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POSSIBILITIES FOR DIAGNOSIS AND TREATMENT OF CERVICAL DISEASES

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Abstract. Women over 30 require screening to improve HPV detection and Pap smear cytology. Only a negative Pap test and negative HPV test can confirm the absence of pathology.

Keywords: Human papillomavirus, cervical intraepithelial neoplasia, liquid-based cytology, p16/Ki67 double staining, HPV testing

Relevance. Cervical pathology (CM) is one of the most common gynecological diseases, especially in antenatal clinics—25–45%. In gynecology and obstetrics, early diagnosis and adequate treatment of underlying and precancerous conditions, as well as early forms of cervical cancer, remain a major challenge [1, 3, 5, 7, 9]. Various methods are used to diagnose precancerous conditions and cervical cancer (CC), but the most readily available are clinical imaging, colposcopy, molecular biological methods for detecting HPV (polymerase chain reaction – PCR or the DIGENE test), cytological examination of smears, and histological examination of a targeted cervical biopsy. Epidemiological and molecular biological data indicate an important role of the human papillomavirus in the development of cervical intraepithelial neoplasia and cervical cancer [2,4,6,8,10]. In almost 100% of cases of cervical cancer patients confirmed by histological examination, highly oncogenic types of the human papillomavirus (HPV) are detected. Currently, it is generally accepted that HPV is one of the leading factors in the development of cervical cancer. According to C.M. Wheeler et al. (2016), 3 years after HPV infection, CIN II–III develops in every fourth woman (27%) [1,11,12]. In Russia, papillomavirus infection is diagnosed in 15.5% of women, in the USA – in 28.6%, in Europe – 2–12% [2,6]. Human papillomavirus is a DNA virus consisting of two structural genes (L1 and L2) and seven functional genes (E17). More than 200 types of HPV are known, more than 40 of which are capable of affecting the mucous membranes of the genitals [3,13]. HPV are divided into highly oncogenic (16, 18, 31, 33, 35, 39, 45, 46, 51, 52, 53, 56, 58, 59, 66, 68, 73, 82) and low oncogenic (6, 11, 40, 42, 43, 44, 54, 61, 70, 72, 81) types of the virus. Studies by L. Giannella et al. (2018) [2] showed that in women with a histologically verified diagnosis of CIN 3, HPV type 16 was detected in 63.6% of cases, HPV type 33 in 7%, HPV type 18 in 6.2%, and HPV type 31 in 5.4%. However, the authors showed that

HPV type 16 is more common in patients under 35 years of age [15]. A number of studies have shown that invasive cervical cancer is caused by HPV types 16 and 18 in 70% of cases [1].

Cytological analysis of cervical smears is used as an initial (screening) diagnosis of tumor and precancerous lesions [3, 4]. The final conclusion determining the treatment tactics is formulated only through histological examination of biopsy or surgical material [2]. Immunohistochemical research methods play a significant role in the diagnosis and differential diagnosis of precancerous lesions of the cervix [15].

The aim of this work is to analyze the literature data on the possibilities of using immunohistochemical markers for the diagnosis and differential diagnosis of cervical lesions. According to modern guidelines on cervical oncomorphology [7], precancerous lesions of the cervix are divided into squamous cell and glandular. The former, in turn, are divided into low-grade squamous intraepithelial lesions (LSIL) and high-grade squamous intraepithelial lesions (HSIL). Low-grade lesions correspond to CIN 1, and high-grade lesions to CIN 2 and CIN 3. The main advantages of this classification are a more accurate reflection of the processes of onco- and morphogenesis, as well as the unification of cytological and histological classifications, aimed at an unambiguous interpretation of the identified changes. It should be added that changes corresponding to CIN 1 undergo regression in 70–80% of observations, and in girls under 25 years of age – even in 90% of cases [8]. Changes of the CIN 3 type, on the contrary, are characterized by further progression to invasive forms of cancer: in 0.2–4% of cases – within 12 months [9]. The morphological diagnosis of CIN and its degree is based on the determination of the zone of the epithelial layer of the cervix occupied by atypical basal cells, during traditional histological examination of preparations stained with hematoxylin and eosin.

The most significant help in identifying and determining the degree of CIN is the immunohistochemical detection of Ki-67 and p16. Ki-67 is a cellular marker of proliferation, which is expressed at all stages of the cell cycle, with the exception of the G0 stage. In normal cervical epithelium, a positive Ki-67 reaction is observed only in the nuclei of the suprabasal cell layer [10]. In CIN observations, the localization of cells expressing Ki-67 depends on the degree of damage [10, 11]. According to R. Carreras et al. [13], the proliferation index by Ki-67 was 25%, 68% and 65.5% in LSIL, HSIL and invasive squamous cell carcinoma, respectively. Based on the determination of the number of Ki-67-stained cells in CIN 1 and CIN 2, it was concluded that it is a clear indicator of the extent of damage and a strong prognostic factor for the disease [14]. A very interesting model for determining the risk of CIN progression was

proposed by A. Kruse et al. [15]. Based on the values of the epithelial stratification index and the percentage of Ki-67-positive cells in the middle third of the epithelial layer, women were divided into groups with low and high risk of disease progression. The group of patients with low risk included CIN observations with a stratification index of less than 0.57 and a proliferation index of less than 30%, the remaining women formed a group with a high risk of CIN progression.

However, it should be added that the expression level and the number of Ki-67-positive cells depend on the level of circulating hormones. Thus, the number of stained cells increases in the parabasal layer during the secretory phase (luteal phase) of the menstrual cycle and during pregnancy [1,6]. Another widely studied marker of cervical tumor lesions is p16. The main function of p16 is considered to be the inhibition of cyclin-dependent kinase (CDK4/6), which is involved in the regulation of the cell cycle. It has been established that the expression level of p16 correlates with the presence of high-risk human papillomaviruses (HPV) in the development of cervical cancer [1,7]. Therefore, the reaction to p16 is recommended as a marker for the presence of high-oncogenic-risk HPV infection [4, 6]. Along with this, pronounced expression of p16 has been described in CIN and cervical cancer [1,8]. Moreover, the intensity of the reaction increases with the severity of the lesion [1,8]. A meta-analysis found that a positive reaction to p16 occurs in 2% of normal ectocervical specimens, 38% of CIN 1 specimens, 68% of CIN 2 specimens, and 82% of CIN 3 specimens [1,9]. It is noteworthy that nuclear staining was predominant in most specimens, although a cytoplasmic reaction was also observed.

It is believed that if a patient with a positive HPV test result is found to have atypical squamous epithelial cells of undetermined grade or LSIL during cervical cytology, the pathologist should not differentiate between reactive epithelial changes and LSIL when analyzing the biopsy material, since these changes have approximately the same risk of developing HSIL (5–10% over 2 years). The described immunohistochemical markers should be used for differential diagnosis of cervical lesions. Thus, a positive reaction to Ki-67 in superficial epithelial cells can also be observed during inflammation. Therefore, analysis of p16 expression is crucial for differentiating reactive changes from squamous intraepithelial lesions [2,3]. A high proliferation index determined by Ki-67, combined with diffuse nuclear and cytoplasmic expression of p16 in most cervical epithelial cells, indicates the presence of squamous intraepithelial lesions.

Therefore, women over 30 years of age require screening to improve HPV detection and cytological examination of cervical smears using the Papanicolaou method. Only

a simultaneous negative result of both the PAP and HPV tests can conclude that pathology is absent.

Conclusions. Unfortunately, there are currently no immunohistochemical markers to verify the invasive form of adenocarcinoma. Therefore, its diagnosis requires a thorough histological examination of serial specimens [5]. Thus, immunohistochemical examination is rightfully considered an effective method of pathohistological examination, allowing for the objective diagnosis of cervical tumor lesions, their differential diagnosis with reactive and tumor-like changes, and determining the prognosis of the disease.

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PROBLEMS OF EMPLOYMENT AND UNEMPLOYMENT

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Abstract: This article examines the current state of employment and unemployment issues, their socio-economic causes, and their impact on economic development. The study analyzes the labor market dynamics, factors influencing unemployment rates, and the effectiveness of government policies aimed at reducing unemployment. Special attention is given to structural changes in the economy, demographic trends, and the role of education and professional skills in ensuring sustainable employment. Based on the analysis, practical recommendations are proposed to improve employment opportunities and reduce unemployment levels. The findings highlight the importance of comprehensive and innovative approaches in addressing labor market challenges.

Keywords: employment, unemployment, labor market, economic development, workforce, job creation, human capital, labor policy, economic reforms, social stability

Introduction

Employment and unemployment are among the most significant indicators of a country's economic and social development. A stable labor market not only ensures economic growth but also contributes to social stability and the overall well-being of the population. In contrast, high levels of unemployment can lead to serious socio-economic problems, including poverty, inequality, and reduced living standards. In recent years, the global economy has undergone significant transformations driven by technological advancements, globalization, and structural changes in production processes. These factors have reshaped labor markets, creating new opportunities while simultaneously increasing the complexity of employment issues. As a result, addressing unemployment has become a key priority for both developed and developing countries. In Uzbekistan, ensuring employment and reducing unemployment have been identified as important directions of state policy. Various reforms aimed at supporting job creation, improving labor market infrastructure, and enhancing workforce skills have been implemented. However, despite these efforts, certain challenges remain, including regional disparities, skill mismatches, and limited access to quality employment. The main objective of this article is to analyze the

problems of employment and unemployment, identify their key determinants, and propose effective measures to improve labor market conditions and ensure sustainable employment.

Materials and Methods

This study is based on a comprehensive methodological approach that combines both qualitative and quantitative research methods. In order to analyze employment and unemployment issues, statistical data analysis, comparative analysis, and economic-logical methods were applied. The research relies on official data sources, including national statistical reports, labor market indicators, and relevant legislative documents related to employment policy. In addition, the study incorporates theoretical frameworks developed by both domestic and international scholars in the field of labor economics. A systematic approach was used to examine the interrelations between various factors affecting employment, such as demographic changes, education levels, and economic reforms. Furthermore, trend analysis and forecasting methods were employed to identify future developments in the labor market. The research methodology also includes the evaluation of employment policies and programs aimed at reducing unemployment. This allows for a deeper understanding of their effectiveness and impact on different segments of the population.

Results

The findings of the study indicate that employment plays a crucial role in ensuring sustainable economic growth and social stability. In recent years, there has been a gradual improvement in employment rates, largely due to ongoing economic reforms and government initiatives aimed at supporting job creation. However, the analysis reveals that unemployment remains a significant challenge, particularly among young people and in rural areas. One of the key issues identified is the mismatch between the skills possessed by the workforce and the requirements of the labor market. This skills gap limits employment opportunities and reduces overall labor productivity. Additionally, the results show that informal employment continues to occupy a considerable share of the labor market. While it provides income opportunities for many individuals, it often lacks social protection and job security. The study also highlights regional disparities in employment levels, indicating uneven economic development across different areas.

Discussion

The results of this study emphasize the complexity of employment and unemployment issues in the context of modern economic development. The persistence of unemployment, despite positive economic changes, suggests that structural factors play

a significant role in shaping labor market outcomes. Comparative analysis with international experience demonstrates that successful employment policies require an integrated approach, combining education reform, vocational training, and active labor market programs. In this regard, improving the quality of education and aligning it with labor market demands is essential for reducing unemployment. Moreover, the expansion of digital technologies and the development of the digital economy create new opportunities for employment, but also require new skills and competencies. Therefore, continuous professional development and lifelong learning become increasingly important. The discussion also highlights the need to strengthen institutional frameworks, reduce administrative barriers, and support entrepreneurship as key drivers of job creation. Addressing regional inequalities and promoting inclusive economic growth are also critical for achieving sustainable employment. Overall, effective solutions to employment and unemployment problems require coordinated efforts from the government, private sector, and educational institutions, as well as the implementation of innovative and flexible policy measures.

Conclusion

In conclusion, employment and unemployment remain critical issues that significantly influence the socio-economic development of a country. The findings of this study demonstrate that while notable progress has been achieved in improving employment levels through economic reforms and policy measures, unemployment continues to pose serious challenges, particularly among youth and in less developed regions. The research highlights that structural factors such as skill mismatches, regional disparities, and the prevalence of informal employment hinder the efficient functioning of the labor market. Therefore, addressing these challenges requires a comprehensive and systematic approach that integrates education, labor market policies, and economic development strategies. Furthermore, the study emphasizes the importance of enhancing human capital, promoting entrepreneurship, and supporting innovation as key drivers of job creation. The expansion of digital technologies and the transition to a knowledge-based economy also necessitate continuous skill development and adaptation to changing labor market demands. To ensure sustainable employment and reduce unemployment, it is essential to strengthen institutional frameworks, improve access to quality education and vocational training, and create a favorable business environment. Overall, coordinated efforts and forward-looking policies will play a decisive role in achieving long-term stability and inclusive economic growth.

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ВЛИЯНИЕ РАСТИТЕЛЬНЫХ ПРЕПАРАТОВ НА КООПЕРАЦИЮ Т- И В-ЛИМФОЦИТОВ

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Актуальность

Эффективная реализация иммунного ответа на тимусзависимые антигены, включая эритроциты барана, требует кооперативного взаимодействия Т- и В-лимфоцитов. Данный процесс лежит в основе дифференцировки В-клеток в плазматические клетки — продуценты антител, что определяет актуальность поиска средств, способных модулировать межклеточные иммунные взаимодействия.

Цель исследования

Изучить влияние препаратов растительного происхождения на кооперацию Т- и В-лимфоцитов в условиях экспериментального иммунного ответа.

Материалы и методы

Эксперимент проведён на белых мышах, подвергнутых тотальному облучению в летальной дозе (8 Гр). Животным вводили сингенные клетки костного мозга (источник В-лимфоцитов, 10^7 /мл), клетки лимфатических узлов (источник Т-лимфоцитов, 2×10^6 /мл) и эритроциты барана (2×10^8 /мл).

Исследуемые растительные препараты вводили однократно внутрибрюшинно через 24 часа после облучения. В качестве препарата сравнения использовали иммуномодулин (0,01 мл/кг).

На 9-е сутки оценивали количество антителообразующих клеток (АОК) в селезёнке.

Результаты

Установлено, что при трансплантации сингенных Т- и В-лимфоцитов в селезёнке реципиентов формируется $46,0 \pm 6,8$ АОК.

Введение растительных препаратов сопровождалось стимуляцией иммунного ответа:

- имбирь увеличивал показатель кооперации Т- и В-лимфоцитов в 1,6 раза;
- настой чая «Doctor Ali 1» достоверно усиливал антителогенез в 1,5 раза (до $67,0 \pm 3,8$ АОК).

Иммуномодулин проявил более выраженный эффект, увеличивая число АОК в 2,6 раза и общее количество клеток селезёнки — в 2,4 раза.

Выводы

Растительные препараты, такие как имбирь и настой чая «Doctor Ali 1», оказывают стимулирующее влияние на кооперативное взаимодействие Т- и В-лимфоцитов, способствуя усилению гуморального иммунного ответа. Полученные данные свидетельствуют о перспективности их применения в качестве иммуномодулирующих средств.

THREAD TENSION STABILIZING OF THE DEVICE ELASTIC ELEMENT PERMANENT POWER UNDER THE INFLUENCE CHARACTERISTICS EXPERIMENTAL ANALYSIS

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Annotation. Textile in the industry thread again wrapping in the process thread tension stabilizing of devices elastic element that is springs characteristics research TW2 - D machines at Artsoft Holding in the example of of springs singleness coefficients experimental determined. Research as a result spring up to 32–33% of virginity was unevenness of the bobbins mass and density various to be main reason that proven. The spring time to pass with elasticity properties decrease analysis made.

Keywords: Thread tension, stabilizing device, spring single, TW2-D machine, bobbin density, experimental analysis.

Textile in the industry thread cooking and again wrapping in the processes ready product quality determinant the most important from parameters one thread of tension permanent from storage consists of. To the thread screw in giving and again wrapping in the process of tension variable to be of the bobbins every kind mass and in density to the formation take This is coming. in turn, next in stages technological problems and useful work coefficient come down to leave reason will be.

Namangan region large industry subject at the Artsoft Holding enterprise, which held practical research as a result technological on a chain serious imbalance This problem has been identified. study for the purpose thread stabilizing your device worker organ was to the spring attention focused. Researchers by spring virginity study for the purpose special device working It was released.

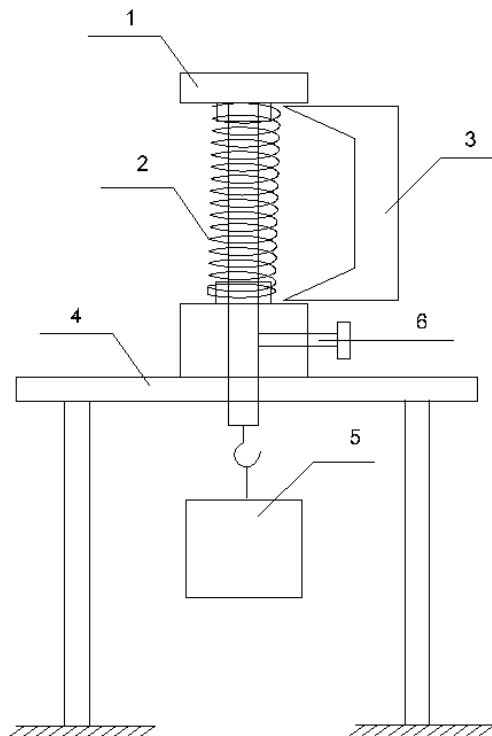


Figure 1. Spring elasticity (elasticity) tester special device.

1-Top plate, 2-Spring, 3-Barbell, 4-Device installed general support, 5- Load hanging on a spring, 6-Adjusting screw.

