are evolving, making it even more important to understand the foundational principles that contribute to healthy relationships. Psychological services and support play a critical role in helping couples navigate challenges and strengthen their bonds. Continued research in this field not only deepens our understanding of marital dynamics but also helps develop practical tools to support couples in achieving long-term happiness and stability.

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## **MAKTAB YOSHIDAGI BOLALAR TISHLARIDA DEMINERALIZATSION JARAYON MAVJUDLIGI VA JADALLIGINI BAHOLASH**

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**Annotatsiya.** Tish kariyesi dunyo bo'ylab eng keng tarqalgan kasalliklardan biridir. U asosan mutant streptokokk kabi kariyesni keltirib chiqaruvchi bakteriyalarning tishlarga yopishib, u yerda shakarlarni parchalab kislota hosil qilishi natijasida yuzaga keladi. Erta bolalik kariyesi (EBK) olti yoshgacha bo'lgan bolada biror sut tishida bir yoki undan ortiq (kariyes tufayli) chirigan, tushib ketgan yoki plombalangan tish yuzasining mavjudligi sifatida aniqlanadi. [2,7,10]

Jahon sog'liqni saqlash tashkiloti (JSST) erta bolalik kariyesini 60 dan 90% gacha tarqalgan global muammo sifatida ko'rsatgan [5]. Yevropa mamlakatlari tomonidan taqdim etilgan statistik ma'lumotlarga ko'ra, 6 yoshdan 12 yoshgacha bo'lgan bolalarning 61 foizida kamida bitta kariyes tishi bor va barcha ijtimoiy sinflarda tish kariyesining keng tarqalishi tufayli bu kasallik jamiyatga katta moliyaviy yuk yuklashi mumkin.

Taxminan aholining 35% da davolanmagan tish kariyesi borligi taxmin qilinmoqda. Ftor tish kariyesining oldini olishda asosiy omil bo'lib kelgan bo'lsa-da, aholi orasida qabul qilinishining pasayishi va bolalarda flyuoroz xavfi tufayli samarali muqobillar zarurati mavjud. Gidroksiapatit (GAP; Tarkibida  $\text{Ca}_5(\text{PO}_4)_3(\text{OH})$  bo'lgan tish pastalari ftorsiz alternativalar bo'lib, ular so'nggi paytlarda kariyesga qarshi vositalar sifatida samarali ekanligi isbotlangan.[1,4]

**Kalit so'zlar.** Karies, demineralizatsiya, remineralizatsiya

## **ОЦЕНКА НАЛИЧИЯ И ИНТЕНСИВНОСТИ ПРОЦЕССА ДЕМИНЕРАЛИЗАЦИИ ЗУБОВ У ДЕТЕЙ ШКОЛЬНОГО ВОЗРАСТА**

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**Аннотация.** Кариес зубов - одно из самых распространенных заболеваний во всем мире. Он в основном возникает в результате того, что кариозные бактерии, такие как мутантный стрептококк, прикрепляются к зубам, разрушая там сахара с образованием кислоты. Кариес раннего детства (КРМ) у детей до шести лет с одним или более молочными зубами (из-за кариеса) определяется как наличие гнилой, выпавшей или пломбированной поверхности зуба. [2,7,10]

Всемирная организация здравоохранения (ВОЗ) обозначила кариес раннего детства как глобальную проблему с распространенностью от 60 до 90%[5]. Согласно статистике, предоставленной европейскими странами, у 61% детей в возрасте от 6 до 12 лет имеется как минимум один кариесный зуб, и из-за широкой распространенности кариеса зубов во всех социальных классах это заболевание может создать значительную финансовую нагрузку на общество.

Предполагается, что примерно у 35% населения имеется нелеченный кариес зубов. Хотя фтор был ключевым фактором в профилактике кариеса зубов, существует необходимость в эффективных альтернативах из-за снижения потребления среди населения и риска флюороза у детей. Гидроксиапатит (ГАП; Зубные пасты, содержащие  $\text{Ca}_5(\text{PO}_4)_3(\text{OH})$ , являются нефторированными альтернативами, которые в последнее время доказали свою эффективность в качестве противокариозных средств.[1,4]

**Ключевые слова.** Кариес, деминерализация, реминерализация

## **ASSESSMENT OF THE PRESENCE AND INTENSITY OF REMINERALIZATION PROCESSES IN THE TEETH OF SCHOOL-AGE CHILDREN**

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**Abstract.** Dental caries is one of the most widespread diseases globally. It primarily occurs when caries-causing bacteria, such as mutant streptococcus, adhere to teeth and break down sugars, producing acid. Early childhood caries (ECC) is defined as the

presence of one or more decayed, missing (due to caries), or filled tooth surfaces in any primary tooth in a child under six years of age. [2,7,10]

The World Health Organization (WHO) has identified early childhood caries as a global problem with a prevalence ranging from 60 to 90%.

The World Health Organization (WHO) has identified early childhood caries as a global problem with a prevalence of 60 to 90%.

According to statistics provided by European countries, 61% of children aged 6 to 12 have at least one caries tooth, and due to the widespread prevalence of dental caries in all social classes, this disease can place a significant financial burden on society.

It is estimated that approximately 35% of the population has untreated dental caries. Although fluorine has been a key factor in the prevention of dental caries, there is a need for effective alternatives due to the decrease in its use among the population and the risk of fluorosis in children. Hydroxyapatite (HAP; Toothpastes containing  $\text{Ca}_5(\text{PO}_4)_3(\text{OH})$  are fluorine-free alternatives, which have recently been proven to be effective as anti-cariogenic agents.[1,4]

**Keywords.** Caries, demineralization, remineralization

**Tadqiqot maqsadi.** Maktab yoshidagi bolalar tishlarida dog` bosqichidagi kariesni aniqlash ularni davolash samaradorligini oshirishga yordam beradi, chuqur kavakli defektlar hosil bo`lishini va kelajakda kelib chiqadigan suyak va yumshoq to`qimalarda kechadigan asoratlarni oldini oladi.

**Materiallar va usullar.** Tadqiqotda somatik jihatdan sog`lom sakkizinchi va o`ninchi sinf o`quvchilari (50 kishi: 23 qiz va 27 o`g`il bolalar) ishtirok etdi. Ushbu maktabda faoliyat yuritadigan statsionar stomatologiya kabinetida tekshiruvlar o`tkazildi.

**O`tkazilgan tekshiruvlar:**

1. KPU indeksi bo'yicha bolalar tishlari holatini aniqlash;
2. Tish kariesining demineralizatsiyasini metilen ko'kning 2% suvli eritmasi bilan bo'yash usuli bilan aniqlash va baholash (Aksamit indeksi);



**Natijalar va muhokama.** Tadqiqotda ishtirok etgan bolalarning og'iz bo'shlig'i kuzatuv davomida quyidagi natijalar qayd etildi:

- Tekshirilgan bolalar KPU indeksi umumiy guruhga nisbatan o'rtacha 0,53 ni tashkil etdi.
- Qizlar o'rtasida o'rtacha KPU indeks ko'rsatgichi 0,49
- O'g'il bolalar o'rtacha KPU indeksi 0,57

-Metilen ko`kining 2%li eritmasida demineralizatsiyalanayotgan o`choqlarni bo`yash usuli bilan ani`langan Aksamit indeksining o`rtacha ko`rsatgichi o`lchanganlar orasida 2,7 ko`rsatgichni tashkil etdi.

**Xulosa.** Tadqiqotdan ko`zlangan maqsadga muvofiq maktab yoshidagi bolalar tish yuzasidagi demineralizatsion o`choq hosil qilgan dog` bosqichidagi karieslarning borligi, ularning jadalligi aniqlandi va holatga baho berildi. KPU indeksi natijasiga ko`ra bolalarda tishlarning holati yaxshi ko`rsatgichda deb baholandi. Aksamit indeksi bilan tekshirilgan demineralizatsion jarayonning holati ham qoniqarli. Bu natijalarga asoslangan holda tekshiruvdan o`tkazilgan bolalarga tavsiyalar berildi va remineralizatsiyalovchi “R.O.C.S. Medical Minerals” gelidan foydalanish tavsiyasi berildi

#### **Tavsiyalar:**

1. Tish gigiyenasiga e`tibor qaratish bilan bir qatorda remineralizatsiya vositalarini, jumladan ROCS gelini muntazam qo`llash zarur.
2. Profilaktik dasturlarni maktab yoshidagi bolalar uchun keng ko`lamda amalga oshirish tish sog`lig`ini yaxshilashga yordam beradi.

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**МАҚСУД ШАЙХЗОДА – МАНГУЛИККА ДАХЛДОР ИЖОДКОР**

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**Annotation.** The outstanding writer of the Uzbek and Azerbaijani peoples, Maqsud Shaykhzoda, wrote works in the classical genres of Eastern poetry. Shaykhzoda's works have been translated into fraternal languages and foreign languages. During the translation process, the poet drew inspiration from the schools of mastery of classical writers of fraternal and world literature, incorporating advanced traditions into his poetry. His contributions to literature were recognized by the Soviet government. This article discusses these aspects.

**Keywords:** writer, poetry, translation, literary fiction, poet, publicist, people.

Maksud Masum oglu Sheikhzadeh, one of the great representatives of Uzbek literature in the 20th century and a son of both the Uzbek and Azerbaijani peoples, was born in 1908 in the city of Agdash (Oqtosh), Azerbaijan, into an intellectual family. His father, Masumbek, was a physician who had a deep love for poetry and instilled in his children a passion for literature. His mother, Fotimakhonim, was also an educated woman.

In 1928, he was accused of free-thinking, particularly for advocating Azerbaijan's independence, and was exiled to Tashkent as part of the persecution of national intellectuals. From that time until the end of his life, Sheikhzadeh's fate remained closely tied to Uzbekistan. Between 1935 and 1938, he worked as a researcher at the Institute of Language and Literature. From 1938 until his death, he taught at the Tashkent State Pedagogical Institute named after Nizami, in the Department of Uzbek Classical Literature. He also served as the dean of the institute and the head of the Uzbek Literature Department. His works were regularly published in periodicals, and his activities as a translator, literary scholar, and educator earned him recognition in Uzbekistan's academic circles.

Sheikhzadeh began writing poetry during his school years and often recited his poems at school events. His first poem was published in 1921 in the *Communist* newspaper in Baku. Many of his early poems, written in Azerbaijani, were preserved in manuscript form in *Shaykhzoda's Notebook*. His first works in Uzbek literature were published in 1929.

During the 1930s, the poet published collections such as *Ten Poems*, *My Comrades*, *The Third Book*, and *Republic*. These collections established Sheikhzadeh as a

distinctive and recognized poet in Uzbek literature. As he rightfully wrote in *Tashkentnama*:

The poet's creative work reached its peak in the 1940s, during the years of World War II. The main themes of his poetry collections published during this period, such as "What is the Struggle for?", "War and Song", "Captain Gastello", and "The Heart Says", revolved around the destruction of fascism, the preservation of life, honor, and peace, and the call for resilience and courage. In 1944, Maksud Sheikhzadeh created another masterpiece of his literary career, the historical drama "Jalaluddin Manguberdi." The play depicts the 13th-century struggle of Jalaluddin Manguberdi, one of the valiant sons of the Uzbek people, against the invading armies of Genghis Khan, fighting bravely for the independence of his homeland. The artistic authenticity of this historical figure and the glorious past ensured the success of "Jalaluddin Manguberdi." During the author's lifetime, the work was not published in its entirety. It was only in 1988, 21 years after Sheikhzadeh's death, that the full version was printed in Uzbek. The play was staged at the Hamza Uzbek State Academic Drama Theater (now the Uzbek National Academic Drama Theater), with the legendary actor Shukur Burhanov portraying the fearless commander Jalaluddin.