Figure 1 shows issued device schematic official cited. Device using of springs free in the state length and known power under the influence shrunk in the state length determination opportunity was created. [2]

Spring flexibility coefficient following expression through is defined as:

$$C = \frac{G_t}{l_0 - l_k}$$

Here: G_t — spring squeeze force, N;

l_0 — spring free in the state length, mm;

l_k — spring power under the influence shrunken in the state length, mm.

Based on this formula, the TW2-D model adding wrapping from cars received 20 pieces spring flexibility coefficients was determined. To the spring impact provider power amount when choosing in use of the thread linear the density is Nm 34/2. into account received. Thread wrapping in the process tension power of the thread maximum interruption 15–20% of the power to be recommendation [2] This to recommendations based on experience spring squeeze force is taken as 1.44 N This value is of the thread without interruption, one in rhythm wrapping provision was considered optimal for. Springs free in the state length and squeeze power under the influence length high to accuracy has was electronic scaled barbell circle using

measured. Prepared device using to the enterprise built-in TW2-D model adding wrapping from cars received 20 pieces spring mechanic properties studied. Obtained experience results summarized and presented in Table 1. Table information based on of springs flexibility indicators between noticeable differences existence was determined [3].

Adding wrapping from the car taken from products the most many encountered according to Analysis Table 1.

Table 1

On trial spring number	Spring free in the state length ,	Spring squeeze power	Spring squeezed in the state length,	Spring absolute deformation (difference),	Spring virginity (flexibility),	Spring of the wire diameter ,
No.	l_0 , mm	G_t gr	l_k , mm	Δl , mm	C; gr / mm	d; mm
1	26.12	144	20.36	5.76	25.00	0.5
2	26.32	144	19.98	6.34	22.71	0.5
3	27.04	144	21.27	5.77	24.96	0.5
4	27.65	144	22.03	5.62	25.62	0.5
5	24.8	144	18.83	5.97	24.12	0.5
6	29.64	144	23.62	6.02	23.92	0.5
7	26	144	19.45	6.55	21.98	0.5
8	25.48	144	22.85	2.63	54.75	0, 9
9	26.85	144	21.02	5.83	24.70	0.5
10	27.83	144	22.36	5.47	26.33	0.5
11	27.52	144	21.58	5.94	24.24	0.5
12	28.7	144	22.47	6.23	23.11	0.5
13	28.1	144	22.12	5.98	24.08	0.5
14	26.58	144	20.16	6.42	22.43	0.5
15	27.56	144	21.55	6.01	23.96	0.5
16	26.64	144	20.62	6.02	23.92	0.5
17	24	144	19.85	4.15	34.70	0.5 (cut)
18	30	144	23.22	6.78	21.24	0.5

19	29.5	144	23.58	5.92	24.32	0.5
20	28.6	144	22.2	6.4	22.50	0.5

Information analysis this showed that some of springs flexibility high that is 54.75 g / mm However, in some and this indicator noticeable at the level low which is 21.24 gr / mm. In particular, the 8th order spring flexibility high to be determined and this spring of the wire diameter 0.9 mm to equality reason happened determined. The remaining on springs and wire diameter 0.5 mm what organization reached is, this their mechanic strength and to the elasticity directly impact Also, the spring of the 18th order length artificial accordingly elongated because of his/her flexibility decreased was observed. As a result, this spring installed wrapping in the head winding of threads relatively low density This situation has been identified. spring initial mechanic properties when broken thread of tension stability not provided shows. Two spring flexibility indicators into account if not taken, the rest springs of flexibility average unevenness around 32–33% happened This was determined. indicator working being released of the bobbin's weights unevenness with almost suitable arrival This is observed. thread wrapping in the process coil weight unevenness directly of springs flexibility differences with related that confirms [4].

Conclusion. Transferred initial analyses this shows that the tension stable not main cause, tension device worker organ was spring characteristic time to pass with Experience within from the car undress taken to the spring special device using permanent power impact was carried out. Time to pass with spring absolute deformation increase This situation was observed. spring of the material internal elasticity properties weakening and static loading under his/her mechanic resistance from the decline evidence gives. This point of view from the perspective of the spring under load such experimental characteristic to study, its to time related without change laws determination and this basically tension stabilizing devices optimization current is a scientific and practical issue. This problem solution through one kind dense and standard in the mass bobbins formation possibility is created.

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THE DEVELOPMENT OF ENGLISH LANGUAGE EDUCATION IN UZBEKISTAN AFTER INDEPENDENCE

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Abstract

Since gaining independence in 1991, Uzbekistan has gradually repositioned English language education from a limited school subject to a strategic instrument for international integration, human capital development, and employability. This article reviews the post-independence development of English language education through a policy-and-practice lens and proposes a structured interpretation of reforms as an evolving “access–quality–accountability” agenda. Using document analysis of major legal and policy acts and a thematic synthesis of secondary educational reports, the study maps four reform phases: foundational restructuring (1991–1997), institutional consolidation (late 1990s–2011), system-wide acceleration (2012–2017), and quality and governance expansion (2018–present). Particular attention is given to the 2012 presidential resolution that introduced earlier and more continuous foreign-language instruction in general education (including English from Grade 1) and expanded infrastructure and teacher preparation; subsequent measures strengthened curricular standards, assessment capacity, and professional incentives. The results show that Uzbekistan’s reforms combined three mutually reinforcing levers: (1) early-start and continuity across the education ladder, (2) infrastructural and digital support, and (3) institutional mechanisms for quality monitoring and certification. However, persistent challenges remain, including uneven teacher proficiency, rural–urban disparities, exam-oriented pedagogy, and limited integration of English-for-Specific-Purposes (ESP) into vocational tracks. The discussion offers practical recommendations for aligning policy goals with classroom methods, particularly in professional education institutions, emphasizing competency-based outcomes, teacher professional development, and risk-sensitive assessment practices.

Keywords: Uzbekistan, English language education, language policy, curriculum reform, teacher development, assessment, vocational education

Introduction

English has become a central language of international mobility, science, technology transfer, and transnational labor markets. For post-Soviet states, the expansion of

English education has often symbolized both economic openness and a reorientation of knowledge flows. Uzbekistan's experience is distinctive because it combines a strong nation-building agenda with a step-by-step institutionalization of foreign-language learning across the entire education system. After independence in 1991, the education sector faced multiple tasks at once: building a national curriculum, restructuring governance and financing, and preparing a workforce compatible with a market economy and international cooperation. In this context, English did not develop through a single reform but through a cumulative sequence of legal acts, curricular changes, infrastructure investment, and incentive mechanisms.

Two methodological risks complicate discussion of English education development. First, reform narratives often reduce outcomes to simple slogans—"English from Grade 1" or "international certificates"—without clarifying how these decisions affect teaching quality, equity, and learning trajectories. Second, classroom reality may diverge from policy intent when teachers lack training, materials are inconsistent, or assessment practices encourage memorization rather than communicative competence. Therefore, a meaningful account of development must connect policy design to implementation conditions and to the professional competencies required by learners.

This article addresses the development of English language education in Uzbekistan after independence through a policy and practice review. It focuses on three guiding questions: (1) What major policy milestones shaped the system-wide role of English in Uzbekistan's education sector? (2) What implementation levers were prioritized—curriculum, teachers, infrastructure, or assessment—and how did they interact across time? (3) What current challenges and methodological implications emerge, especially for professional education institutions where employability-oriented language competence is central?

The contribution of the article is twofold. Conceptually, it organizes reforms into phases and interprets them as an evolving "access–quality–accountability" framework. Practically, it translates policy milestones into implications for vocational and professional English teaching, highlighting where traditional classroom routines need adjustment to meet national goals.

Methods

Research design. The study employs qualitative document analysis combined with thematic synthesis. Rather than reporting a single experimental intervention, the article

reconstructs reform trajectories from official policy documents and triangulates them with education sector reviews.

Data sources. The primary corpus consists of major legal and policy acts regulating education and foreign-language learning, including the 1997 Law on Education; the 1997 National Programme for Personnel Training; the 2012 presidential resolution on improving foreign-language learning; the 2017 Cabinet of Ministers resolution on enhancing the quality of foreign-language teaching; and the 2021 decision establishing a specialized agency for the popularization of foreign-language learning. Secondary sources include education sector analysis reports and public policy statements.

Analytical procedure. Documents were coded for recurrent policy goals, instruments, and implementation mechanisms. Codes were grouped into five thematic clusters: (1) access and starting age, (2) curriculum and materials, (3) teacher preparation and incentives, (4) infrastructure and digital support, and (5) assessment and quality assurance. Based on these clusters, the study builds a periodization of reforms and identifies how levers shifted over time.

Validity strategy. To reduce interpretive bias, findings are presented in a dual format: a chronological timeline of milestones and an analytical matrix linking policy tools to expected educational outcomes. Because the approach is documentary, the article does not claim causal impact estimates; instead, it provides plausible policy-to-practice mechanisms that can be tested in future empirical studies.

Results

The document analysis indicates that English language education in Uzbekistan developed through four partially overlapping phases. Each phase introduced a distinct priority but also built on earlier institutional foundations.

Phase 1: Foundational restructuring (1991–1997). The immediate post-independence period was characterized by system rebuilding: redefining national education goals, updating curriculum identity, and establishing a legal framework for continuous education. The 1997 Law on Education and the National Programme for Personnel Training became anchor documents that framed education as a strategic national priority and promoted modernization and continuity across levels.

Phase 2: Institutional consolidation and capacity building (late 1990s–2011). During

this phase, foreign-language education expanded within the existing school and secondary-specialized structures. English grew through teacher preparation programs, gradual updating of textbooks, and the development of specialized institutions and language classrooms. However, development remained uneven and often depended on local capacity and resource availability.

Phase 3: System-wide acceleration (2012–2017). A decisive shift occurred with the 2012 presidential resolution on further improving foreign-language learning. The act explicitly recognized progress since independence and quantified some achievements, noting that more than 51.7 thousand foreign-language teachers had been trained and that more than 5,000 language laboratories had been equipped in general schools and secondary specialized institutions. The resolution also introduced a model of early and continuous learning: starting from the 2013/2014 academic year, foreign languages—primarily English—were to be taught from Grade 1 in a game-based and oral form, with systematic alphabet, reading, and grammar instruction beginning from Grade 2. In addition, the resolution strengthened assessment infrastructure by expanding structures to evaluate foreign-language proficiency and develop a national testing system aligned with internationally recognized standards.

Phase 4: Quality, governance, and incentives expansion (2018–present). The post-2017 period is marked by stronger governance and quality assurance measures. The 2017 Cabinet of Ministers resolution targeted the improvement of foreign-language teaching quality in educational institutions, reinforcing implementation discipline. In 2021, a presidential decision established an Agency for promoting foreign-language learning under the Cabinet of Ministers, tasked with coordinating international methodologies, supporting teacher skills, analyzing labor-market demand, and implementing a continuous “kindergarten–school–higher education–enterprise” chain. Incentive mechanisms for teachers, including supplements linked to certification and professional standards, became an additional lever to attract and retain qualified personnel.

Across phases, three recurring structural trends can be identified: (1) earlier start and continuity across education levels, (2) a move from input-focused reform (hours, textbooks, laboratories) toward outcome-focused reform (competence, certification, ratings), and (3) institutionalization of quality through dedicated bodies and procedures.

Table 1. Reform phases and dominant policy levers in English language education after independence.

Phase (years)	Dominant lever(s)	Typical instruments	Expected outcome
1991–1997	System building	Legal framework; continuity of education; national priorities	Foundation for modernization and workforce development
Late 1990s–2011	Capacity consolidation	Teacher training; gradual textbook renewal; language classrooms	Expanded access with uneven quality
2012–2017	Acceleration & early start	English from Grade 1; infrastructure; national proficiency assessment	Higher participation; stronger continuity; standardized signals
2018–present	Quality & governance	Quality regulations; specialized agency; incentives and certification	Improved accountability; alignment with labor-market needs

Discussion

The phased pattern suggests that Uzbekistan’s English education development is best understood as cumulative institutionalization rather than a sequence of unrelated initiatives. Reforms did not simply add more English lessons; they restructured when learners start, how continuity is maintained across levels, how teachers are supported, and how outcomes are signaled through assessment and certification.

Interpreting the early-start strategy. Introducing English from Grade 1 is often justified by cognitive and motivational arguments, but its real value depends on implementation. The 2012 reform design attempted to manage early-start risks by specifying an oral, game-based approach for the first year and delaying formal literacy in English until Grade 2. This sequencing is pedagogically reasonable because it reduces cognitive overload and supports pronunciation and listening foundations before intensive reading and grammar. Yet, the quality of early-start outcomes is highly sensitive to teacher preparation and classroom resources. If early grades rely on underprepared teachers or purely mechanical repetition, the policy may produce early exposure without durable

competence.

Infrastructure as a necessary but insufficient condition. The documented investment in language laboratories and multimedia resources improved the potential for listening practice and interactive learning. However, technology alone does not guarantee communicative pedagogy. Laboratory use requires lesson scripts, task design, and teacher confidence in facilitating speaking and listening activities. Therefore, infrastructure should be treated as a platform that demands methodological capacity-building.

Assessment and certification: benefits and side effects. The expansion of national testing and certification aligned to international standards contributes to accountability by producing comparable signals of proficiency. It can motivate learners and teachers and help employers interpret competence. However, certification systems can also drive exam-oriented teaching, where instruction prioritizes test-taking strategies over workplace communication. The risk is particularly high in professional education institutions, where English competence should be measured by task performance (e.g., service dialogues, report writing, understanding manuals) rather than by decontextualized grammar accuracy.

Governance and the ‘education–enterprise’ link. The establishment of a specialized agency and the explicit “kindergarten–school–higher education–enterprise” chain reflect a shift toward human capital logic: languages are taught not only for cultural purposes but for economic competitiveness. For vocational pathways, this shift is methodologically significant. It implies that English teaching must increasingly adopt English-for-Specific-Purposes (ESP) approaches—terminology, routine workplace genres, customer interaction scripts, and safety communication. Where ESP is missing, learners may pass general exams but struggle in real job situations.

Equity challenges. Post-independence reforms expanded access, but quality remains uneven across regions and institutions. Rural schools may face shortages of qualified teachers and limited exposure to authentic input. Learners from less-resourced settings may depend heavily on translation and memorization rather than active communication. Addressing equity requires a combination of targeted teacher deployment, continuous professional development, remote support, and locally relevant materials.

Methodological implications and recommendations. Based on the reform trajectory, five practice-oriented recommendations are proposed for professional education institutions:

- 1) Align learning outcomes with workplace tasks. Replace broad goals (“improve speaking”) with measurable outcomes (e.g., “handle a customer complaint politely,” “explain a safety rule,” “write a short service email”).
- 2) Use micro-ESP modules. Even within general English courses, embed short weekly modules linked to the learners’ specialties, supported by a mini-glossary and situational dialogues.
- 3) Adopt rubric-based speaking assessment. Use clear rubrics that evaluate intelligibility, task completion, and pragmatic appropriateness rather than only grammatical correctness.
- 4) Strengthen teacher professional learning communities. Encourage lesson-study cycles in which teachers share role-plays, listening tasks, and post-lesson reflections.
- 5) Balance certification preparation with communication. Treat certificates as one indicator, not the curriculum itself; integrate exam practice only after communicative routines are established.

These recommendations match the direction of policy evolution: from access expansion to quality management and accountability. They also address the main tension in current practice: ensuring that measurable outcomes reflect real-world competence rather than narrow test performance.

Conclusion

English language education in Uzbekistan after independence developed through a sustained sequence of reforms that gradually moved the system from foundational restructuring to accelerated access, and then toward governance and quality assurance. The 2012 shift to earlier-start English, combined with infrastructure investment and national proficiency assessment, marked a turning point toward system-wide continuity. Subsequent measures strengthened regulation, introduced specialized coordinating institutions, and expanded incentive mechanisms.

Despite these achievements, the decisive challenge remains methodological: policies can mandate starting age and certification systems, but communicative competence emerges only through teacher expertise, task-rich pedagogy, and contextualized assessment. For professional education institutions, the next stage of development

should prioritize ESP integration, performance-based speaking assessment, and equity-focused teacher support. Under such conditions, the post-independence trajectory can translate more consistently into employability, mobility, and meaningful international participation for Uzbek learners.

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LINGUA-CULTURAL APPROACH TO THE LEXICAL UNITS DENOTING EMOTIONS

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Annotatsiya: Mazkur maqolada emotsiyalarni ifodalovchi leksik birliklar lingvomadaniy yondashuv asosida tahlil qilinadi. Tadqiqotda til va madaniyat o'rtasidagi o'zaro bog'liqlik emotsional leksika misolida yoritilib, hissiy ma'nolarni ifodalovchi birliklarning milliy-madaniy xususiyatlari aniqlanadi. Emotsiyalarni bildiruvchi so'zlar va frazeologik birliklarning semantik, konnotativ va pragmatik jihatlari o'rganilib, ularning nutqdagi funksional roli ko'rsatib beriladi. Shuningdek, turli lingvomadaniy muhitlarda emotsional tushunchalarning shakllanishi va ifodalanishidagi o'xshashlik hamda tafovutlar tahlil qilinadi. Tadqiqot natijalari til birliklarining emotsional mazmuni madaniy qadriyatlar, mentalitet va ijtimoiy tajriba bilan uzviy bog'liqligini tasdiqlaydi.

Kalit so'zlar: lingvomadaniy yondashuv, emotiv leksika, emotsiya, konnotatsiya, semantika, frazeologiya, madaniyat, til va tafakkur, pragmatika

Abstract : This article examines lexical units denoting emotions from a linguo-cultural perspective. The study explores the interrelationship between language and culture through the analysis of emotive vocabulary, highlighting the culturally specific features of emotional expression. Words and phraseological units that convey emotions are analyzed in terms of their semantic, connotative, and pragmatic characteristics, as well as their functional role in discourse. The research also investigates similarities and differences in the conceptualization and expression of emotions across different linguocultural contexts. The findings demonstrate that the emotional meaning of lexical units is closely connected with cultural values, mentality, and social experience.