In the post-war years, Sheikhzadeh published poetry collections celebrating peaceful life and creative enthusiasm, including "Fifteen Years' Notebook", "My Praises", "Strings of Time", "Flame", and "A Quarter-Century's Divan." In 1957, he wrote "Tashkentnama," an epic poem filled with deep philosophical and emotional reflections on Tashkent.

Maksud Sheikhzadeh, a talented poet and translator, made significant contributions to Uzbek literature by translating the works of over fifty authors and producing numerous original poetic works. He was an erudite, multifaceted, and dedicated artist. Sheikhzadeh's translations embraced both Eastern (Rabindranath Tagore, Volat̤hōl, Mehmet Akif, Nâzım Hikmet) and Western classics (Johann Wolfgang von Goethe, George Gordon Byron, Nâzım Hikmet). He also paid attention to the works of Alexander Pushkin, Mikhail Lermontov, Nikolay Nekrasov, Vladimir Mayakovsky, Eduard Bagritsky, Boris Pasternak, and Aleksei Surkov, as well as those of Taras Shevchenko, Samad Vurgun, and Eghishe Charents. However, his most remarkable achievement was translating the works of William Shakespeare, whom he considered a "theater genius." Sheikhzadeh devoted his best years to translating and promoting Shakespeare's literary legacy in his native language.

In Shakespeare's works, Sheikhzadeh was inspired by their humanistic ideas; in Byron's poetry, he admired the revolutionary spirit of Romanticism; in Pushkin's

works, he appreciated the vast artistic development and the richness of folk lyrical creativity. He was also influenced by Mayakovsky's ability to "speak in full voice" and his militant spirit. Sheikhzadeh left behind a truly invaluable literary heritage in Uzbek literature through his translation endeavors. One of his greatest contributions was his translation of Shakespeare's "Hamlet," which he revised in the 1930s and approached with deep poetic and philosophical insight. He worked on this project in the 1940s, when he felt mature enough to tackle such a highly responsible task. Thus, in 1948, after 12 years of work, his first translation of "Hamlet" was published. He later revised it in 1960, further demonstrating his serious approach to Shakespeare's timeless work. Sheikhzadeh's deep understanding of Shakespeare's originality and poetic richness became evident in his translation of "Hamlet." His analysis of the tragedy was based on a careful interpretation of the protagonist's image and its evolution. Understanding and depicting Hamlet's character was a complex task due to the presence of mythological imagery, the philosophical depth of the hero's character, and the historical-social distance between the tragedy's setting and modern times. These challenges required additional clarifications and interpretations from the translator. Sheikhzadeh's attitude toward archaic expressions in the Uzbek language was also shaped by these considerations. Sheikhzadeh was a true master of translation, creating a school of thought that influenced many young translators who followed in his footsteps.

Sheikhzadeh was also the author of the immortal tragedy "Mirzo Ulugbek." Written under the influence of Shakespeare's "Hamlet," "King Lear," and "Romeo and Juliet," this work was a significant milestone in the development of Uzbek dramaturgy. The play vividly and grandly portrays Mirzo Ulugbek, a great scholar-astronomer and the descendant of the Timurid dynasty, who played a crucial role in promoting science after Amir Timur. The legendary actor Shukur Burhanov masterfully portrayed this historical figure on stage. In 1964, Sheikhzadeh adapted the play into the screenplay for the film "Ulugbek's Star." The play explored the unique realities of Ulugbek's rule and showcased how Sheikhzadeh creatively incorporated some of Shakespeare's techniques. However, Sheikhzadeh did not merely imitate Shakespeare—he introduced original innovations in developing the plot and characters, highlighting his independence as a playwright.

It is worth noting that Sheikhzadeh did not speak English, yet his translations of Shakespeare's works were highly esteemed by Uzbek readers. His translations retained the essence of the original texts and demonstrated his remarkable talent. Sheikhzadeh adhered to a set of principles that ensured the high quality of his translations: preserving

the original characters and imagery, finding linguistic equivalents, maintaining fidelity to historical and contextual details, and ensuring the structural and semantic coherence of the text. He successfully conveyed the poetic devices and social atmosphere of Shakespeare's tragedies, bringing the spirit of their respective eras to life in the Uzbek language.

Sheikhzadeh was particularly drawn to progressive, humanistic, and peace-loving authors. These values were deeply embedded in his own character. He despised evil, exploitation, inequality, colonial oppression, and senseless wars.

Thus, Maksud Sheikhzadeh translated works that resonated with his worldview and artistic identity. His monumental contributions to poetic art and translation have enriched Uzbek literature. His efforts revived and gave full voice to the masterpieces of both Eastern and Western literature, solidifying their place in the treasury of national literature. As a poet, playwright, translator, publicist, scholar, and educator, Maksud Sheikhzadeh has left an indelible mark on Uzbek culture, ensuring his eternal legacy

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## Adsorption isotherm of PFA corrosion inhibitor which obtained based on paraphenylenediamine, Formalin, and Alanin

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The process of adsorption is desorption of water molecules by adsorbing inhibitor molecules on the metal surface, and this process can also be described as an exchange process. From this we can see that the inhibitor is adsorbed on the metal surface and covers the surface ( $\gamma$ ) as the inhibitor concentration increases, the surface is covered to a higher degree and the efficiency increases.  $\theta$  is a quantity indicating the effectiveness of the inhibitor and is taken as 100. Several types of isotherms have been used to describe this process[1-5]. Freundlich adsorption isotherms were obtained, which can be expressed as follows:

$$\theta = K_{ads} C^n \quad (1)$$

or

$$\log \theta = \log K_{ads} + n \log C \quad (2)$$

here  $0 < n < 1$ ;  $\theta$  – surface coating;  $C$  – inhibitor concentration;  $K_{ads}$  – equilibrium constant of the adsorption-desorption process.