Keywords: linguocultural approach, emotive lexicon, emotion, connotation, semantics, phraseology, culture, language and thought, pragmatics

Аннотация: В данной статье рассматриваются лексические единицы, обозначающие эмоции, с лингвокультурологической точки зрения. В исследовании анализируется взаимосвязь языка и культуры на примере эмотивной лексики, выявляются национально-культурные особенности выражения эмоций. Рассматриваются слова и фразеологические единицы,

передающие эмоциональные значения, с точки зрения их семантических, коннотативных и прагматических характеристик, а также их функциональной роли в речи. Особое внимание уделяется сходствам и различиям в концептуализации и выражении эмоций в различных лингвокультурных средах. Результаты исследования подтверждают, что эмоциональное значение лексических единиц тесно связано с культурными ценностями, менталитетом и социальным опытом.

Ключевые слова: лингвокультурологический подход, эмотивная лексика, эмоция, коннотация, семантика, фразеология, культура, язык и мышление, прагматика

INTRODUCTION

Emotions constitute a fundamental dimension of human cognition and communication, shaping how individuals perceive the world and interact with others. Language serves as the primary medium through which these emotions are conceptualized and expressed, and lexical units play a central role in encoding emotional experience. Words denoting emotions do not merely reflect internal psychological states; they are also deeply embedded in cultural frameworks that influence their meaning, usage, and interpretation.

A linguo-cultural approach to emotive lexical units emphasizes the interdependence between language and culture in the representation of emotions. Emotional concepts are not universal in their linguistic realization; instead, they are shaped by culturally specific values, beliefs, and social practices. This perspective highlights that the same emotion may be categorized, expressed, or evaluated differently across languages, depending on the underlying cultural context. Consequently, the study of emotive vocabulary requires an analysis that goes beyond purely semantic boundaries and incorporates cultural and cognitive dimensions. Lexical units denoting emotions include a wide range of linguistic forms, such as adjectives, nouns, verbs, and phraseological expressions. These units carry both denotative and connotative meanings, with the latter often reflecting culturally conditioned attitudes and evaluations. For example, certain emotional expressions may carry positive connotations in one culture while being perceived as negative or inappropriate in another. Such variations demonstrate that emotional meaning is not fixed but dynamically constructed within specific linguo-cultural environments. Recent developments in linguistics have increasingly focused on the role of language in shaping emotional experience, drawing on insights from cognitive linguistics, cultural

linguistics, and pragmatics. Within this framework, emotive lexicon is viewed as a key site where language, thought, and culture intersect. The study of emotional vocabulary provides valuable insights into how speakers categorize feelings, interpret social situations, and construct meaning in communication. The relevance of this research lies in its attempt to analyze lexical units denoting emotions through a linguo-cultural lens, uncovering the cultural specificity and variability of emotional expression. By examining both universal and culture-bound aspects of emotive lexicon, the study contributes to a more comprehensive understanding of how emotions are encoded in language and how they function within different communicative contexts. The aim of the present study is to investigate the semantic, connotative, and pragmatic features of lexical units denoting emotions, with particular attention to their linguo-cultural characteristics. Through this analysis, the research seeks to reveal how emotional meaning is shaped by cultural values and how it influences communication across different linguistic communities.

MAIN

BODY

The linguo-cultural analysis of lexical units denoting emotions demonstrates that emotional meaning is constructed at the intersection of semantic structure and cultural interpretation. Emotive lexicon encompasses a wide range of linguistic forms—nouns, verbs, adjectives, adverbs, and phraseological expressions—each contributing differently to the representation of emotional experience. While the denotative core of such units may appear comparable across languages, their connotative layers often reveal significant cultural specificity. A useful point of departure is the semantic classification of emotion-denoting lexical units. These can be grouped into basic emotion terms (e.g., joy, anger, fear), evaluative descriptors (e.g., pleasant, disturbing, kind), and metaphorically extended expressions (e.g., heartbroken, burning with anger). Basic terms tend to show a higher degree of cross-linguistic stability, reflecting shared human emotional experiences. In contrast, evaluative and metaphorical expressions exhibit greater variation, as they are shaped by culturally embedded models of feeling and behavior. Connotation plays a decisive role in differentiating emotive lexical units within and across languages. Words with similar denotative meanings may carry distinct emotional tones due to cultural associations, historical usage, or stylistic preferences. For instance, expressions of pride or modesty can be evaluated differently depending on cultural norms regarding individualism and collectivism. In Uzbek, emotional expression is often moderated by norms of respect and social harmony, leading to a preference for indirect or softened

forms. English, particularly in informal registers, frequently allows more direct lexicalization of emotional states. Phraseological units and idioms provide especially rich evidence of linguo-cultural specificity. These expressions encapsulate culturally salient metaphors and symbolic associations, often rooted in shared historical and social experiences. Emotional states are frequently conceptualized through bodily imagery, spatial orientation, or natural phenomena. While some metaphors—such as linking emotion to physical sensation—are widespread, the specific imagery and linguistic realization vary across languages. Uzbek phraseology, for example, often reflects traditional values and collective experience, whereas English idioms may draw on a broader range of metaphorical domains shaped by diverse cultural influences. The pragmatic dimension further clarifies how emotive lexical units function in communication. Emotional expressions are not used in isolation; they are embedded in discourse and serve specific interactional purposes. Speakers select particular lexical items to signal evaluation, align with interlocutors, express empathy, or manage social distance. Cultural norms influence these choices, determining what is considered appropriate, excessive, or insufficient in a given context. As a result, the same emotional state may be expressed differently depending on situational and cultural expectations. Another important aspect concerns the role of cognitive models in shaping emotive lexicon. Emotions are conceptualized through culturally mediated schemas that organize experience and guide interpretation. These schemas influence how emotions are categorized, which distinctions are emphasized, and how they are linguistically encoded. The presence of culturally specific emotion terms that lack direct equivalents in other languages illustrates this point, highlighting the non-universality of emotional categorization. Comparative observations suggest that while there are universal tendencies in the linguistic representation of emotions, such as the existence of basic emotion categories, the ways in which these emotions are elaborated and expressed are strongly influenced by cultural context. The interaction between universal cognitive mechanisms and culture-specific patterns results in a complex system of emotive lexical units that reflects both shared human experience and cultural diversity. Through this analysis, it becomes evident that emotive lexicon cannot be fully understood without considering its linguo-cultural dimension. Emotional meaning emerges not only from the internal structure of language but also from the cultural environment in which language is used, making emotive lexical units a key site for exploring the relationship between language, culture, and human experience.

CONCLUSION

The analysis confirms that lexical units denoting emotions are shaped by a close interaction between semantic structure and cultural context. Emotional meaning is not limited to denotation; it is enriched by connotation, evaluative force, and culturally grounded associations that guide interpretation in discourse. The findings show that while basic emotion categories display a degree of cross-linguistic stability, their linguistic realization varies considerably across cultures. This variation is especially visible in evaluative and metaphorical expressions, as well as in phraseological units, where cultural values and shared experiences are encoded. Differences between English and Uzbek illustrate how norms of directness, politeness, and social harmony influence the choice and intensity of emotive vocabulary. The role of connotation emerges as central in distinguishing lexical items with similar denotative meanings. Speakers rely on culturally informed knowledge to select appropriate expressions, adjusting emotional tone according to context and communicative goals. In this respect, emotive lexicon functions as a flexible tool for managing interpersonal relations, signaling attitudes, and shaping interaction. From a linguo-cultural perspective, emotional expression is closely linked to cognitive models that reflect culturally specific ways of categorizing and interpreting feelings. The presence of language-specific emotion terms and culturally embedded metaphors highlights the diversity of emotional conceptualization across linguistic communities. The study demonstrates that emotive lexical units are not only linguistic elements but also carriers of cultural meaning. Their analysis provides valuable insights into how language encodes emotion and how cultural frameworks influence communication. A deeper understanding of these processes is essential for effective intercultural interaction, translation practices, and the development of communicative competence in multilingual contexts.

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ВЛИЯНИЕ ОСОБЕННОСТЕЙ ОБЩЕНИЯ НА ФОРМИРОВАНИЕ ВЗАИМОДЕЙСТВИЙ У УЧАЩИХСЯ МЛАДШЕГО ШКОЛЬНОГО ВОЗРАСТА

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Аннотация. Статья посвящена изучению влияния коммуникативного характера на формирование взаимоотношений у учащихся младшего школьного возраста. В первую очередь приведены анализы исследований, проведенных зарубежными учеными по особенностям взаимоотношений и общения у учащихся младшего школьного возраста. Вместе с тем были проведены эмпирические исследования, направленные на изучение особенностей общительности у учащихся младшего школьного возраста, и изложен их анализ.

Ключевые слова. младший школьный возраст, взаимоотношения, коммуникабельность, организованность, взаимоотношения с окружающими, эмпатия, агрессивность, беззащитность, обидчивость, справедливость, правдивость, вежливость, трудолюбие, доверие.

THE INFLUENCE OF COMMUNICATIVE FEATURES ON THE FORMATION OF INTERACTIONS IN PRIMARY SCHOOL STUDENTS

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Abstract. The article is dedicated to studying the influence of communicative characteristics on the formation of relationships in primary school students. First, an analysis of research conducted by foreign scholars on the characteristics of relationships and communicativeness in primary school students is presented. At the same time, empirical research aimed at studying the characteristics of communicativeness in primary school students was conducted, and its analysis is presented.

Keywords. primary school age, relationships, sociability, organization, interaction with others, empathy, aggressiveness, defenselessness, resentment, justice, honesty, politeness, diligence, trust.

In the process of joint educational activities, children establish certain relationships. After a few weeks at school, most first-graders lose their fear and embarrassment from

the mass of new impressions. They begin to pay close attention to their neighbor's behavior, establishing contacts with classmates who sympathize with them or show similar interests. At the first stages of orientation in a new collective, as a rule, some children generally exhibit character traits uncharacteristic of them (some are shy, while others are sociable). However, as relationships are established with other children, each student reveals their true individual characteristics.

A characteristic feature of the relationships between primary school students is that their friendship is, as a rule, based on commonalities of external life circumstances and random interests (children sit at the same desk, live in the same house, are interested in adventure literature, etc.). [2].

The content and nature of communication between younger schoolchildren and their peers are determined, as a rule, by the emotional-semantic dominant—the content of the leading spheres of life activity: cognition, play, and activity. It determines the predominance of certain aspects of communication, but does not limit its diversity. The topics of oral communication between primary school students and their peers are diverse. The conversations cover the following topics: studies, games, sports, nature, movies, television programs, books, family events, kinship relations, childhood, future, etc. Younger schoolchildren comprehend and discuss political (war and peace problems, events in the country, etc.), acute social (drug addiction, crime, etc.), age-specific (exchange, comradesly relations, etc.), moral and ethical (norms of communication, behavior, etc.), everyday, family (shopping, clothing, events in the yard, etc.), personal (unpleasantness, health, etc.) and other issues. Children of this age are characterized by an interest in a person in all their manifestations [4].

Girls are very interested in topics related to man: his capabilities, abilities, the meaning of life, the lives of other peoples, and so on. Boys' communication is thematically more diverse, independent of school and academic affairs, saturated with extracurricular and extracurricular information, and linked to subject-specific activities. Boys often talk about sports and technology. Most conversations are about toys, movies, nature, and hobbies. Along with general topics in children's free dialogues, special ones are allocated that meet the interests of boys: about brave people, heroes, about struggle, military service, about the dignity of brothers, fathers, grandfathers, etc. Also, children's folklore occupies a significant place in the communication of boys: jokes, fantasies, anecdotes, secrets, scary stories, adventures, word and picture riddles, jokes, parodies, songs, and counting cards; these texts are, as a rule, transmitted to boys in oral form. Their narration turns out to be both entertainment and a way to transcend routine familiarity, a touch of the unusual.

According to many authors, communication with peers during the early school years plays a very important role in developing a child's self-esteem.

T. I. Yufereva's study examined the regulatory function of self-esteem in an experimentally created conflict situation with a group of peers. The study emphasized that as a result of communication activity, attention is focused on the person and their attitude toward themselves, which helps clarify perceptions of themselves and evaluate individual facts of their achievements [9].

In turn, T. V. Zinova investigated the dynamics of self-esteem in connection with peer evaluations and concluded that from the first to the fourth grade, the number of links between self-esteem and peer mirror evaluations, and between self-esteem scales and popularity ratings increases. That is, the higher a child evaluates their emotional well-being, the more popular and attractive they are in the eyes of their peers [3].

In her research, L. M. Shipitsina draws attention to the fact that if a schoolchild's position in the classroom is favorable: the student feels accepted in the group, feels sympathy from their classmates, and sympathizes with them, this, in turn, creates self-confidence. Dissatisfaction with relationships with classmates and the experience of being excluded from the group can serve as a source of serious difficulties in the development of a primary school student's personality.

Naturally, such a state negatively affects a child's self-esteem. The author also notes that the significance of communication between primary school students is not only that it expands their general horizons and contributes to the development of mental education, but also that by communicating with classmates, children learn to evaluate themselves and their peers [8].

It should be noted that the communication of primary school students with their peers changes significantly throughout the entire age stage. Thus, researchers note changes in the content, needs, motives, and means of communication, which can occur smoothly and gradually, while potential breakthrough manifestations and qualitative shifts are possible.

L.I. Bojovich describes the changing nature of relationships between children in his works. As mentioned earlier, comradely relationships among first-graders are established based on external circumstances, meaning children befriend based on the principle of proximity of contacts: they sit at the same party, live on the same street, etc.

Closer relationships between schoolchildren are already formed in the process of joint activity, for example, during academic classes or in the process of collective play [1]. However, as soon as the children's games or joint work are completed, the relationships

established on their basis also collapse. However, gradually, comradely relations become more stable and emotionally strong, as certain requirements for the comrade's personal qualities already arise. D.I. Feldstein, in turn, relies on a multi-level and multi-character assessment of the real socio-cultural environment in which a younger schoolchild is developing today, emphasizing that parental detachment forms a sense of loneliness and withdrawal in children, which negatively affects the construction of interpersonal relationships with peers [6]. In his opinion, the relationship between an adult and a child is quite complex and multifaceted, and it is not uncommon for adults to distance themselves from children. This is due to the fact that adults have not developed an objective attitude toward children as subjects of relationships.

This is not the only problem investigated by D.I. Feldstein; the author also touched upon the influence of such a factor as children's national affiliation in the communication of primary school students. In fact, until recently, students in Russian schools did not think about which nationality's children they would like to study, play, or befriend when choosing a companion for communication. However, according to D.I. Feldstein, the picture has changed in recent years: already 69% of 6-7-year-old schoolchildren, choosing a comrade, prioritize their nationality in terms of importance [7].

Unfortunately, more and more modern research in the field of interpersonal relations and communication processes in childhood indicates a lack of communication skills and interpersonal interaction skills in younger schoolchildren, primarily with peers, namely: - difficulties related to changing one's behavior, not knowing what to say and how to say it; - difficulties related to the misunderstanding and disapproval of the communication partner; - difficulties caused by the misunderstanding of the communication partner, i.e., insufficient formation of one's own perceptual side of communication; - difficulties related to experiencing dissatisfaction, even irritation, with one's partner; - difficulties caused by the child's general dissatisfaction with communication [5].

As T. V. Kalinina notes in her work, communication develops specifically within the family, starting from the neonatal stage, forming in direct interaction with parents, step-parents, and close relatives. In this regard, the author suggests that educators conduct active educational work with young parents, starting from the child's early age: organizing parent lectures, round tables, and training sessions that contribute to expanding communicative competence and mastering effective communication skills [4].

Of course, developing communication skills with peers is important at any age. But the primary school age is the most significant, as it begins to develop in preschool childhood, the development of interaction becomes conscious for the child in primary school, and the well-being of the adolescent's personal development will largely depend on how communication and interaction skills are formed in the primary school age. It is precisely in the early school age that a peer acquires individuality from the child's point of view, while an adult gradually recedes into the background, due to which the peer becomes a significant figure in communication and the child's various communicative qualities are formed.

The full satisfaction of an individual's need for communication also affects their work activity. The fact that people have the opportunity to talk to each other in this environment often increases a person's ability to work, especially in operations where work that is difficult to do while talking is performed side by side. A questionnaire was conducted in the group to assess the communicative characteristics of primary school students. The results of the methodology were analyzed in quantitative and qualitative terms. The results of the quantitative analysis are presented in tables and diagrams.

Table 1.

Results on the methodology for determining an individual's communicative abilities

№	Adjectives	4-сиф
1.	Communication	68,6 %
2.	Organizational skills	49,3%
3.	Interaction with others	62,5%
4.	Empathy	36,5 %
5.	Aggressiveness	28,6%
6.	Lack of protection	16,4%
7.	Resentment	22,5%
8.	Fairness	28,7%
9.	Truthfulness	33,5%
10.	Kindness	13,3
11.	Hard work	42,4 %
12.	Confidence	28,6%

From the table results, it can be seen that 68.6% of the subjects have developed communicative abilities. They are explained by the priority of the ability to interact with people and communicate. Among the subjects, organizational abilities accounted for 49.3%, which can be explained by the formation of social skills and a sense of

mutual respect. Interaction with others was 62.5% among the subjects, indicating a positive attitude toward others. The ability to empathize with the pain of others among the subjects was 36.5%, which is determined by the formation of the ability to analyze the mental changes occurring in them.