The following isotherms for adsorption of these corrosion inhibitors were also studied

Lengmyur: 
$$\frac{C_{ing}}{\theta} = \frac{1}{K_{ads}} + C_{ing} \quad (3)$$

Frumkin: 
$$\frac{\theta_{grav}}{1 - \theta_{grav}} \exp(-2f\theta_{grav}) = K_{ads} C_{ing} \quad (4)$$

Tyomkin: 
$$\exp(f\theta_{grav}) = K_{ads} C_{ing} \quad (5)$$

here:  $C_{inh}$  – concentration of the inhibitor in the solution (mg/l),  $\theta$  – the full coverage rate,  $K_{ads}$  – adsorption equilibrium constant.

The standard free energy of adsorption ( $\Delta G^\circ_{ads}$ ) is calculated by the following equation (6).

$$\Delta G^\circ_{ads} = \Delta H^\circ_{ads} - T \Delta S^\circ_{ads} \quad (7)$$

Here,  $R$  is the universal gas constant,  $T$  is the absolute temperature in Kelvin. The values of  $k_{ads}$  and  $\Delta G^\circ_{ads}$  are calculated using the above isotherm equations.

Knowing the thermodynamic energy of the system is very important in determining the mechanisms of action of the corrosion inhibitor. Based on this, we can say that the energy of the thermodynamic system where corrosion is occurring is measured in cases with and without an inhibitor taken at different concentrations. For this, it is found by applying the Arrhenius equation.

$$CR = A \exp\left(\frac{-E_a}{RT}\right) \quad (8)$$

Here:  $E_a$  is the activation energy expressed in kJ/mol moles,  $R$  is the universal gas constant value of  $8.314 \text{ J/mol} \times \text{K}$ ,  $T$  is the temperature expressed in K,  $A$  is the exponential coefficient [5,6].

The Arrhenius graph is widely used to explain various parameters such as activation energy ( $E_a$ ), enthalpy ( $\Delta H$ ), and entropy ( $\Delta S$ ) and its mathematical form is expressed by the following equations in the broad elucidation of the concepts of corrosion inhibitor's absorption mechanism:

$$CR = A e^{-E_a/RT} \quad (8)$$

$$CR = \frac{RT}{Nh} e^{\frac{\Delta S_a^0}{R}} e^{\frac{-\Delta H_a^0}{RT}} \quad (9)$$

Here,  $CR$  is the corrosion rate, mm/year  $A$  is the Arrhenius constant for the process,  $R$  is the universal gas constant ( $8.314 \text{ J/mol}$ ). Temperature on the T-kelvin scale,  $N$ -Avagadaro number ( $6.12 \cdot 10^{23}$ ),  $h$ -Planck's constant ( $6.626 \cdot 10^{-34} \text{ m}^2\text{kg/s}$ ) [7-10].

When describing the dependence of  $\ln CR/T$  on  $1/T$  with an Arrhenius graph, I can take the regression coefficient as equal to 1. Thermodynamic parameters of solutions with and without PFA brand corrosion inhibitor was determined. From the results of a series of experiments, we can say that the value of  $E_a$  in solutions with a corrosion inhibitor is somewhat higher than in solutions without an inhibitor, and of course, these values are different at different concentrations.

The values of activation energy and enthalpy were obtained by calculating the transition state values in solutions with and without inhibitors of different concentrations. (formula-3.3) [11-15]. These plots give the slopes (slope =  $\Delta H_a / 2.303R$ ) and intercepts (intercept =  $[\log RNh + (\Delta S_a / 2.303R)]$ ), which give the value of  $\Delta H_a$  in inhibitor and non-inhibitor solutions. It is calculated based on the following formula:

$$CR = \frac{RT}{Nh} \exp\left(\frac{\Delta S_a}{R}\right) \exp\left(\frac{\Delta H_a}{RT}\right) \quad (3.3)$$

In the above equation,  $h$  is Planck's constant ( $6.626 \cdot 10^{-34} \text{ m}^2\text{kg/s}$ ) and  $N$  is Avogadro's number ( $6.12 \cdot 10^{23}$ ). A higher activation energy indicates physical

adsorption, and a lower one indicates chemical adsorption. Using the Arrhenius equation, kinetic parameters such as activation energies, enthalpy, and entropy of corrosion inhibitors in graded water and 1 M HCl in the steel surface in inhibitor-free and inhibitor-containing environments were studied. In this case, the values of  $E_a$  were found from the dependence of  $\lg W$  on  $1000/T$  in inhibitor-free and inhibitor-containing environments.

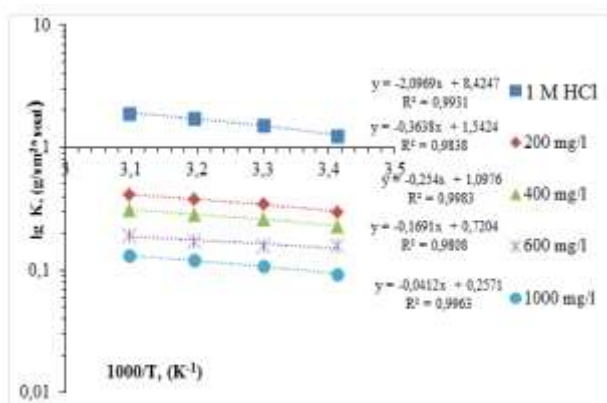


**Figure 1. Arrhenius plot of the activation energy of the green corrosion inhibitor in 1 M HCl.**

In Table 1, the activation energy and enthalpy values in the inhibitor-free solution were  $E_a$  40.88 kJ/mol-1 and  $\Delta H_a$  139.77 kJ/mol-1).

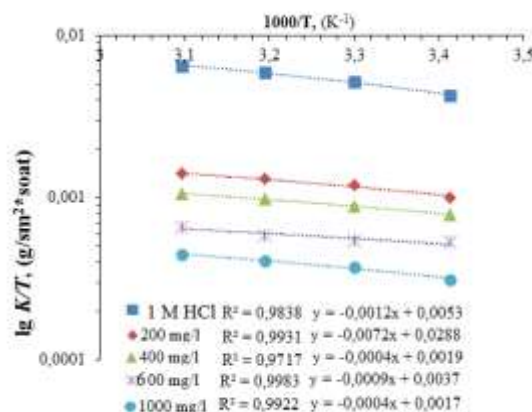
Table-1

**Activation parameters in 1 M hydrochloric acid environment for St20 steel under the influence of corrosion inhibitor**

| Inhibitor concentration | $E_a$ (kJ/mol <sup>-1</sup> ) | $\Delta H_a$ (kJ/mol <sup>-1</sup> ) | $\Delta S_a$ (kJ/mol <sup>-1</sup> K <sup>-1</sup> ) |
|-------------------------|-------------------------------|--------------------------------------|------------------------------------------------------|
| 0.0                     | 40,88                         | 139,77                               | 363,43                                               |
| 200                     | 6,66                          | 22,98                                | -101,84                                              |
| 400                     | 2,20                          | 7,66                                 | -157,37                                              |
| 600                     | 1,65                          | 5,74                                 | -166,94                                              |
| 1000                    | 1,58                          | 4,77                                 | -179,28                                              |

When the concentration reached 1000 mg/l,  $E_a$  decreased to 1.58 (kJ/mol-1) and  $\Delta H_a$  decreased to 4.77 (kJ/mol-1).  $\Delta S_a$  decreased from 363.43 (kJ/mol-1K-1) to -179.28

(kJ/mol-1K-1). This confirms that the St20 steel is inhibited during melting and the

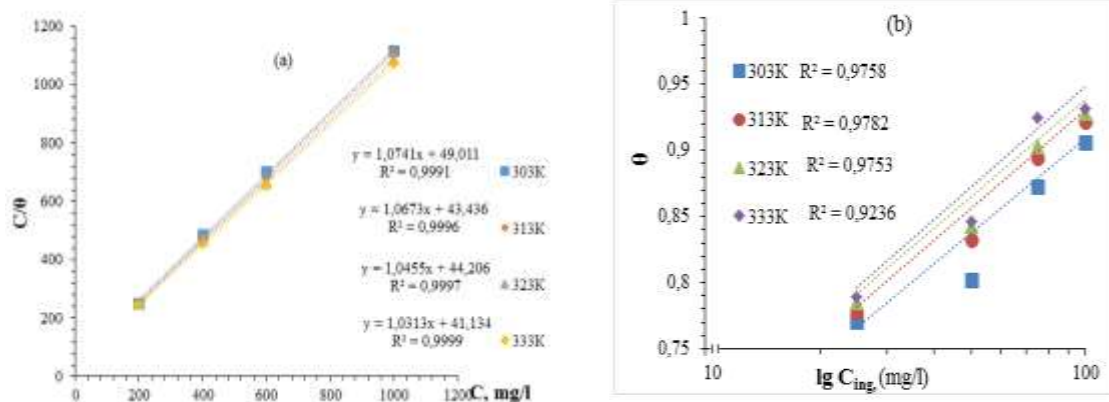


chemisorption process is underway.

**Figure 2. Transition state diagram for the activation process of the inhibitory system in 1M HCl.**

Arrhenius plots (1000/T of lgW) were obtained for St20 steel in 1 M HCl medium with and without green corrosion inhibitor at various concentrations and at various temperatures.

Adsorption isotherm. Langmuir (Figure 3.a), Frumkin (Figure 3.b), and Tymkin (Figure 3.c) isotherms of the green corrosion inhibitor obtained in 1 M hydrochloric acid medium are also plotted.



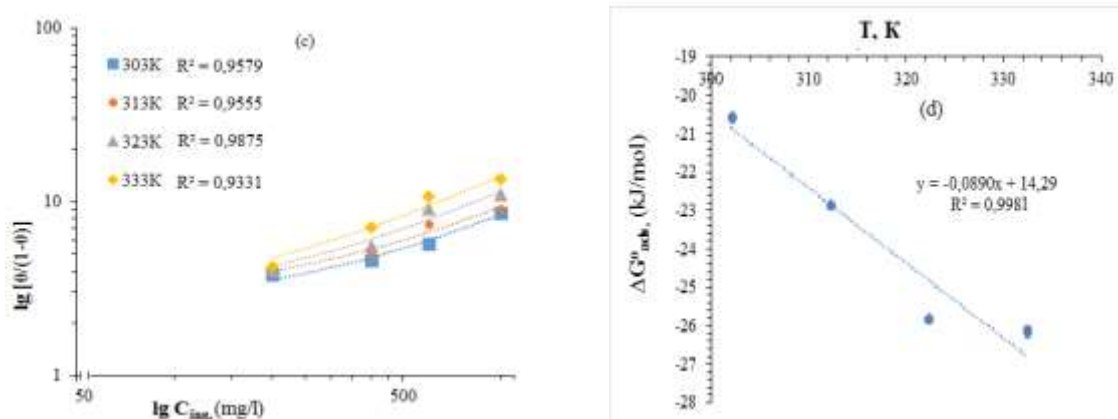


**Figure 3. (a) Langmuir, (b) Frumkin, and (c) Tmkin isotherms and (d) temperature dependence of  $\Delta G^0_{\text{ads}}$ .**