Aggressiveness is 28.6%. According to him, this is explained by the increasing sense of aggression in the majority of children.

Vulnerability among the subjects is 16.4%. According to it, it can be seen that self-defense skills have been formed in 4th-grade students. The quality of resentment among the subjects is 22.5%. The characteristic of fairness can serve as a criterion for injustice toward oneself in the attitude of adults toward them. Among the truth-telling subjects, this figure was 33.5%, and we can see that as age increases, instances of learning to lie occur as a result of the influence of those around them. The quality of courtesy among the subjects was 13.3%, and if initially the child showed courtesy toward adults, it can be explained by the subsequent formation of egoistic traits in the child.

From the analysis of the results, it can be seen that the characteristics of creativity and independence have an inverse proportion. Increasing the quality of independence in them leads to a decrease in obedience. Furthermore, an increase in children's independence leads to an increase in their determination. It can be seen that they can be characterized by an increase in their internal attraction to the surrounding things.

From the results of the methodology, it can be seen that diligence among 4th-grade students is 42.4%. According to him, every activity carried out with children is aimed at forming their labor skills.

The formation of self-confidence in the group of subjects is 28.6%. It can be seen from the results that as their life experience increases, the expansion of skills and imagination leads to an increase in self-confidence.

From the results of the methodology, it can be seen that an individual's communication skills play an important role in entering interpersonal relationships. It can also be explained by the fact that they have the ability to establish relationships with each other.

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FILTRLOVCHI NOTO‘QIMA MATERIALLARDA G‘OVAKDORLIK VA DINAMIK ZICHLIK O‘RTASIDAGI BOG‘LIQLIKNI KOMPLEKS BAHOLASH USULI

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Annotatsiya. Mazkur tadqiqotda filtrlovchi noto‘qima materiallarning g‘ovakdorligi va zichligini kompleks baholashga asoslangan yangi usul taklif etildi. Usul geometrik parametrlar, kapillyar singdirish va siqilish sharoitidagi o‘zgarishlarni hisobga olishga qaratilgan. Ilk bor dinamik zichlik tushunchasi kiritilib, materialning real ekspluatatsion holatdagi xususiyatlari baholandi. Shuningdek, samarali g‘ovakdorlik va filtratsion zichlik indeksi kabi yangi ko‘rsatkichlar taklif etildi. Tajriba natijalari g‘ovakdorlik kamayishi bilan dinamik zichlik ortishini ko‘rsatdi. Olingan ma‘lumotlar asosida g‘ovakdorlik va zichlik o‘rtasida empirik bog‘liqlik aniqlandi. Ushbu bog‘liqlik material tuzilishi va filtratsion samaradorlik o‘rtasidagi munosabatni tushuntirish imkonini beradi. Taklif etilgan usul an‘anaviy usullarga nisbatan aniqroq va ishonchliroq natijalar beradi. Usul laboratoriya sharoitida oson amalga oshiriladi va sanoatda qo‘llashga mos hisoblanadi. Natijalar noto‘qima filtr materiallarni optimallashtirishda muhim ahamiyatga ega.

Kalit so‘zlar. noto‘qima material, g‘ovakdorlik, zichlik, filtratsiya, kapillyar singdirish, dinamik zichlik

Kirish. Hozirgi kunda filtrlovchi noto‘qima materiallar sanoatning ko‘plab sohalarida, jumladan, havo va suvni tozalash, tibbiyot, kimyo sanoati, neft-gaz tarmog‘i va oziq-ovqat ishlab chiqarishda keng qo‘llanilmoqda. Ushbu materiallarning asosiy afzalligi ularning yuqori g‘ovakdorlikka ega bo‘lishi, yengilligi va filtratsiya jarayonida samarali ishlash qobiliyati bilan belgilanadi. Noto‘qima materiallar tuzilishi tolalarning tasodifiy joylashishi va g‘ovaklar tarmog‘idan iborat bo‘lib, bu ularning filtratsion xossalarini shakllantiradi. Filtrlovchi notukima materiallarning ish samaradorligi asosan ularning tuzilishi va fizik-mexanik ko‘rsatkichlari, xususan g‘ovakdorlik va zichlik bilan belgilanadi. G‘ovakdorlik materialdagi bo‘shliqlar ulushini ifodalasa, zichlik uning massasi va hajmi o‘rtasidagi munosabatni ko‘rsatadi. Ushbu ikki parametr o‘zaro chambarchas bog‘liq bo‘lib, filtratsiya jarayonida zarrachalarni ushlab qolish, havo yoki suyuqlik o‘tkazuvchanligi va gidrodinamik qarshilik kabi muhim xususiyatlarga ta‘sir ko‘rsatadi. Ammo mavjud ilmiy tadqiqotlarda g‘ovakdorlik va zichlik ko‘pincha alohida-alohida o‘rganiladi.

An'anaviy geometrik usullarda zichlik materialning massa va hajmi orqali aniqlanadi, lekin bu yondashuv notukima materiallarning govakli va siqiluvchan tuzilishini to'liq hisobga olmaydi. Xuddi shunday, g'ovakdorlikni aniqlash usullari ham ko'p hollarda materialning real ekspluatatsion sharoitidagi holatini aks ettirmaydi. Ayniqsa, filtratsiya jarayonida material tashqi bosim ta'sirida siqiladi, bu esa uning ichki tuzilishi va g'ovaklar geometriyasini o'zgartiradi. Shu munosabat bilan, noto'qima materiallarning g'ovakdorligi va zichligini birgalikda, kompleks tarzda baholash zarurati yuzaga keladi. Bunday yondashuv materialning real ishchi sharoitdagi xususiyatlarini aniqlash, filtratsion samaradorlikni to'g'ri baholash va materiallarni optimal tanlash imkonini beradi. Zamonaviy tadqiqotlarda kapillyar singdirish, vakuumli to'yintirish va raqamli tasvir tahlili kabi usullardan foydalanish orqali govakli tuzilmalarni chuqur o'rganish imkoniyati paydo bo'lmoqda. Mazkur tadqiqotda filtrlovchi noto'qima materiallarning g'ovakdorligi va zichligini kompleks baholashga qaratilgan yangi usul ishlab chiqildi. Ushbu usul geometrik parametrlar, kapillyar singdirish jarayoni va siqilish sharoitidagi o'zgarishlarni birgalikda hisobga oladi. Ilk bor dinamik zichlik tushunchasi kiritilib, materialning real ekspluatatsion holatdagi zichligi baholandi. Shu bilan birga, samarali govakdorlik va filtratsion zichlik indeksi kabi yangi ko'rsatkichlar taklif etildi. Tadqiqotning maqsadi filtrlovchi notukima materiallarning tuzilishi va ularning g'ovakdorlik hamda zichlik ko'rsatkichlari o'rtasidagi bog'liqlikni aniqlashdan iborat. Buning uchun materiallarning turli holatlardagi parametrlari o'lchanib, ular asosida yangi matematik modellar ishlab chiqildi. Olingan natijalar materiallarning filtratsion xususiyatlarini bashorat qilish va ularni optimallashtirishda muhim ahamiyat kasb etadi. Shunday qilib, taklif etilgan tadqiqot notukima materiallarning tuzilishini chuqurroq o'rganish, ularning funksional xossalarini baholash va yangi samarali filtr materiallarni yaratishda ilmiy-amaliy ahamiyatga ega hisoblanadi.

Tadqiqot usuli.

1. Geometrik g'ovakdorlik

$$\varepsilon_{\text{geo}} = 1 - \rho_b / \rho_f$$

2. Ochiq g'ovakdorlik

$$\varepsilon_{\text{liq}} = m_1 - m_0 / \rho_l \cdot V$$

3. Samarali g'ovakdorlik

$$\varepsilon_{\text{comp}} = m_{1p} - m_0 / \rho_l \cdot V_p$$

4. Dinamik zichlik

$$\rho_{\text{dyn}} = k_1 \rho_{\text{geo}} + k_2 \rho_{\text{liq}} + k_3 \rho_{\text{comp}}$$

5. Yangi bog'liqlik

$\rho_{dyn} = \rho_f(1 - \varepsilon_{eff})$ бунда: $\varepsilon_{eff} = \varepsilon_{liq} + \varepsilon_{comp}/2$. Bu formula ilmiy yangilik hisoblanadi.

Tajriba qismi: 3 xil, turli zichlik va struktura ega notukima material namuna sifatida olindi. Massa, qalinlik, siqilish, singdirish o'Ichandi.

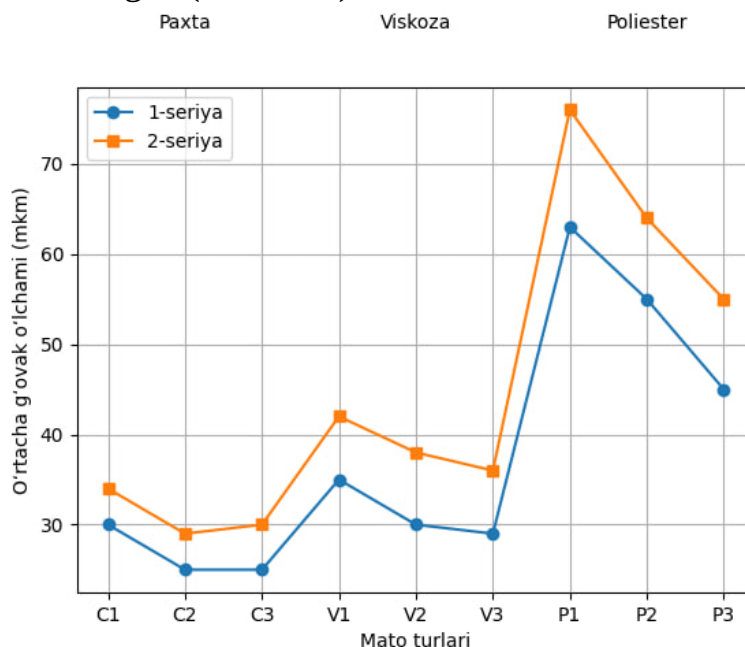
Natijalar va tahlil. **Tadqiqotda filtrlovchi notukima materiallar turli tolalar asosida tayyorlandi: paxta tolasi, poliestar (PET) tolasi, viskoza tolasi.** Ushbu tolalar turli tuzilish va gidrofillik xususiyatlarga ega bo'lganligi sababli, govakdorlik va zichlik ko'rsatkichlariga turlicha ta'sir ko'rsatadi.

1-jadval

Tola turiga bog'liq parametrlar

No	Tola turi	ε_{geo}	ε_{liq}	ε_{comp}	ρ_{geo}	ρ_{comp}	ρ_{dyn}
1	Paxta	0.91	0.80	0.72	0.56	0.74	0.70
2	Viskoza	0.89	0.78	0.68	0.60	0.79	0.75
3	PET	0.86	0.74	0.63	0.66	0.88	0.82

Quyidagi grafikda namlik qaytarish qobiliyati turli tolalar uchun solishtirilgan. Shuningdek, ikki xil holat berilgan: ko'k chiziq — ishlov berilgan (treated) va qizil chiziq — ishlov berilmagan (untreated)



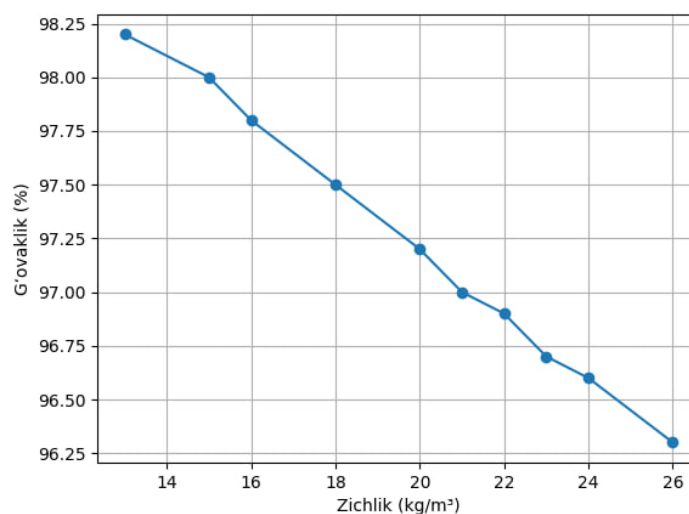
ko'k chiziq - ishlov berilgan, qizil chiziq - ishlov berilmagan

1-rasm. Tola turlarining namlikni ushlash xususiyatiga nisbatan o'zgarishini ko'rsatadi.

Paxta tolasi. yuqori g'ovakdorlik ($\varepsilon=0.91$), past zichliklikka va gidrofil $\rightarrow$ suyuqlikni yaxshi singdiradi. Bu ko'rsatkichlar filtratsiyada yuqori samara beradi. Viskoza tolasi o'rtacha g'ovakdor, struktura bir xilroq, kapillyar ta'sir yuqori, shunga ko'ra barqaror filtratsiyaga ega. Poliester (PET) past g'ovakdorlik, yuqori zichlik, gidrofob, yuqori mexanik mustahkamlik, lekin filtratsiya kamroq. Tadqiqot natijasida quyidagi qonuniyat aniqlandi:

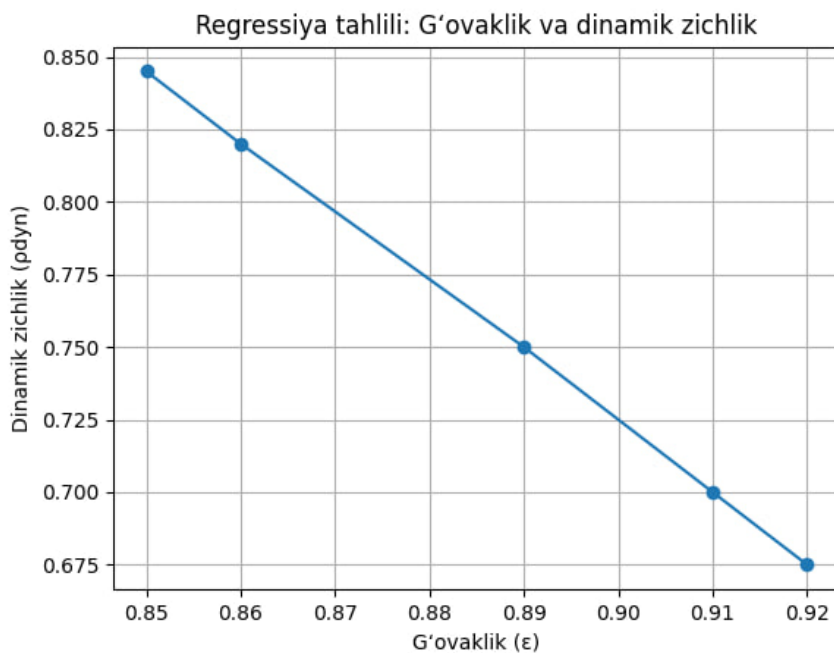
$$p_{dyn} \uparrow \text{ agar } \varepsilon \downarrow$$

Quyidagi grafikda esa porosity (g'ovaklik) ning density (zichlik) ga bog'liqligi berilgan.



2-расм. Г'овакликнинг zichlikka nisbatan ўзгариши.

Grafikdan ko'rinib turibdiki zichlik oshgan sari, g'ovaklik kamayadi (to'g'ri chiziqli teskari bog'lanish). YA'ni: g'ovakdorlik kamaysa $\rightarrow$ zichlik ortadi va tola turi bu jarayonga ta'sir qiladi. paxta $\rightarrow$ eng yuqori filtratsiya. PET $\rightarrow$ eng yuqori zichlik. viskoza $\rightarrow$ optimal balans. Demak g'ovakdorlik va zichlik o'zaro teskari bog'langan, lekin siqilishda bu bog'liqlik noaniq bo'ladi, yangi p_{dyn} formulasi real holatni ko'rsatadi. G'ovakdorlik + zichlik integratsiya qilindi; dinamik zichlik tushunchasi kiritildi; yangi formula ishlab chiqildi; filtratsion indekslar taklif etildi.



3-rasm. G'ovakdorlik va dinamik zichlik o'rtasida chiziqli regressiya tahlili

Olingan tajriba natijalari asosida govakdorlik va dinamik zichlik o'rtasida chiziqli regressiya tahlili amalga oshirildi. Natijada $\rho_{dyn}=2.88-2.395\epsilon$ ko'rinishidagi empirik tenglama aniqlandi. Korrelyatsiya koeffitsiyenti $R^2=0.9996$ ni tashkil etib, parametrlar o'rtasida juda kuchli bog'liqlik mavjudligini ko'rsatdi."

XULOSA. Mazkur tadqiqotda filtrlovchi noto‘qima materiallarning g‘ovakdorligi va zichligini kompleks baholashga asoslangan yangi usul ishlab chiqildi. Tadqiqot natijalari shuni ko‘rsatdiki, materialning tuzilishi va uning funksional xossalari o‘rtasida chambarchas bog‘liqlik mavjud. G‘ovakdorlik va dinamik zichlik o‘rtasida teskari proporsional bog‘liqlik aniqlanib, $p_{dyn}=2.88-2.395\varepsilon$ ko‘rinishidagi empirik tenglama taklif etildi. Tajriba natijalariga ko‘ra, paxta tolasi asosida tayyorlangan noto‘qima materiallarda yuqori g‘ovakdorlik va past zichlik kuzatilib, ularning filtratsion samaradorligi yuqori ekani aniqlandi. Poliester tolali materiallarda esa yuqori zichlik va past g‘ovakdorlik qayd etildi, bu esa mexanik mustahkamlikni oshirishi bilan birga filtratsiya samaradorligini ma’lum darajada kamaytiradi. Viskoza tolasi esa o‘rtacha ko‘rsatkichlarni namoyon qilib, optimal strukturani ta’minlaydi. Ishda ilk bor dinamik zichlik tushunchasi kiritildi va u materialning real ekspluatatsion sharoitdagi holatini baholash imkonini berdi. Shuningdek, samarali g‘ovakdorlik va filtratsion zichlik indeksi taklif qilinib, materiallarni kompleks baholash uchun yangi ilmiy yondashuv shakllantirildi. Taklif etilgan usul an’anaviy usullarga nisbatan aniqroq natijalar beradi, siqilish ta’sirini hisobga oladi va laboratoriya sharoitida amalga oshirish uchun qulay hisoblanadi. Olingan natijalar filtrlovchi noto‘qima materiallarni tanlash, loyihalash va optimallashtirishda muhim ahamiyatga ega.