As can be seen from Figure 3.b, a graph of the dependence of  $\lg [\theta/(1-\theta)]$  on  $\lg C_{\text{ing}}$  for the Frumkin isotherm was drawn, and the values of the correlation coefficient at each temperature were (0.9758; 0.9782; 0.9753; 0.9236;). Similarly, a graph of the dependence of  $\theta$  on  $\lg C_{\text{ing}}$  for the Tyomkin isotherm was drawn (Figure 3.13c). The values of the correlation coefficient for each temperature were (0.9579; 0.9555; 0.9875; 0.9331;). As can be seen from the results obtained, the significant difference in the values of the correlation coefficients based on the Frumkin and Tyomkin isotherms from 1 indicates that the green corrosion inhibitor does not obey both of the above isotherms in a 1 M hydrochloric acid environment. However, the Langmuir isotherm value showed values higher than 0.99, which shows us that the process proceeds completely according to the Langmuir isotherm and that the thermodynamic parameters are consistent with the data obtained from practical experiments.

### Thermodynamics of adsorption.

In this study, green corrosion inhibitor with 1M hydrochloric acid. Table-2. Thermodynamic parameters of corrosion inhibitor

| Temperature | $K_{\text{ads}}$ | $\Delta G_{\text{ads}}$<br>kJ/mol | $\Delta H_{\text{ads}}$ ,<br>(kJ/mol) | $\Delta S_{\text{ads}}$ , (kJ/mol<br>K) |
|-------------|------------------|-----------------------------------|---------------------------------------|-----------------------------------------|
| 303         | 348,2            | -22,17                            | -14,29                                | -119,8                                  |
| 313         | 412,4            | -24,09                            |                                       |                                         |
| 323         | 510,7            | -26,41                            |                                       |                                         |
| 333         | 601,3            | -28,21                            |                                       |                                         |

From Table 2, it can be seen that the adsorption process of the inhibitor on steel in 1 M hydrochloric acid solution ( $\Delta H^0_{\text{ads}}$  value is negative -14.29 kJ/mol) is accompanied

by heat absorption. It can also be concluded from the values of  $\Delta G_{ads}$  that the values of  $\Delta G_{ads}$  were -22.17 kJ/mol at 303 K, -24.09 kJ/mol at 313 K, -26.41 kJ/mol at 323 K and -28.21 kJ/mol at 333 K. Therefore, the adsorption process of the green corrosion inhibitor in 1 M HCl solution is physical and chemisorption, which indicates that it is a mixed type of adsorption. Here, the negative value of  $\Delta S_{ads}$  (-119.8 J/mol) indicates that an inhibitor-metal complex is formed on the surface of the inhibitor and the metal during adsorption[16,17].

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## TABLE OF CONTENTS

|           |                                                                                                                                                            |              |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>1</b>  | IMPROVING METHODS FOR DEVELOPING MODERN MARKETING STRATEGIES FOR THE BANKING SERVICES MARKET<br>Yuldasheva Dilorom Shakhzod kizi                           | <b>3-6</b>   |
| <b>2</b>  | CREATININE AND GLOMERULAR FILTRATION RATE ESTIMATED USING IT IN PATIENTS WITH VARIOUS SEVERITY LEVELS OF COVID-19<br>Gadayev A.G., Safarova G.A.           | <b>7-8</b>   |
| <b>3</b>  | PEDAGOGICAL CONDITIONS FOR DEVELOPING CREATIVE QUALITIES IN STUDENTS<br>KURBONOVA GUZAL SALAYEVNA                                                          | <b>9-11</b>  |
| <b>4</b>  | TYPES OF FILM DOCUMENTS IN THE CENTRAL STATE ARCHIVE OF CINEMA, PHOTO, VOICE DOCUMENTS<br>Muyiddinov Bekali Bahodir o'g'li, Teshayeva Shahzoda Rahim qizi  | <b>12-15</b> |
| <b>5</b>  | MAQSUD SHAYKHZADEH PEOPLE OF THE LAST DAYS<br>Boyxurozov Diyorbek Sherzod ugli                                                                             | <b>16-18</b> |
| <b>6</b>  | MAQSUD SHAYXZODA SO'NGI KUNLARDAGI INSONLAR<br>Boyxurozov Diyorbek Sherzod o'gli                                                                           | <b>19-21</b> |
| <b>7</b>  | ОСОБЕННОСТИ СОДЕРЖАНИЯ ВОСПИТАТЕЛЬНЫХ УРОКОВ ПО ФОРМИРОВАНИЮ ЦЕННОСТНОГО ОТНОШЕНИЯ К ЗДОРОВЬЮ У МЛАДШИХ ШКОЛЬНИКОВ<br>Сайдаспорходжаева Шохсанам Закировна | <b>22-27</b> |
| <b>8</b>  | TA'LIM TURLARIDA CHIZMACHILIK FANINING O'QITILISH HOLATI<br>Qodirova Sevdora                                                                               | <b>28-34</b> |
| <b>9</b>  | YANGI O'ZBEKISTONNI BARPO ETISHDA ILM -FAN SOHASIDA ZAMONAVIY GRAFIK DASTURLARNING O'RNI VA AHAMIYATI.<br>Butayeva Zarina Zamonbek qizi                    | <b>35-40</b> |
| <b>10</b> | THE ROLE OF INNOVATION AND TECHNOLOGY IN ECONOMIC DEVELOPMENT AND STRATEGIC MANAGEMENT OF JOINT-STOCK COMPANIES<br>Rakhmatullaeva Nargiza Oktyabrevna      | <b>41-44</b> |
| <b>11</b> | QADIMGI XITOIY VA HIND TAMADDUNLARIDA MUSIQA<br>Azimova Zarnigor Azamat qizi                                                                               | <b>45-47</b> |
| <b>12</b> | BOSHLANG'ICH SINF O'QUVCHILARINING JAMOADA ISHLASH KO'NIKMALARINI RIVOJLANTIRISHNING PEDAGOGIK-PSIXOLOGIK XUSUSIYATLARI<br>Jumanova Shaxnoza Baxromjanovna | <b>48-53</b> |
| <b>13</b> | PEDAGOGICAL ASSISTANCE FOR CHILDREN RECEIVING PALLIATIVE CARE<br>Musaeva Dilfuza Abdurakhmonovna                                                           | <b>54-59</b> |
| <b>14</b> | ELEKTRON RESURSLARDAN FOYDALANISH ASOSIDA BOSHLANG'ICH TA'LIMNING DIDAKTIK TA'MINOTINI TAKOMILLASHTIRISH                                                   | <b>60-64</b> |

|           |                                                                                                                                                         |                |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|           | Tursunova S.I.                                                                                                                                          |                |
| <b>15</b> | BOSHLANG'ICH TA'LIM JARAYONIDA INTERFAOL METODLARNING AHAMIYATI<br>Azimova Dilfuza Usmonovna                                                            | <b>65-67</b>   |
| <b>16</b> | THE ROLE OF THE DEPUTY DEAN IN DEVELOPING STUDENT LEADERSHIP IN HIGHER EDUCATION INSTITUTIONS<br>Arslonbek Kalandarovich Khudayberganov                 | <b>68-69</b>   |
| <b>17</b> | COVID-19 БИЛАН КАСАЛЛАНГАН ОНАЛАРДАН ТУҒИЛГАН ЧАҚАЛОҚЛАРДА ИНТЕФЕРОН ҲОЛАТИНИНГ ХУСУСИЯТЛАРИ<br>Кароматова Фазолат Абдикаххоровна                       | <b>70-71</b>   |
| <b>18</b> | KIYIM DIZAYNIDA 3D TECHNOLOGIYALARNING QO'LLANILISHI VA RAQAMLI MODANING KELAJAGI: INNOVATSIYALAR, IMKONIYATLAR VA MUAMMOLAR<br>Nurullaeva Ruxshona     | <b>72-75</b>   |
| <b>19</b> | TECHNOLOGY OF ORGANIZING THE TRAINING PROCESS OF HIGHLY QUALIFIED HANDBALL PLAYERS<br>Kuralbayev Azizbek Kuralbayevich                                  | <b>76-79</b>   |
| <b>20</b> | MAQSUD SHAIKHZODA'S LITERARY LEGACY<br>Aktamova Aziza Utkir kizi                                                                                        | <b>80-83</b>   |
| <b>21</b> | EXPRESSION OF THE COURAGE OF MAQSUD SHAIKHZODA'S DRAMA " JALOLIDDIN MANGUBERDI<br>Boykhurozov Diyorbek Sherzod ugli                                     | <b>84-87</b>   |
| <b>22</b> | PEDAGOGICAL AND PSYCHOLOGICAL ASPECTS OF DEVELOPING SPORTS ACTIVITY MOTIVATION IN STUDENTS<br>T. Arzimbetov                                             | <b>88-90</b>   |
| <b>23</b> | DEVIANT BEHAVIOR: UNDERSTANDING ITS NATURE AND IMPACT<br>U.Kalillaeva                                                                                   | <b>91-93</b>   |
| <b>24</b> | TECHNOLOGY FOR SEPARATION OF MOLYBDENUM FROM TECHNOLOGICAL SOLUTIONS IN URANIUM DEPOSITS<br>Odilova Ozoda                                               | <b>94-96</b>   |
| <b>25</b> | BOSHLANG'ICH SINIF O'QUVCHILARIGA CHET TILINI O'QITISHDA INTERAKTIV METODLARDAN FOYDALANISHNING ZAMONAVIY USULLARI<br>Abduraimova Nozimaxon Valijonovna | <b>97-101</b>  |
| <b>26</b> | OPPORTUNITIES FOR DEVELOPING LEADERS' COMMUNICATIVE AND SOCIAL SKILLS IN THE CONTEXT OF DIGITAL TECHNOLOGIES<br>ZIYOVIDDINOVA POKIZA SADRIDDIN KIZI     | <b>102-112</b> |
| <b>27</b> | THE DEVELOPMENT OF ENGLISH TERMINOLOGY IN SCIENCE AND TECHNOLOGY<br>Salomova Sevara Choriyevna                                                          | <b>113-119</b> |
| <b>28</b> | STATISTICAL ANALYSIS OF THE EFFECTIVENESS OF DENTAL IMPLANTS                                                                                            | <b>120-129</b> |