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TIBBIY TA'LIMDA O'QITISHNI JADALLASHTIRISH TEXNOLOGIYALARINING SAMARADORLIGI VA AMALIY AHAMIYATI

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Annotatsiya: Mazkur maqolada tibbiy ta'lim jarayonida o'qitishni jadallashtirish texnologiyalarining samaradorligi va ularning amaliy ahamiyati tahlil qilinadi. Zamonaviy pedagogik yondashuvlar, interaktiv metodlar hamda raqamli texnologiyalar yordamida talabalar bilimini tez va sifatli o'zlashtirish imkoniyatlari o'rganilgan. Shuningdek, tibbiy fanlarni o'qitishda jadallashtirilgan ta'limning afzalliklari, o'quv jarayoniga ta'siri va klinik kompetensiyalarni shakllantirishdagi o'rni yoritilgan. Tadqiqot natijalari shuni ko'rsatadiki, innovatsion o'qitish texnologiyalaridan foydalanish talabalar faolligini oshiradi, mustaqil fikrlashni rivojlantiradi va amaliy ko'nikmalarni samarali shakllantirishga xizmat qiladi.

Kalit so'zlar: tibbiy ta'lim, o'qitishni jadallashtirish, pedagogik texnologiyalar, innovatsion metodlar, interaktiv ta'lim, klinik kompetensiya, raqamli ta'lim, ta'lim samaradorligi

Kirish

Bugungi kunda tibbiyot ta'limi tizimida yuqori malakali, tezkor fikrlovchi va amaliy ko'nikmalarga ega mutaxassislarni tayyorlash dolzarb masalalardan biri hisoblanadi. Tibbiy bilimlar hajmining keskin ortib borishi hamda zamonaviy tibbiyotning jadal rivojlanishi ta'lim jarayonini takomillashtirishni, xususan, o'qitishni jadallashtirish texnologiyalarini joriy etishni talab etmoqda. O'qitishni jadallashtirish texnologiyalari – bu o'quv materialini qisqa vaqt ichida samarali o'zlashtirishga yo'naltirilgan metod va vositalar majmuasi bo'lib, ular talabalar bilimini chuqurlashtirish bilan birga ularning mustaqil ishlash ko'nikmalarini ham rivojlantiradi. Ayniqsa, tibbiy fanlarda nazariy bilimlar bilan bir qatorda amaliy malakalarni shakllantirish muhim ahamiyat kasb etadi. Zamonaviy pedagogik texnologiyalar, jumladan, muammoli ta'lim, modul tizimi, simulyatsion treninglar, axborot-kommunikatsiya texnologiyalaridan foydalanish o'quv jarayonini jadallashtirishda muhim vosita hisoblanadi. Ushbu yondashuvlar talabalarni faollikka undaydi, klinik tafakkurni rivojlantiradi va o'zlashtirish samaradorligini oshiradi. Shu munosabat bilan, mazkur maqolada tibbiy

ta'limda o'qitishni jadallashtirish texnologiyalarining samaradorligi va ularning amaliy ahamiyatini ilmiy jihatdan tahlil qilish maqsad qilib olingan.

Materiallar va metodlar

Mazkur tadqiqot tibbiy ta'lim jarayonida o'qitishni jadallashtirish texnologiyalarining samaradorligini aniqlashga qaratildi. Tadqiqotda tibbiyot yo'nalishida tahsil olayotgan 1–2-bosqich talabalari ishtirok etdi. Ishtirokchilar tasodifiy tanlash asosida ikki guruhga ajratildi: nazorat guruhi (an'anaviy o'qitish usullari) va tajriba guruhi (jadallashtirilgan o'qitish texnologiyalari asosida ta'lim). Tadqiqot metodologiyasi kompleks yondashuv asosida tashkil etildi. Xususan, quyidagi usullardan foydalanildi: Pedagogik kuzatuv – talabalar faolligi, dars jarayonidagi ishtiroki va o'zlashtirish darajasini aniqlash maqsadida; Diagnostik testlar – bilim darajasini boshlang'ich va yakuniy bosqichlarda baholash uchun; So'rovnoma – talabalar va o'qituvchilarning o'qitish texnologiyalariga bo'lgan munosabatini o'rganish uchun; Tajriba-sinov metodi – ikki guruh natijalarini qiyosiy tahlil qilish uchun; Statistik tahlil usullari – olingan natijalarni matematik qayta ishlash va ishonchliligini aniqlash uchun. Tajriba guruhida o'qitish jarayonida interaktiv metodlar (muammoli ta'lim, “aqliy hujum”, kichik guruhlarda ishlash), axborot-kommunikatsiya texnologiyalari, multimediali taqdimotlar hamda simulyatsion treninglardan keng foydalanildi.

Natijalar

Tadqiqot natijalari shuni ko'rsatdiki, jadallashtirilgan o'qitish texnologiyalari qo'llanilgan tajriba guruhida bilim o'zlashtirish ko'rsatkichlari nazorat guruhiga nisbatan sezilarli darajada yuqori bo'ldi. Xususan, yakuniy test natijalari bo'yicha tajriba guruhida o'zlashtirish darajasi o'rtacha 15–20% ga oshgani aniqlandi. Shuningdek, tajriba guruhidagi talabalar o'quv jarayonida faolroq ishtirok etgani, mustaqil ishlashga ko'proq moyillik bildirgani va murakkab klinik vaziyatlarni tahlil qilishda yuqori natijalar ko'rsatgani kuzatildi. Simulyatsion mashg'ulotlar orqali talabalar amaliy ko'nikmalarni tezroq egallaganligi va nazariy bilimlarni real vaziyatlarga tatbiq etish qobiliyati rivojlanganligi qayd etildi. Bundan tashqari, raqamli vositalardan foydalanish o'quv materiallarini o'zlashtirish tezligini oshirishga xizmat qildi.

Muhokama

Olingan natijalar tibbiy ta'limda o'qitishni jadallashtirish texnologiyalarining yuqori samaradorlikka ega ekanligini ko'rsatdi. Interaktiv va innovatsion metodlarning qo'llanilishi talabalarni passiv tinglovchidan faol ishtirokchiga aylantirib, ularning bilim olish jarayoniga bo'lgan qiziqishini oshirdi. Tadqiqot natijalari boshqa ilmiy izlanishlar bilan hamohang bo'lib, zamonaviy pedagogik texnologiyalar o'quv

jarayonini optimallashtirish va ta'lim sifatini oshirishda muhim omil ekanligini tasdiqlaydi. Ayniqsa, tibbiy ta'limda klinik tafakkurni shakllantirishda simulyatsion va muammoli ta'lim usullarining ahamiyati yuqori ekanligi aniqlandi. Shu bilan birga, o'qitishni jadallashtirish texnologiyalarini keng joriy etishda ayrim muammolar mavjud. Jumladan, moddiy-texnik bazaning yetarli emasligi, o'qituvchilarning raqamli kompetensiyalarini rivojlantirish zarurati va metodik ta'minotning yetishmasligi jarayon samaradorligini cheklashi mumkin. Umuman olganda, o'qitishni jadallashtirish texnologiyalarini tibbiy ta'limga keng tatbiq etish talabalar bilimini chuqurlashtirish, amaliy ko'nikmalarini rivojlantirish va raqobatbardosh mutaxassislarni tayyorlashda muhim ahamiyat kasb etadi.

Xulosa

Tadqiqot natijalari asosida shuni xulosa qilish mumkinki, tibbiy ta'lim jarayonida o'qitishni jadallashtirish texnologiyalaridan foydalanish yuqori samaradorlikni ta'minlaydi. Ushbu yondashuv talabalar bilimini qisqa vaqt ichida chuqur o'zlashtirishga, ularning mustaqil fikrlash qobiliyatini rivojlantirishga hamda amaliy ko'nikmalarini shakllantirishga xizmat qiladi. Interaktiv metodlar, simulyatsion treninglar va raqamli texnologiyalarni qo'llash o'quv jarayonini yanada samarali va qiziqarli qiladi. Ayniqsa, tibbiy fanlarda nazariy bilimlarni amaliyot bilan uyg'unlashtirish imkoniyati kengayadi, bu esa kelajakdagi mutaxassislarning klinik kompetensiyalarini mustahkamlashda muhim ahamiyatga ega. Shu bilan birga, o'qitishni jadallashtirish texnologiyalarini samarali joriy etish uchun o'qituvchilarning malakasini oshirish, zamonaviy texnik vositalar bilan ta'minlash hamda metodik bazani boyitish zarur. Umuman olganda, mazkur texnologiyalarni tibbiy ta'lim tizimiga keng joriy etish ta'lim sifatini oshirish va raqobatbardosh kadrlar tayyorlashda muhim omil hisoblanadi.

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**YOG‘OCH QURILISH MATERIALLARINING
YONG‘INBARDOSHLILIGINI OSHIRIB, TERMITLARDAN
HIMOYALOVCHI OLIGOMER ANTIPIREN-ANTISEPTIKLAR SINTEZI
VA ULARNING QO‘LLANILISHI**

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Annotatsiya: Ushbu maqolada yog‘och qurilish materiallarining yong‘inga chidamliligini oshirish va termitlar ta‘siridan himoyalashda **oligomer antipiren-antiseptiklarning** ilmiy-amaliy ahamiyati yoritiladi. Yog‘och ekologik toza, yengil, issiqlikni yaxshi saqlaydigan va ishlov berishga qulay qurilish materiali bo‘lsa-da, uning asosiy kamchiligi yonuvchanligi, namlik ta‘sirida biologik yemirilishi va termitlar tomonidan shikastlanishidir. Maqolada fosfor, bor, azot, oltingugurt va rux saqlovchi organo-noorganik tarkiblarning yong‘inbardoshlik hamda antiseptik ta‘sir mexanizmlari tahlil qilinadi. O‘zbekiston tadqiqotchilari tomonidan olingan tajriba natijalariga tayangan holda, ishlov berilmagan yog‘och namunalarida massa yo‘qotilishi 67,3 foizga yetgani, Zn-4 markali oligomer antipiren-antiseptik bilan ishlov berilganda esa bu ko‘rsatkich 4,1 foizgacha kamaygani asoslanadi. Bu esa mahalliy xomashyolar asosida ishlab chiqiladigan ko‘p funksiyali himoya tarkiblarining import o‘rnini bosuvchi, iqtisodiy va texnologik jihatdan istiqbolli yo‘nalish ekanini ko‘rsatadi.

Kalit so‘zlar: Yog‘och materiallar, oligomer antipiren, antiseptik, termit, yong‘inbardoshlik, organo-noorganik gibrid tarkib, fosfor-bor tizimi, rux birikmalari, biologik barqarorlik, qurilish xavfsizligi.

KIRISH

Yog‘och qurilish materiallari insoniyat tomonidan eng qadimdan qo‘llanib kelinayotgan tabiiy konstruksion materiallardan biridir. Uning keng ishlatilishi zichligining nisbatan pastligi, mexanik ishlov berishga qulayligi, issiqlik izolyatsiyasi yuqoriligi va qayta tiklanuvchi xomashyo sifatida ekologik afzalliklarga ega ekani bilan bog‘liq. Shu bilan birga, yog‘ochning kimyoviy tarkibi, ya‘ni selluloza, gemisellyuloza va lignindan iborat organik tuzilmasi uni alanga, yuqori harorat, namlik, zamburug‘, bakteriya va termitlar uchun sezgir materialga aylantiradi. Yog‘och 250-300 daraja atrofida termik parchalanishni boshlaydi, 300 darajadan

yuqorida esa uchuvchan yonuvchi gazlar ajralishi kuchayadi. Agar bu jarayon boshqarilmasa, yog‘och konstruksiya qisqa vaqt ichida mexanik mustahkamligini yo‘qotadi va bino xavfsizligiga tahdid tug‘diradi.

O‘zbekiston sharoitida yog‘ochdan tayyorlangan tom yopma elementlari, eshik-romlar, pollar, tarixiy obidalardagi o‘ymakor ustunlar, dekorativ panellar, qishloq uylaridagi to‘sinlar va yordamchi qurilmalar ko‘p uchraydi. Bunday konstruksiyalar nafaqat yong‘in, balki termitlar xavfi bilan ham bog‘liq. Fanlar akademiyasi ma‘lumotlariga ko‘ra, respublikada termitlar aholi turar joylari, tarixiy-madaniy obidalar, ijtimoiy soha obyektlari va strategik inshootlardagi yog‘och materiallarga zarar yetkazmoqda. Monitoring natijalarida aholi turar joylarida 18 958 ta, madaniy-tarixiy obidalarda 46 ta, ijtimoiy soha obyektlarida 98 ta holat qayd etilgan. Termitlar bo‘yicha kuchli zararlangan hududlar qatorida Surxondaryo viloyati ham tilga olingan. Shu bois yog‘ochni himoyalash masalasi faqat kimyoviy texnologiya muammosi emas, balki qurilish xavfsizligi, madaniy merosni saqlash, favqulodda holatlarning oldini olish va mahalliy sanoatni rivojlantirish bilan bog‘liq kompleks vazifadir.

O‘zbekiston Respublikasi Vazirlar Mahkamasining yong‘in xavfsizligi qoidalarida obyektlarda yong‘in xavfsizligi talablariga rioya etish majburiy ekani, me‘yor asosida ishlov berilgan yog‘och konstruksiyalari himoyalash xususiyatini yo‘qotganda takroran ishlov berilishi lozimligi ko‘rsatilgan. Qurilish obyektlarida yonuvchi materiallarni saqlash va ulardan foydalanish ham alohida tartibga solinadi. Shu me‘yoriy asoslar yog‘och qurilish materiallarini oldindan himoyalash, ishlov sifatini nazorat qilish va ishlov muddatini hujjatlashtirish zarurligini ko‘rsatadi.

ASOSIY QISM

Oligomer antipiren-antiseptik deganda yog‘ochning yong‘inga chidamliligini oshirish, mikroorganizmlar va termitlar ta‘sirini kamaytirish uchun ishlab chiqiladigan, tarkibida bir nechta funksional faol guruhlarini saqlovchi nisbatan past polimerlanish darajasidagi himoyalovchi modda tushuniladi. Uning oddiy antipirendan farqi shundaki, u faqat alangani susaytirish bilan cheklanmaydi. U yog‘och tolalarining g‘ovak tuzilmasiga kirib boradi, gidroksil guruhlar bilan fizik-kimyoviy bog‘lanadi, termik parchalanish jarayonida yog‘och yuzasini qoplovchi zich qatlam hosil qiladi va biologik zararkunandalarga noqulay muhit yaratadi.

Bunday tarkiblarning shakllanishida bir nechta omillar muhim o‘rin tutadi. Kimyoviy omil sifatida fosfor, bor, azot, oltingugurt va metall ionlari ishtirokidagi sinergetik ta‘sir ajralib turadi. Fosforli birikmalar yog‘och tarkibidagi sellyuloza parchalanishida suv ajralishini kuchaytirib, yonuvchi gazlar hosil bo‘lishini kamaytiradi. Borat birikmalari yuqori haroratda shishasimon himoya qatlamiga yaqin struktura hosil qilib,

issiqlik o'tishini pasaytiradi. Azot saqllovchi komponentlar qizish jarayonida ammiak yoki boshqa inert gazlar ajratib, alanga zonasidagi kislorod ulushini nisbatan kamaytiradi. Rux va oltingugurt saqllovchi komponentlar esa antiseptik barqarorlikni oshirib, termitlar va mikrobiologik yemirilish omillariga qarshi qo'shimcha himoya beradi.

Texnologik omil ham muhim. Yog'ochning turi, namligi, zichligi, kapillyar-g'ovak tuzilmasi, eritmaning qovushqoqligi, pH muhiti va shimdirish sharoiti himoya samaradorligiga bevosita ta'sir qiladi. Agar modda faqat yuzada qolsa, u mexanik ishqalanish, yomg'ir, namlik yoki ultrabinafsha nurlanish ta'sirida tez yemiriladi. Agar tarkib yog'och ichki qatlamlariga yetarli darajada singdirilsa, himoya muddati uzayadi. Shu sababli oligomer tarkiblar sirtga surtiladigan bo'yoq sifatida emas, balki yog'och bilan o'zaro ta'sirlashadigan modifikator sifatida qaralishi kerak. Amaliyotda eshik-romlar, tom osti yog'och elementlari, qishloq uylaridagi to'sinlar, omborxona stellajlari, madaniy meros obyektlaridagi yog'och o'ymakorlik namunalari va qurilish-montaj jarayonida vaqtincha ishlatiladigan yog'och konstruksiyalar uchun bunday himoya ayniqsa ahamiyatli.

Sintez nuqtayi nazaridan oligomer antipiren-antiseptiklar organik va noorganik komponentlarning boshqariladigan o'zaro ta'siri asosida shakllanadi. Fosfat, borat, sulfid, karbamid, tiomochevina, urotropin, rux oksidi va akril sopolimerlari kabi komponentlar bir tizimda birlashtirilganda ko'p funksiyali struktura hosil bo'ladi. Bunda maqsad oddiy aralashma olish emas, balki yong'in vaqtida faol himoya beradigan, yog'ochga singadigan, namlikda barqaror va biologik yemirilishga chidamli modda yaratishdir. Bunday sintezlar faqat laboratoriya xavfsizligi, texnologik reglament va ekologik talablar asosida olib borilishi kerak, chunki ayrim reagentlar noto'g'ri qo'llanganda ishchi muhit va inson salomatligi uchun xavf tug'dirishi mumkin.

O'zbekiston uchun bu yo'nalishning yana bir muhim jihati mahalliy xomashyo bazasiga tayanishdir. Import antipirenlari qimmat bo'lishi, ularning tarkibi mahalliy iqlim sharoitiga to'liq mos kelmasligi yoki keng qo'llash uchun iqtisodiy jihatdan noqulay bo'lishi mumkin. Mahalliy sharoitda olinadigan organo-noorganik gibrid tarkiblar qurilish materiallari sanoati, yog'ochni qayta ishlash korxonalari, tarixiy obidalarni restavratsiya qilish tashkilotlari va favqulodda vaziyatlar profilaktikasi tizimi uchun amaliy ahamiyatga ega.

XULOSA

Yog'och qurilish materiallarining yong'inbardoshliligini oshirish va termitlardan himoyalash uchun oligomer antipiren-antiseptiklardan foydalanish O'zbekiston

sharoitida ilmiy hamda amaliy jihatdan asoslangan yoʻnalishdir. Bunday tarkiblar yogʻochning tabiiy afzalliklarini saqlagan holda uning asosiy zaif tomonlarini kamaytiradi. Fosfor, bor, azot, oltingugurt va rux saqlovchi organo-noorganik gibrid tizimlar sellyulozaning termik parchalanishini sekinlashtiradi, himoya koʻmir qatlamini shakllantiradi, alanga tarqalishini pasaytiradi va biologik yemirilishga qarshi barqarorlikni oshiradi. Oʻzbekiston tadqiqotlarida ishlov berilmagan yogʻochda massa yoʻqotilishi 67,3 foiz boʻlgani, Zn-4 tarkibli oligomer himoya vositasidan keyin esa 4,1 foizga tushgani bu yoʻnalishning samaradorligini koʻrsatadi. Termitlar boʻyicha respublikada qayd etilgan monitoring natijalari, ayniqsa Surxondaryo va Xorazm kabi hududlarda, yogʻoch konstruksiyalarni faqat qurilish materiali sifatida emas, balki doimiy himoya talab qiladigan muhandislik obyekti sifatida baholash zarurligini koʻrsatadi. Kelgusida bu yoʻnalishda mahalliy xomashyoga asoslangan, ekologik xavfsiz, kam yuviladigan, sertifikatlanadigan va sanoat sharoitida qoʻllashga tayyor antipiren-antiseptik tarkiblarni ishlab chiqish asosiy ilmiy-amaliy vazifa boʻlib qoladi.

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ДИФФЕРЕНЦИРОВАННЫЙ ПОДХОД К ВЫБОРУ ХИРУРГИЧЕСКОЙ ТАКТИКИ ПРИ ОСЛОЖНЁННОЙ ЖЕЛЧНОКАМЕННОЙ БОЛЕЗНИ В ЗАВИСИМОСТИ ОТ ТРИМЕСТРА БЕРЕМЕННОСТИ

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Введение. Осложнённые формы желчнокаменной болезни (ЖКБ) при беременности - острый холецистит, холедохолитиаз с механической желтухой (МЖ) и острый билиарный панкреатит - занимают ведущее место в структуре неотложной абдоминальной патологии у беременных и, по данным крупных эпидемиологических исследований, встречаются у 0,05–0,33% беременных. Несмотря на относительно невысокую частоту, каждое из перечисленных осложнений сопряжено со значительным риском для матери и плода: частота преждевременных родов при остром холецистите достигает 12–18%, а перфоративный холецистит с перитонитом ассоциирован с потерей плода в 15–22% случаев при несвоевременном лечении.

Принципиальная особенность данной категории пациенток состоит в необходимости принятия многоуровневого тактического решения, одновременно учитывающего: степень тяжести хирургического осложнения, срок беременности и объём матки, характер поражения желчевыводящих путей (изолированный холецистит vs холедохолитиаз), а также акушерскую ситуацию и состояние фетоплацентарного комплекса. В региональной хирургической практике единый стандартизированный алгоритм, систематизирующий все три уровня принятия решений, до настоящего времени отсутствовал, что приводило к высокой вариабельности тактики и неоптимальным результатам.

Цель исследования. Разработать трёхуровневый дифференцированный алгоритм хирургической тактики при осложнениях ЖКБ у беременных и оценить его клиническую эффективность в сравнении с исторической группой пациенток без применения алгоритма.

Материал и методы. Основную группу составили 87 беременных с осложнёнными формами ЖКБ, пролеченных на базе клиники СамГМУ в 2016–2023 гг. Нозологическая структура: острый калькулёзный холецистит - 58 (66,7%), холедохолитиаз с механической желтухой - 17 (19,5%), острый билиарный панкреатит - 8 (9,2%), перфоративный холецистит с перитонитом - 4 (4,6%). Распределение по триместрам: I - 14 (16,1%), II - 49 (56,3%), III - 24 (27,6%). Средний возраст пациенток - $28,4 \pm 5,7$ лет. Группой сравнения

(историческая контрольная группа) послужили 54 беременных с аналогичной патологией, оперированных в 2010–2015 гг. без систематизированного алгоритма.

В основной группе применялся разработанный трёхуровневый алгоритм. Первый уровень - стратификация тяжести по классификации Токийских рекомендаций TG18 (Grade I–III) с определением допустимых сроков и методов вмешательства. Второй уровень - выбор хирургического доступа: при сроке до 26 нед. методом выбора служила лапароскопическая холецистэктомия (ЛХЭ) с обязательным соблюдением технических требований (открытый доступ по Хасану, давление CO₂ 10–12 мм рт. ст., левое боковое положение 15–20°, мониторинг EtCO₂); при сроке свыше 26 нед. - индивидуальное решение с учётом объёма матки; при перитоните - лапаротомия как абсолютное показание. Третий уровень - тактика при холедохолитиазе и МЖ: при МРТ-верифицированном холедохолитиазе - двухэтапный подход (ЭРХПГ со сфинктеротомией → ЛХЭ через 48–72 ч); при МЖ свыше 72 часов с явлениями холангита - чрескожная чреспечёночная холангиостомия (ЧЧХС) в качестве первого этапа декомпрессии; при невозможности ЭРХПГ - интраоперационная холедохоскопия.

Диагностический комплекс включал УЗИ органов брюшной полости (все пациентки), МРТ-холангиографию при подозрении на холедохолитиаз (23 наблюдения), определение биохимических маркёров холестаза (билирубин, ЩФ, ГГТП), КТГ-мониторинг плода.

Результаты. Внедрение алгоритма позволило достоверно изменить структуру хирургической активности и улучшить исходы лечения. Доля ЛХЭ в основной группе возросла с 38,9% до 63,2% ($p = 0,003$), что свидетельствует о более широком и обоснованном применении малоинвазивного доступа. Частота послеоперационных осложнений снизилась с 27,8% до 12,6% ($p = 0,018$), средняя длительность госпитализации сократилась с $8,9 \pm 3,2$ до $5,1 \pm 2,4$ сут. ($p < 0,001$). Акушерские исходы в основной группе достоверно улучшились: частота преждевременных родов снизилась с 18,5% до 8,0% ($p = 0,042$), частота потери плода - с 7,4% до 2,3% ($p = 0,101$, тенденция). Частота угрозы прерывания беременности в периоперационном периоде уменьшилась с 33,3% до 16,1% ($p = 0,026$). При холедохолитиазе с МЖ ($n = 17$) двухэтапная тактика (ЭРХПГ+ЭПСТ → ЛХЭ) применена в 14 наблюдениях с успешной декомпрессией желчных путей в 85,7% случаев против 61,5% в контрольной группе ($p = 0,044$). ЧЧХС как первый этап выполнена у 2 пациенток с холангитом и длительной МЖ; в обоих

случаях достигнута стабилизация с последующей радикальной операцией. При остром билиарном панкреатите ($n = 8$) агрессивная инфузионная терапия в сочетании с ранней санацией желчных путей позволила избежать тяжёлых форм панкреонекроза во всех наблюдениях. Летальных исходов ни в основной, ни в контрольной группе не было.

Заключение. Применение трёхуровневого дифференцированного алгоритма хирургической тактики при осложнениях ЖКБ у беременных достоверно улучшает хирургические и акушерские исходы по сравнению с нестандартизированным подходом. Ключевыми элементами алгоритма являются: стратификация тяжести по TG18 как основа для принятия решений о сроке и методе вмешательства; приоритет ЛХЭ при соблюдении технических требований безопасности; двухэтапная тактика при холедохолитиазе с обязательным МРТ-этапом диагностики. Разработанный алгоритм обеспечивает системный мультидисциплинарный подход с участием хирурга, акушера-гинеколога и анестезиолога и рекомендован для внедрения в хирургических стационарах, оказывающих помощь данной категории пациенток.

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SYSTEMATIC DIFFERENTIATION OF DOMESTIC KNOWLEDGE AND EDUCATION OPPORTUNITIES BASED ON GENDER ROLES

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Abstract: this article explores the gendered nature of household education, focusing on how gender roles and expectations shape educational experiences and responsibilities within the home. It examines the ways in which caregiving, tutoring, and educational support are often divided along gender lines, reflecting broader societal norms and inequalities. The discussion highlights the implications of these dynamics for gender equity in education and family life, suggesting pathways for more balanced and inclusive educational practices at home.

Keywords: gender roles, household education, educational inequality, family dynamics, caregiving, gender equity

Household education—the informal teaching, learning support, and intellectual nurturing that occur within families—plays a critical role in shaping children's educational outcomes. However, this domain is deeply gendered, with societal norms dictating distinct roles for men and women. Understanding the gendered nature of household education is essential for addressing disparities in educational support and promoting equitable learning environments.

Research consistently shows that women disproportionately bear the responsibility for educational tasks within the household, including helping with homework, managing school-related activities, and fostering educational aspirations (Lareau, 2011). This division is rooted in traditional gender roles that associate women with caregiving and men with breadwinning, thereby relegating educational support to the feminine sphere. Men's involvement tends to be less frequent and often more peripheral or disciplinary rather than nurturing or instructional (Smith & Green, 2019). This disparity contributes to reinforcing gendered expectations not only for parents but also for children, perpetuating cycles of inequality.

The gendered nature of household education affects children's engagement with learning. Girls may receive more emotional and instructional support from mothers, while boys might experience more performance pressure or limited involvement from fathers (Connell, 2009). These patterns influence academic self-concept and motivation, potentially affecting long-term educational trajectories. Moreover, the

unequal distribution of educational labor can strain women's time and resources, impacting their well-being and economic opportunities (Bianchi et al., 2012). This dynamic underscores the intersection between gender, education, and social equity. Addressing the gendered nature of household education requires challenging traditional norms and promoting shared responsibility for educational support. Policies and programs that encourage paternal involvement, provide parental education, and support work-life balance can mitigate these disparities (OECD, 2015). Educational institutions can also play a role by engaging fathers and promoting inclusive family participation strategies. Ultimately, fostering gender equity at home enhances children's educational experiences and contributes to broader social justice. The gendered nature of household education reflects and reinforces societal inequalities, shaping educational outcomes and family dynamics. Recognizing and addressing these patterns is crucial for achieving gender equity in education and beyond. Collaborative efforts from families, educators, and policymakers are essential to create more balanced and supportive educational environments within the home.

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ORGANIZATIONAL AND ECONOMIC MECHANISMS FOR CREATING AN INNOVATIVE ECOSYSTEM OF TEXTILE INDUSTRY CLUSTERS

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Abstract. The paper analyzes cluster governance, public–private partnership, cooperation between enterprises and universities, innovation infrastructure, digital platforms, financing instruments, circular economy principles, responsible supply chains and institutional regulation. Special attention is paid to the relevance of these mechanisms for countries where textile clusters are becoming a tool of industrial modernization, including Uzbekistan.

Keywords: textile industry, textile cluster, innovation ecosystem, organizational mechanisms, economic mechanisms, sustainable development.

INTRODUCTION

The textile industry is one of the sectors in which cluster-based development can produce significant economic effects. Textile production is structurally connected with agriculture, fibre processing, spinning, weaving, dyeing, garment manufacturing, packaging, logistics, marketing and export operations. If these stages function separately, enterprises face high transaction costs, unstable raw material quality, weak technological coordination and limited innovation capacity. A cluster model reduces these barriers by creating a territorial and institutional environment in which enterprises, suppliers, service organizations, financial institutions, research centres and public authorities interact within a common value chain. Porter's classical concept explains clusters as geographically proximate groups of interconnected companies and institutions that increase productivity, stimulate innovation and create conditions for new business formation [1]. In the textile sector, this interpretation is especially relevant because competitiveness depends not only on the individual factory, but also on the quality of the entire production and innovation environment.

MAIN PART

The first organizational mechanism is cluster governance. In many textile-producing countries, enterprises operate within a fragmented institutional environment: farmers,

spinning mills, garment factories, logistics companies and exporters often make decisions independently, without a unified development strategy. Cluster governance should solve this problem by establishing a coordination body or cluster management organization. Its functions may include strategic planning, monitoring of investment projects, supplier coordination, export promotion, technological modernization, cooperation with universities and dispute resolution among participants. Effective governance does not mean excessive administrative control. It means transparent rules, contractual discipline, equal access to infrastructure and coordination of long-term interests. Without such governance, the cluster may turn into a vertical monopoly or a loose group of unrelated enterprises.

The second mechanism is the formation of stable value-chain integration. Textile clusters should connect the full cycle from raw material to finished product. In cotton-based economies, this includes cultivation, ginning, spinning, weaving, dyeing, sewing and export logistics. Uzbekistan's experience is illustrative because cotton-textile clusters were introduced as a mechanism for moving from raw cotton production toward deeper industrial processing. The World Bank noted that Uzbekistan's cluster model expanded rapidly after 2017 and became a major institutional instrument for agricultural modernization and textile value-chain integration [3]. The 2020 reform on the broad introduction of market principles in the cotton sector abolished state procurement prices and created conditions for more market-oriented relations between farmers and cluster organizers [4].

The third organizational mechanism is contractual coordination between cluster participants. Textile clusters often include actors with unequal economic power: large processing enterprises, small farmers, medium-sized sewing factories, service providers and exporters. If contractual relations are unclear, conflicts may arise over prices, payment periods, quality standards, input supply and delivery obligations. Therefore, a cluster ecosystem needs standardized contracts, transparent pricing formulas, arbitration procedures and digital monitoring of obligations. Contracts should protect both the cluster organizer and smaller participants. This is especially important in cotton-textile clusters, where farmers may become dependent on one buyer. An innovative ecosystem cannot develop under conditions of coercive dependence; it requires trust, predictability and mutual economic benefit.

The fourth mechanism is the creation of innovation infrastructure. Textile clusters need laboratories, design centres, testing facilities, certification services, pilot production lines, business incubators and technology transfer offices. These institutions help enterprises test new fibres, improve fabric quality, reduce chemical use, develop

technical textiles and comply with international standards. Innovation infrastructure is particularly important for small and medium-sized firms, which often cannot finance advanced research or laboratory testing independently. A shared innovation centre inside the cluster can reduce costs and accelerate modernization. In practical terms, such a centre may provide fabric testing, colour fastness analysis, eco-design consulting, digital pattern-making, product prototyping and training in international certification requirements.

The fifth mechanism is cooperation between industry, universities and vocational education institutions. Textile innovation is impossible without qualified engineers, technologists, designers, machine operators, environmental specialists, logistics managers and digital analysts. Educational institutions should not remain outside the cluster. They should participate in curriculum development, applied research, internships, dual education programmes and joint laboratories. A university connected with a textile cluster can study local technological problems: water-saving dyeing, fibre waste recycling, quality defects, energy efficiency and labour productivity. Enterprises receive scientific and methodological support, while students gain practical competence. Such cooperation transforms human capital into a direct factor of cluster competitiveness.

The fourteenth mechanism is cluster performance evaluation. An innovative ecosystem needs measurable indicators. These may include the share of processed raw material, export value added, productivity per worker, number of new products, number of certified enterprises, energy consumption per unit of output, water use, share of recycled materials, number of university-industry projects, training hours, patents, digitalization level and supplier integration. Without such indicators, cluster policy becomes descriptive and difficult to evaluate. Performance monitoring should be public, regular and connected with policy decisions. Enterprises receiving support should demonstrate measurable progress.

CONCLUSION

The creation of an innovative ecosystem of textile industry clusters requires a complex combination of organizational and economic mechanisms. Organizational mechanisms include cluster governance, value-chain coordination, transparent contracts, innovation infrastructure, university-industry cooperation, digital platforms, responsible supply-chain management and institutional regulation. Economic mechanisms include preferential financing, innovation funds, tax incentives, export support, supplier development, performance-based subsidies and investment in shared infrastructure.

These mechanisms should not function separately. Their effectiveness appears only when they are integrated into a coherent cluster development strategy.

The textile cluster should be understood not as a simple administrative association of enterprises, but as an ecosystem of production, knowledge, finance, technology, labour and markets. Its innovative capacity depends on the ability to connect farmers, manufacturers, research institutions, designers, logistics providers, banks and public agencies around common economic goals. In this sense, the cluster becomes a platform for technological modernization, sustainable production and export competitiveness.