|           |                                                                                                                                                             |                |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|           | Toshpulatov B. Sh., Nigmonov D. R., Rahmonov T. O.                                                                                                          |                |
| <b>29</b> | BACHADON SARATONI: ETIOLOGIYASI, PATOGENEZI VA ZAMONAVIY DAVOLASH USULLARI.<br>Mahzumabonu Hayrullayeva Muzaffarbek qizi, Botir Tursinboyevich Allaberdiyev | <b>130-134</b> |
| <b>30</b> | TECHNOLOGY FOR ORGANIZING EXPERIMENTAL WORK TO DEVELOP COMMUNICATIVE SKILLS OF FUTURE ROAD ENGINEERS<br>Mukhammadjonov Alijon Olimonovich,                  | <b>135-140</b> |
| <b>31</b> | TRAINING METHODOLOGY AIMED AT DEVELOPING SPEED QUALITIES IN ATHLETES<br>IBRAGIMOV SANJAR BOTIROVICH                                                         | <b>141-146</b> |
| <b>32</b> | РОЛЬ МАРКЕТИНГА В РАЗВИТИИ АГРОБИЗНЕСА<br>Xolboyeva Farangiz                                                                                                | <b>147-149</b> |
| <b>33</b> | ИЗОБРАЖЕНИЕ ДЕТСКОЙ ЖИЗНИ В РАССКАЗЕ ГАФУРА ГУЛЯМА «ОЗОРНИК»<br>Джалилова Зарнигор Обидовна,, Бердиева Ситора Уткировна                                     | <b>150-153</b> |
| <b>34</b> | MODELLASHTIRISH ONA TILI O'QITISH TIZIMIDA YANGICHA YONDASHUV<br>Qulmuminov O'rolboy Safar o'g'li                                                           | <b>154-158</b> |
| <b>35</b> | PROFESSIONAL SKILLS OF A TEACHER<br>Sayitova Umida Hikmatillo kizi                                                                                          | <b>159-162</b> |
| <b>36</b> | "KLINIK ATAMASHUNOSLIK. KLINIK ATAMALARNI YASASH USULLARI"<br>Murodova Dilshoda Baxritdin qizi, Сайфуллаева Лола Сабитовна,                                 | <b>163-167</b> |
| <b>37</b> | KOMPANIYALARDA RAHBARLIK STILLARI, UNI JAMOA FAOLIYATIGA TA'SIRINING TAHLILI VA SAMARADORLIGINI OSHIRISH YO'LLARI.<br>Kurbanbayeva Malohat Madjit qizi      | <b>168-170</b> |
| <b>38</b> | BARRIERS TO THE DEVELOPMENT OF STUDENTS' SPEAKING COMPETENCE<br>Khasanova Gulrukh, Mardonova Dinora                                                         | <b>171-175</b> |
| <b>39</b> | BIOPOTENSIALLARNI QAYD QILISH. ELEKTROGRAFIYANING FIZIK ASOSLARINI O'RGANISH<br>Choriyeva Gulsora Yusupovna; Sultonova O'g'iloy Nabiyevna                   | <b>176-178</b> |
| <b>40</b> | OLIY TA'LIM MUASSASALARI FAOLIYATIDA MARKETING BOSHQARUVINING ILMIY-METODOLOGIK ASOSLARI<br>Xodjaeva Shodiyabonu Abitdjanovna                               | <b>179-182</b> |
| <b>41</b> | KORXONA RIVOJLANISHIDA SOLIQ IMTIYOZLARIDAN SAMARALI FOYDALANISH<br>Boboraxmatova Shohsanam Ibodullo qizi                                                   | <b>183-187</b> |
| <b>42</b> | ОСОБЕННОСТИ ПРОВЕДЕНИЯ СЕДАЦИИ ЗАКИСЬЮ АЗОТА И КИСЛОРОДОМ У ДЕТЕЙ В СТОМАТОЛОГИИ<br>Курбанов Дилшод Фарходович, Мардиева Сора Алишер кизи                   | <b>188-190</b> |

|           |                                                                                                                                                                                         |                |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>43</b> | ФАКТОРЫ РИСКА И СВЯЗЬ С ДРУГИМИ ЛЕКАРСТВАМИ ПРИ СЕДАЦИИ АЗОТ ОКСИДОМ В ДЕТСКОЙ СТОМАТОЛОГИИ<br>Курбанов Дилшод Фарходович, Давлатбаев Хасан Махмудович                                  | <b>191-193</b> |
| <b>44</b> | GRAMMAR VS COMMUNICATION: WHAT SHOULD BE PRIORITIZED IN ENGLISH LEARNING?<br>Ruzmetova Mamlakat Azadovna                                                                                | <b>194-196</b> |
| <b>45</b> | YANGI O'ZBEKISTONNI BARPO ETISHDA ILM -FAN SOHASIDA ZAMONAVIY GRAFIK DASTURLARNING O'RNI VA AHAMIYATI.<br>Butayeva Zarina Zamonbek qizi                                                 | <b>197-202</b> |
| <b>46</b> | TA'LIM TURLARIDA CHIZMACHILIK FANINING O'QITILISH HOLATI<br>Qodirova Sevdora                                                                                                            | <b>203-209</b> |
| <b>47</b> | ОБОСНОВАНИЕ МЕСТНОГО ПРИМЕНЕНИЯ ПРОБИОТИКОВ В КОМПЛЕКСНОМ ЛЕЧЕНИИ АБСЦЕССОВ И ФЛЕГМОН ЧЕЛЮСТНО-ЛИЦЕВОЙ ОБЛАСТИ У ДЕТЕЙ<br>Абдикаримов Бехзод Алишерович, Муртазаев Саидаъло Муртазаевич | <b>210-214</b> |
| <b>48</b> | THEORETICAL FOUNDATIONS OF RESEARCH ON MARITAL RELATIONSHIPS AND VALUES<br>Mirssamukova Shakhnoza Kakhramonovna                                                                         | <b>215-217</b> |
| <b>49</b> | MAKTAB YOSHIDAGI BOLALAR TISHLARIDA DEMINERALIZATSION JARAYON MAVJUDLIGI VA JADALLIGINI BAHOLASH<br>Abdukayumova Z.X., Dinikulov J.A.                                                   | <b>218-224</b> |
| <b>50</b> | MAKSUD SHAYKHZODA – A CREATIVE CONTRIBUTOR<br>Кодиров Исломжон Икболжонович                                                                                                             | <b>225-228</b> |
| <b>51</b> | ADSORPTION ISOTHERM OF PFA CORROSION INHIBITOR WHICH OBTAINED BASED ON PARAPHENYLENEDIAMINE, FORMALIN, AND ALANIN<br>Abdusalomov Abdumalik, Melikulova Gavkhar                          | <b>229-235</b> |
|           | <b>OUTLINE</b>                                                                                                                                                                          | <b>236-239</b> |