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THE CONCEPT OF MIND IN LANGUAGE AND THOUGHT: A COMPARATIVE STUDY OF ENGLISH AND UZBEK PERSPECTIVES

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ABSTRACT

This article presents a comprehensive comparative analysis of the concept of mind as reflected in language and thought, with particular focus on English and Uzbek perspectives. The study explores how linguistic structures and cultural frameworks influence the conceptualization of cognitive processes, including reasoning, memory, consciousness, and emotional experience. The concept of mind is examined as a multidimensional construct that integrates both abstract and context-dependent elements, shaped by socio-cultural and linguistic environments. The analysis highlights that in English, the term “mind” functions as a broad and flexible category encompassing various cognitive and emotional processes, often expressed through metaphorical extensions. In contrast, the Uzbek language demonstrates a more differentiated approach by employing multiple lexical units such as “ong,” “aql,” and “fikr,” each representing specific aspects of mental activity.

Keywords: concept of mind, language and thought, linguistic relativity, cognitive processes, English and Uzbek comparison, conceptualization, intercultural communication, cognitive linguistics

Annotatsiya

Ushbu maqolada ong tushunchasining til va tafakkurdagi ifodasi ingliz va o‘zbek tillari misolida qiyosiy tahlil qilinadi. Tadqiqotda til birliklari va madaniy omillar insonning fikrlash jarayonlarini qanday shakllantirishi, xususan, ong, xotira, tafakkur va hissiy holatlarning ifodalanishi o‘rganiladi. Ong tushunchasi ko‘p qirrali hodisa sifatida talqin qilinib, u abstrakt va kontekstga bog‘liq elementlarning o‘zaro uyg‘unligida shakllanishi ko‘rsatib beriladi. Maqolada ingliz tilida “mind” tushunchasi keng va umumlashtirilgan kategoriya sifatida qo‘llanilishi, turli kognitiv va hissiy jarayonlarni qamrab olishi tahlil qilinadi. O‘zbek tilida esa “ong”, “aql”, “fikr” kabi turli tushunchalar orqali ongning alohida jihatlari ifodalanishi ko‘rsatib beriladi.

Kalit so‘zlar: ong tushunchasi, til va tafakkur, til nisbiyligi, kognitiv jarayonlar, ingliz va o‘zbek tili, qiyosiy tahlil, madaniyatlararo muloqot, kognitiv lingvistika

Аннотация

В данной статье представлен сравнительный анализ концепта «разум» (mind) в языке и мышлении на материале английского и узбекского языков. Исследование направлено на выявление того, как языковые структуры и культурные особенности влияют на формирование и выражение когнитивных процессов, таких как мышление, память, сознание и эмоциональное восприятие. Концепт разума рассматривается как многомерное явление, объединяющее абстрактные и контекстуальные компоненты. Анализ показывает, что в английском языке термин “mind” используется как обобщающая категория, охватывающая широкий спектр когнитивных и эмоциональных процессов, часто реализуемых через метафорические конструкции. В узбекском языке, напротив, наблюдается более дифференцированное представление, выраженное через такие понятия, как “ong”, “aql” и “fikr”, что отражает более детализированную структуру когнитивного восприятия.

Ключевые слова: концепт разума, язык и мышление, лингвистическая относительность, когнитивные процессы, английский и узбекский языки, сравнительный анализ, межкультурная коммуникация, когнитивная лингвистика

The concept of mind has long occupied a central position in philosophical inquiry, cognitive science, and linguistic studies, serving as a bridge between language, thought, and human experience. The intricate relationship between how individuals conceptualize the mind and how they express it linguistically reveals significant insights into cognitive processes shaped by cultural and social contexts. In particular, a comparative examination of English and Uzbek perspectives on the concept of mind offers a valuable opportunity to explore how different linguistic systems encode, structure, and transmit cognitive meanings. Such an analysis not only enhances our understanding of language–thought interaction but also contributes to broader discussions on the universality and variability of human cognition. At a fundamental level, the concept of mind refers to the set of cognitive faculties that enable perception, reasoning, memory, emotion, and consciousness. However, this seemingly universal definition masks substantial variation in how different cultures and languages interpret and represent mental phenomena. In English, the term “mind” functions as a highly flexible and abstract construct, encompassing intellectual activity, emotional states, and even aspects of personal identity. Expressions such as “peace of mind,” “make up one’s mind,” or “have something in mind” demonstrate the extensive semantic range

of the term, reflecting a conceptualization of the mind as both a container and a dynamic process. These metaphorical extensions suggest that English speakers often perceive the mind as an entity capable of holding, processing, and transforming information. In contrast, the Uzbek linguistic and cultural framework presents a more differentiated conceptualization of mental and emotional processes. Rather than relying on a single overarching term equivalent to “mind,” Uzbek employs a variety of lexical items such as “ong,” “aql,” “fikr,” and “xotira,” each capturing distinct aspects of cognitive and psychological functioning. The term “ong” is frequently associated with consciousness and awareness, while “aql” emphasizes rationality and intellectual capability. “Fikr” relates to thought or opinion, and “xotira” denotes memory. This lexical diversity indicates a more segmented conceptual structure in which different components of the mind are explicitly distinguished rather than subsumed under a single category. Such distinctions reflect a culturally embedded understanding of cognition that prioritizes functional specificity over conceptual generalization. The divergence between English and Uzbek conceptualizations of the mind can be further examined through the lens of linguistic relativity, which posits that language influences thought patterns and cognitive processes. From this perspective, the availability of specific linguistic categories shapes how individuals perceive and organize their mental experiences. English speakers, accustomed to using a single term to describe a wide range of cognitive phenomena, may develop a more integrated and holistic view of the mind. Conversely, Uzbek speakers, who differentiate between various mental faculties, may exhibit a more analytical approach, distinguishing between reasoning, awareness, and memory as separate yet interconnected processes. While such differences should not be overstated, they highlight the role of language in structuring cognitive representations. Metaphorical language provides another important dimension for analyzing the concept of mind across languages. Cognitive linguistics suggests that abstract concepts are often understood through metaphorical mappings grounded in physical experience. In English, the mind is frequently conceptualized as a container (“fill your mind,” “empty your mind”) or as a machine (“my mind is working,” “process information”). These metaphors reflect a mechanistic and spatial understanding of cognition, aligning with broader cultural tendencies toward scientific and technological models of thought. In Uzbek, metaphorical expressions related to the mind often draw on moral, emotional, and social dimensions. For instance, references to “qalb” (heart) or “ko‘ngil” (inner feeling) frequently overlap with cognitive expressions, indicating a closer integration of thought and emotion. This suggests that Uzbek conceptualizations of the mind may be less compartmentalized and more

holistic in terms of emotional and intellectual unity. The interaction between language and thought is also evident in communicative practices and discourse patterns. English discourse tends to emphasize clarity, precision, and explicit expression of ideas, reflecting a cognitive style that values analytical reasoning and structured argumentation. The concept of mind, in this context, is often associated with logical thinking and individual decision-making. In Uzbek discourse, communication is more context-dependent and relational, with greater emphasis on social harmony, indirect expression, and shared understanding. The conceptualization of the mind within this framework is therefore closely tied to interpersonal dynamics and cultural norms. These differences illustrate how linguistic and cultural factors jointly shape not only what is thought but also how it is communicated. Another significant aspect of the comparative analysis involves the role of education and socialization in shaping conceptual understandings of the mind. Educational systems play a crucial role in reinforcing particular cognitive models through language use, teaching methods, and curricular content. In English-speaking contexts, education often prioritizes critical thinking, debate, and individual expression, thereby reinforcing a concept of the mind as an autonomous and rational entity. In Uzbek contexts, while analytical skills are also valued, there is a stronger emphasis on moral development, respect for tradition, and collective values. This educational orientation influences how individuals conceptualize mental processes, integrating cognitive and ethical dimensions in ways that differ from Western models. Despite these differences, it is important to recognize the underlying commonalities that exist between English and Uzbek conceptualizations of the mind. Both linguistic systems acknowledge the complexity of human cognition and provide mechanisms for expressing abstract thought, reasoning, and introspection. Moreover, globalization and increased intercultural interaction have led to a degree of convergence in conceptual frameworks, particularly in academic and professional domains. Borrowed terminology, translated concepts, and shared scientific discourse contribute to a more unified understanding of cognitive phenomena, even as cultural distinctions persist.

The implications of this comparative study extend beyond theoretical considerations, offering practical insights for fields such as translation studies, language education, and intercultural communication. Understanding how different languages conceptualize the mind can enhance the accuracy and nuance of translation, particularly when dealing with abstract or culturally specific concepts. In language education, awareness of conceptual differences can inform teaching strategies that bridge cognitive and linguistic gaps, facilitating more effective learning. In

intercultural communication, recognizing diverse cognitive models can promote empathy, reduce misunderstandings, and support more meaningful interaction across cultural boundaries. Furthermore, this analysis contributes to ongoing debates in cognitive science regarding the extent to which thought is shaped by language. While some scholars argue for the universality of cognitive structures, others emphasize the influence of linguistic and cultural variation. The comparison between English and Uzbek perspectives on the concept of mind suggests that both positions hold merit. There are indeed shared cognitive foundations that enable mutual understanding, yet the specific ways in which concepts are structured and expressed are undeniably influenced by language and culture. This dual perspective underscores the need for an integrative approach that acknowledges both universal and culture-specific aspects of cognition.

In conclusion, the concept of mind serves as a rich and multifaceted domain for exploring the relationship between language and thought. The comparative analysis of English and Uzbek perspectives reveals both significant differences and meaningful similarities in how cognitive processes are conceptualized and expressed. English tends to favor a unified, abstract, and often mechanistic view of the mind, while Uzbek offers a more differentiated and contextually grounded representation that integrates cognitive, emotional, and social dimensions. These variations reflect broader cultural patterns and highlight the role of language as both a mirror and a shaper of human cognition. Ultimately, understanding these differences enhances our appreciation of the diversity of human thought and underscores the importance of linguistic and cultural awareness in an increasingly interconnected world.

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**SCIENTIFIC AND THEORETICAL FOUNDATIONS FOR IMPROVING
THE ORGANIZATIONAL AND ECONOMIC MECHANISMS OF
RECREATIONAL TOURISM DEVELOPMENT IN UZBEKISTAN**

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Аннотация: В данной статье рассматриваются перспективы туризма в мировой экономике, его место в социально-экономическом развитии, практические аспекты его значения и развития, а также необходимость научного исследования его теоретических и методологических основ. В своих исследованиях мировые ученые акцентируют внимание на выяснении сущности понятия «рекреационный туризм».

Ключевые слова: мировая экономика, перспективы туризма, социально-экономическое развитие, рекреационный туризм, К. Майкл Холл и Стивен Дж. Пейдж, «География туризма и отдыха», теория TALC Батлера, Национальная ассоциация отдыха и парков (NRPA), международные парковые организации, ресурсы ЮНЕСКО/ООН и статистические описания.

Abstract: This article discusses the prospects of tourism in the world economy, its place in socio-economic development, practical aspects of its importance and development, and the need to scientifically research its theoretical and methodological foundations. In their research, world scientists focus on clarifying the essence of the concept of "recreational tourism".

Key words: World economy, tourism perspective, socio-economic development, recreational tourism, C. Michael Hall & Stephen J. Page, "The Geography of Tourism and Recreation", Butler's TALC theory, National Recreation and Park Association (NRPA), international park organizations, UNESCO / UN resources and statistical descriptions.

The prospect of tourism in the world economy, its role in socio-economic development, practical aspects of its importance and development, the need to scientifically research its theoretical and methodological foundations is increasing. In their research, world scientists have focused on elucidating the essence of the concept of "recreational tourism". Today, there are no specific concepts, rules and definitions

related to the field of tourism. Just as economic laws and definitions change with time and convenience to meet consumer demand, definitions of tourism also change with time and economic processes. According to Cohen, a well-known scientist, the more researches there are in the field of tourism, the more definitions will be given. In my opinion, a clear explanation and review of concepts related to the current tourism industry depends on the correct analysis of the nature of all socio-economic relations occurring in the market by world scientists or local scientists.

In the scientific literature, the concept of recreational tourism is often interpreted as a tourism activity aimed at recreation, health restoration and relaxation of the population. However, this approach does not fully reveal the economic content of recreational tourism. Because recreational tourism is a complex economic activity that includes service production, resource use, infrastructure formation, investment attraction and management processes. From this point of view, it is becoming a scientific necessity to justify the development of recreational tourism as a separate economic system.

Definitions of recreational tourism can be divided into several groups. Definitions given by experts in this field are more specific, conceptually oriented definitions that aim to reveal the complex internal content and essence of recreational tourism, which reflects various characteristics and unique relationships. We can also divide recreational tourism into groups that cover specific economic, social, political and legal aspects. When we compare the definitions of recreational tourism, we can see that they are created by linking them to the names of recreational and other types of tourism, or vice versa.

For example, United Nations Tourism Organization (UN Tourism) tourism as a general concept "out of the usual environment of people, from a year defines it as the activity of traveling and staying for a short period of time; recreational and (leisure) trips within this general framework include recreation, health, sports and it is done for other personal purposes. Official 1 of UN Tourism terminology and statistical descriptions to help you understand tourism vs. recreation difference international 2 is the basis for showing in the standards.. "has a legal approach to the definition made simple and understandable.

As another example, C. Michael Hall & Stephen J. Page – "The Geography of Tourism and Recreation" Hall and Page analyze recreation and recreational tourism from a spatial-geographical point of view and emphasize that recreation (leisure/recreation) is related to everyday life and tourism is manifested more by "going outside the residence". They recommend studying recreational tourism as a

combination of place, environment and services — that is, it is the direct basis for the relationship “natural-resource + infrastructure + organizational factors” presented in the theoretical definition of research. A legal approach to the definition and taking into account the activity in the country in question either as a form of touristic travel or as a lever.

R.Butler — Tourism Area Life Cycle (TALC) model. Butler's TALC theory helps to understand the development of destinations step by step (exploration → involvement → development → consolidation → stagnation/decline/ rejuvenation). For recreational areas, this model is useful in analyzing how sustainable resource use is and how flexible infrastructure/management mechanisms are. This model adds a perspective of regional dynamics to the systems approach to research. So, recreational tourism means infrastructure and proper management mechanism.

Field researchers - Mieczkowski and contemporary studies (comparative literature) Mieczkowski et al emphasize the distinction between tourism and recreation, noting that recreation is often a local and ongoing activity, while tourism usually requires "getting out of the home." Contemporary articles (eg Xie 2022) provide scholarly analysis of how the terms recreation and tourism are differentiated in park and land studies—helpful in strengthening the theoretical base for this study.

In our search, the National Recreation and Park Association (NRPA) and international park organizations

Organizations such as the NRPA define recreation as "the physical and social activities that people engage in during their free time" and provide practical recommendations for parks and recreation facilities. These resources are needed to provide recreational services in the context of community health and infrastructure.

UNESCO / UN resources and statistical descriptions during comparisons

Documents from UNESCO and UN agencies (e.g. documents distinguishing between tourism and recreation) support the socio-cultural and sustainability context of the study. Referring to these, it is possible to further justify the social impact of recreation tourism and its connection with sustainable development.

The role of the state in the development of tourism, management of the quality of tourist services, improvement of recreational services, strengthening of cooperation between regions and organizations, assessment of the potential of domestic tourism and the use of effective economic mechanisms for its development are the main directions for scientific and practical research in this regard. In the framework of modernization of the economy, equipping leading industries with high technologies, implementation of innovative development strategies in the Republic of Uzbekistan,

special attention is paid to the tourism sector. The goal of increasing the number of tourists in 2026 by promoting tourism potential is set in state programs, and in order to ensure efficiency in this direction, there is a need to further improve the organizational and economic mechanisms of recreational tourism.

Decision of the President of the Republic of Uzbekistan No. PF-9 of January 12, 2024 “On measures to sharply increase the flow of foreign tourists to the Republic and further acceleration of domestic tourism”, No. 254 of April 28, 2021 of the Cabinet of Ministers of the Republic of Uzbekistan on measures to organize the activities of the tourist-recreational zone “Zomin”, Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 368 of June 14, 2021 “On measures to develop water recreation and beach tourism in the Republic of Uzbekistan”, No. PF-5611 of January 5, 2019 “On additional measures for the rapid development of tourism in the Republic of Uzbekistan”, 2018 No. PQ-3509 dated February 6 “On measures to develop inbound tourism”, No. PF-5326 dated February 3, 2018 “On additional organizational measures to create favorable conditions for the development of the tourism potential of the Republic of Uzbekistan”, No. PF-5273 dated December 5, 2017 “Churvoq” tourist and recreational This thesis research serves to a certain extent in the implementation of the tasks defined in the decree and decisions of December 2, 2016 PF-4861 “On measures to ensure the rapid development of the tourism sector of the Republic of Uzbekistan” on the establishment of the tourism sector and other regulatory legal documents related to this field.

Researcher N. Shaymanova - In the study of the use of Smart technologies in the development of recreational tourism, she covers the issues of developing recreational tourism through modern technologies in the conditions of Uzbekistan. It contains recommendations for managing tourism services and supporting infrastructure. Researcher F. Ismoilova - Uzbekistan's recreational services and their role in tourism.

Therefore, the development of recreational tourism in Uzbekistan, the formation of its sustainable strategic directions, combining the opportunities of recreational tourism with commercial and social benefits, as well as the analysis of economic efficiency based on forecasts, today require the development of a scientific, economic and practical solution.

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LEGAL PROBLEMS AND PRACTICE OF ONE-SIDED TERMINATION OF A PROFESSIONAL SPORTS COACHING CONTRACT BY A COACH

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INTRODUCTION

In modern professional sports, the relationship between a coach and a sports club (or federation) possesses a complex legal nature and is governed by both labour law and specific norms of sports law. In practice, the unilateral termination of a contract by a club (for example, due to unsatisfactory sporting results) is a common occurrence and has been widely examined. However, the unilateral termination of a contract by a coach has been comparatively under-researched, despite constituting a pressing legal issue that may lead to highly contentious consequences in practice.

The unilateral termination of a sports contract by a coach typically occurs for two main reasons: first, within the framework of “just cause” - for instance, in cases of systematic non-payment of salary by the club or unlawful interference with the coach's professional activities; and second, “without just cause” - such as when the coach receives a more favorable financial offer. Although national labour laws generally guarantee an employee's right to terminate an employment contract at their own discretion, in sports law and in the jurisprudence of the Court of Arbitration for Sport, the principle of contractual stability is considered paramount. This creates a legal conflict between national labour codes and international sports law.

The purpose of this thesis is to analyse the legal grounds for the unilateral termination of a sports contract by a coach, the criteria for recognizing such termination as lawful (with just cause), and the legal and financial consequences arising from such actions for the parties involved, including obligations to pay compensation.

METHODS

The following methods were employed in this research:

- (1) comparative legal analysis - to compare approaches to the legal qualification of coaching contracts across different international legal systems;
- (2) doctrinal analysis - to interpret the existing regulatory and legal framework;
- (3) systematic analysis - to determine the structural elements of unilateral termination of coaching contracts and their correlation with labour-law and civil-law frameworks.

RESULTS

As a result of analysing national labour legislation, international sports law norms, and the jurisprudence of the Court of Arbitration for Sport within the framework of this research, the following key scientific and practical findings were obtained regarding the unilateral termination of sports contracts by coaches.

The study demonstrated that domestic labour legislation of various states (including provisions governing the termination of employment contracts at the initiative of the employee) generally guarantees the employee's (coach's) right to resign at their own discretion, subject to the applicable notice period. This rule is based on the principle prohibiting forced labour. However, within the system of international sports regulators such as FIFA and UEFA, the principle of contractual stability (*pacta sunt servanda*) prevails. Consequently, a legal conflict arises: although a coach may lawfully terminate a contract under domestic law, from the perspective of sports law, such conduct may be regarded as a breach of contractual stability without just cause, potentially resulting in severe financial or sporting sanctions.

The analysis of Court of Arbitration for Sport jurisprudence and precedents made it possible to identify circumstances that may constitute "just cause" for the premature unilateral termination of a contract by a coach. According to the findings of this research, the following circumstances are generally recognized by courts and arbitral tribunals as valid grounds in favour of the coach.

First, contract termination may be justified due to the non-fulfilment of financial obligations. This includes situations where a club systematically fails to pay or unjustifiably delays the payment of the coach's salary and bonuses (typically for a period of two months or longer). In such cases, the coach is generally required to provide the club with prior written notice (notice of default).

As a contrasting practical example, reference may be made to the well-known case of Blaž Slišković v. Qingdao Zhongneng F.C., examined by the Court of Arbitration for Sport. In that dispute, the coach argued that he had terminated the contract with just cause due to a 17-day delay in salary payment¹. However, Court of Arbitration for Sport did not recognise this as just cause and emphasized that a short-term delay in fulfilling contractual obligations could not justify breaching the principle of contractual stability.

Second, contract termination may also be justified where club management (such as the president or board of directors) unlawfully interferes with the coach's core sporting authority. For example, mandatory instructions regarding match tactics, squad

¹ Football Legal: [Qingdao Zhongneng Football Club v. Blaz Sliskovic - CAS 2015/A/4158](#)

selection, or decisions on which athletes must participate in competitions have been recognised by Court of Arbitration for Sport as sufficient grounds for contract termination.

Finally, excluding a coach from the team's primary training activities, unjustifiably dismissing the coach's assistants, or restricting access to club infrastructure may also constitute grounds for termination under the doctrine of mobbing or constructive dismissal.

The findings indicate that if a coach terminates a contract on their own initiative, in the absence of any contractual breach, solely for the purpose of continuing their career at another (more prestigious or financially stronger) club, legal liability may arise. In such circumstances, the coach (and, in most cases, the new club as a jointly and severally liable party) is required to pay compensation to the former club. The amount of compensation may be predetermined in the contract through a buy-out clause.

A clear practical example is the 2021 departure of Julian Nagelsmann from RB Leipzig, where he terminated his contract in order to join the more prestigious FC Bayern Munich. As the contract was terminated without just cause, his new club, FC Bayern Munich, assumed joint liability and paid the contractually agreed compensation of €25 million to RB Leipzig².

Where no compensation clause is stipulated in the contract, arbitral tribunals generally determine the amount of compensation based on the principle of proportionality, taking into account the coach's remaining salary under the contract, the expenses incurred by the club in hiring a replacement coach of a similar level, and the actual sporting damage suffered by the club.

Unlike players (particularly football players), coaches who terminate contracts without just cause are less frequently subjected to strict sporting sanctions, such as bans from engaging in sporting activities for a specific period (for example, four to six months). The primary focus is not on punishment, but rather on restoring the economic interests of the injured club through financial compensation.

DISCUSSION

Based on the findings of this study, the following conclusions and recommendations are proposed regarding the legal and practical aspects of contract termination initiated by coaches in professional sports:

The termination of a contract by a head coach often affects the employment of their assistant staff as well. In practice, the signing of separate contracts with each member of the coaching staff frequently creates legal uncertainty. If a head coach terminates a

² The Guardian: [Julian Nagelsmann leaving RB Leipzig to become Bayern Munich manager](#)

contract with just cause, their assistants should also be granted the automatic right to terminate their contracts, which would contribute to greater regulatory certainty and staffing stability within sports organizations.

The analysis also demonstrates that the principle of proportionality is often violated when determining compensation clauses in sports contracts. Excessively high financial penalties imposed on coaches may unjustifiably restrict labour freedom. Therefore, it would be appropriate to introduce legal limitations within national legislation and internal sports regulations to ensure that compensation does not exceed a certain percentage of the coach's annual salary (for example, 50–100%). This would help maintain economic balance between clubs and coaches.

When disputes arise between a coach and a club, immediately referring the matter to Court of Arbitration for Sport or ordinary courts is often inefficient in terms of both time and financial resources. National federations should establish a specialized “Coach–Club Dispute Resolution Chamber” and create mechanisms to ensure the mandatory enforcement of its decisions. This would strengthen the social and legal protection of coaches.

CONCLUSION

In conclusion, the unilateral termination of a sports contract by a coach is not merely an issue of labour law, but rather a complex legal process that must take into account the specific nature of sport (*lex sportiva*). The research demonstrates that:

1. The scope of just cause should be expanded to explicitly include not only financial indebtedness, but also violations of a coach's professional autonomy.
2. A balance between contractual stability and labour freedom can only be ensured through a fair compensation system.
3. Integrating international standards - particularly the approaches of FIFA and Court of Arbitration for Sport into the sports law practice of Uzbekistan would help prevent future violations of coaches' rights and enhance the reputation of the national sports industry.

THE DEVELOPMENT AND LEXICAL LAYERS OF ANTHROPONYMS IN ENGLISH AND UZBEK LANGUAGES

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Abstract. The lexical stratification and historical evolution of anthroponyms in Uzbek and English are examined in this thesis. As an important part of onomastics, anthroponyms show how language, culture, and society have changed throughout time. The study looks at how personal name systems have changed over time in both languages, emphasizing the impact of religious beliefs, historical occurrences, and cross-cultural interactions. The lexical layers—native, borrowed, and hybrid elements—that make up anthroponyms are given particular consideration. The comparative study highlights the significance of personal names as indicators of identity and cultural heritage by revealing both parallels and discrepancies in their creation and usage in Uzbek and English.

Keywords: Anthroponyms, onomastics, lexical layers, English language, Uzbek language, naming system, etymology, cultural influence.

Introduction. They express a people's historical, cultural, and social identity, anthroponyms, or personal names, constitute a crucial field of linguistic study. Anthroponym analysis is a branch of onomastics that offers important insights into language development and cross-cultural communication.

Despite coming from separate language families, the English and Uzbek languages exhibit similar but dissimilar patterns in the creation and development of personal names. While Uzbek anthroponyms represent Turkic origins coupled with substantial Arabic, Persian, and later Russian influences, English anthroponyms have been formed by Germanic foundations, Norman influence, and Christian traditions. These names often have clear meanings that relate to moral or emotional traits, physical traits, or social goals. Names like Dilshod ("happy-hearted"), Botir ("brave"), Ozoda ("pure"), and Rustam ("heroic") are examples of names that show good qualities or traits. Many Uzbek names, such as Muhammad or Vali ("saint"), have religious meanings and come from Islamic traditions. These names are important to the culture and religion. One of the things that makes Uzbek anthroponyms unique is their morphological productivity. People often use suffixes like -bek, -jon, and -oy to change names and show love, respect, or devotion. For example, Gulnora-oy means warmth

and closeness, while Alisherbek means respect. The Uzbek language's vocabulary is always changing and growing, as shown by the constant creation of new words. The adaptability of suffixation in Uzbek facilitates the ongoing creation of new names, illustrating a dynamic and evolving lexical system. Old English, Latin, Hebrew, Greek, and Norman sources are the main sources of English anthroponyms, on the other hand. Many names, like Edward ("guardian of wealth"), Margaret ("pearl"), George ("farmer"), and Lucy ("light"), used to have clear meanings, but now they have semantic fossilization, which means that people don't understand what they mean anymore. Instead of focusing on lexical clarity, English naming rules usually put phonetic beauty, historical continuity, and family tradition first. English anthroponyms exhibit a relatively stable morphological structure, exhibiting minimal productive derivation or affixation. There are smaller versions, like Johnny or Maggie, but they are more phonetic than morphological changes. In modern English name standards, stylistic diversity is more important than structural originality. The goal of this paper is to look at how anthroponyms have changed in both languages and to find their lexical layers. The research demonstrates how historical and cultural factors influence the structure and semantics of personal names through a comparative analysis of these systems.

There are many historical phases in the development of English anthroponyms. Germanic names predominated throughout the Old English era, and they frequently included compound words with distinct meanings. Many French names joined the English naming system after the Norman Conquest, drastically changing its structure. Surnames that were derived from occupations (Smith), geographical regions (Hill), or patronymics (Johnson) were common throughout the Middle English era. English anthroponyms have become more varied in the contemporary age as a result of media, literature, and globalization. The origins of Uzbek anthroponyms may be found in ancient Turkic customs, when names were frequently connected to strength, nature, and good traits. Arabic and Persian names, which represent religious and cultural values, became prevalent as Islam spread. Russian naming customs had an impact on Uzbek anthroponyms throughout the Soviet era, especially when it came to the creation of surnames with suffixes like -ov and -ev. Traditional Uzbek naming customs have resurfaced since independence.

Conclusion. The comparison of Uzbek and English anthroponyms shows that personal names are cultural products influenced by social change, religion, and history in addition to being linguistic units. Uzbek anthroponyms maintain a strong connection to ethnic identity and religious traditions, whereas English anthroponyms show a

history of invasion and language mingling. Lexical layer research demonstrates the intricacy of naming systems and their capacity for long-term adaptation. By highlighting the significance of anthroponyms in representing human identity, an understanding of these processes advances more general language and cultural studies.

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HARBIY XIZMATCHILAR VA HARBIY JAMOANI O'RGANISHNING PSIXOLOGIK NAZARIY ASOSLARI

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Annotatsiya: Mazkur maqolada harbiy xizmatchilar va harbiy jamoani o'rganishning psixologik nazariy asoslari tizimli tarzda tahlil qilinadi. Tadqiqotda harbiy psixologiyaning zamonaviy yondashuvlari, shaxs va jamoa o'rtasidagi psixologik munosabatlar, liderlik, motivatsiya, stressga chidamlilik hamda psixologik moslashuv jarayonlari chuqur o'rganiladi. Shuningdek, harbiy muhitda individual va ijtimoiy-psixologik omillarning o'zaro ta'siri asoslab beriladi. Maqolada psixologik tadqiqot metodlari orqali harbiy jamoaning samaradorligini oshirishga xizmat qiluvchi nazariy model va konseptual yondashuvlar ilgari suriladi. Olingan natijalar harbiy xizmatchilarning psixologik tayyorgarligini mustahkamlash va jamoaviy faoliyatni optimallashtirishda muhim ahamiyat kasb etadi.

Kalit so'zlar: Harbiy psixologiya, harbiy jamoa, psixologik moslashuv, liderlik, motivatsiya, stressga chidamlilik, ijtimoiy-psixologik omillar, shaxslararo munosabatlar, psixologik tayyorgarlik, jamoa samaradorligi

Abstract: This article examines the psychological theoretical foundations of studying military personnel and military teams from a systematic perspective. The research explores modern approaches in military psychology, focusing on the psychological interactions between individuals and groups, leadership, motivation, stress resilience, and adaptation processes. Special attention is given to the interaction of individual and socio-psychological factors within the military environment. The study proposes theoretical models and conceptual frameworks aimed at improving the effectiveness of military teams through psychological research methods. The findings contribute to strengthening the psychological preparedness of military personnel and optimizing collective performance.

Keywords: Military psychology, military personnel, military team, psychological adaptation, leadership, motivation, stress resilience, socio-psychological factors, interpersonal relations, psychological readiness

Аннотация: В данной статье рассматриваются психологические теоретические основы изучения военнослужащих и воинских коллективов. В исследовании анализируются современные подходы военной психологии, включая психологические взаимоотношения между личностью и группой, лидерство,

мотивацию, стрессоустойчивость и процессы адаптации. Особое внимание уделяется взаимодействию индивидуальных и социально-психологических факторов в военной среде. В работе предложены теоретические модели и концептуальные подходы, направленные на повышение эффективности воинских коллективов с использованием психологических методов исследования. Полученные результаты имеют важное значение для укрепления психологической готовности военнослужащих и оптимизации коллективной деятельности.

Ключевые слова: Военная психология, военнослужащие, воинский коллектив, психологическая адаптация, лидерство, мотивация, стрессоустойчивость, социально-психологические факторы, межличностные отношения, психологическая готовность

KIRISH

Zamonaviy globallashuv jarayonlari, geosiyosiy muvozanatning o'zgarishi hamda xavfsizlik tahdidlarining murakkablashuvi sharoitida harbiy tizimlarning samaradorligi faqat texnik va strategik imkoniyatlar bilan emas, balki inson omili bilan ham bevosita belgilanadi. Shu nuqtai nazardan, harbiy xizmatchilar va harbiy jamoaning psixologik xususiyatlarini chuqur o'rganish harbiy faoliyatning muhim ilmiy yo'nalishlaridan biri sifatida namoyon bo'lmoqda. Harbiy muhit o'ziga xos psixologik sharoitlar — yuqori darajadagi mas'uliyat, qat'iy intizom, xavf omili, tezkor qaror qabul qilish zarurati bilan ajralib turadi. Bu omillar esa shaxsning psixologik barqarorligi, moslashuvchanligi va irodaviy sifatlariga yuqori talab qo'yadi. Harbiy psixologiya fanining shakllanishi va rivojlanishi insonning ekstremal sharoitdagi xulq-atvorini, stressga chidamliligini, jamoada o'zaro ta'sir mexanizmlarini hamda boshqaruv jarayonlarida psixologik omillarning rolini o'rganishga qaratilgan. Ayniqsa, harbiy jamoa ichidagi ijtimoiy-psixologik muhit, liderlik uslublari, kommunikativ jarayonlar va motivatsion tizimlar jamoaning umumiy samaradorligini belgilovchi asosiy komponentlar sifatida qaraladi. Shu bilan birga, harbiy xizmatchilarning individual psixologik xususiyatlari va ularning jamoaviy faoliyatga integratsiyalashuvi masalasi ham alohida ilmiy qiziqish uyg'otadi. Bugungi kunda harbiy xizmatchilarni psixologik jihatdan tayyorlash, ularning stress omillariga nisbatan bardoshlilikini oshirish, konfliktlarni boshqarish ko'nikmalarini shakllantirish hamda jamoada sog'lom psixologik muhitni ta'minlash dolzarb vazifalardan hisoblanadi. Bu jarayonlarda nazariy asoslarning puxtaligi amaliy natijalarning samaradorligini belgilaydi. Shu sababli, harbiy jamoani o'rganishda psixologik yondashuvlarning metodologik va nazariy asoslarini aniqlashtirish ilmiy jihatdan katta ahamiyat kasb

etadi. Mazkur tadqiqotning asosiy maqsadi harbiy xizmatchilar va harbiy jamoani o'rganishning psixologik nazariy asoslarini tizimli ravishda tahlil qilish, mavjud ilmiy qarashlarni umumlashtirish hamda zamonaviy yondashuvlar asosida yangi konseptual xulosalar ishlab chiqishdan iborat. Tadqiqot doirasida shaxs va jamoa o'rtasidagi psixologik munosabatlar, liderlik fenomeni, motivatsiya mexanizmlari, psixologik moslashuv jarayonlari hamda ijtimoiy-psixologik omillarning o'zaro ta'siri o'rganiladi. Natijada, harbiy jamoaning samaradorligini oshirish, harbiy xizmatchilarning psixologik tayyorgarligini mustahkamlash hamda boshqaruv tizimida psixologik yondashuvlarni samarali qo'llash bo'yicha ilmiy asoslangan taklif va tavsiyalar ishlab chiqish ko'zda tutiladi.

ASOSIY QISM

Harbiy xizmatchilar va harbiy jamoani psixologik jihatdan o'rganish murakkab, ko'p qatlamli va tizimli yondashuvni talab etadi. Ushbu jarayonni to'liq anglash uchun avvalo shaxs va jamoa o'rtasidagi psixologik munosabatlar mexanizmini aniqlash zarur. Harbiy jamoa oddiy ijtimoiy guruhdan farqli ravishda qat'iy ierarxiya, intizom va normativ talablar asosida shakllanadi. Shu sababli undagi psixologik jarayonlar ham o'ziga xos xarakter kasb etadi. Jamoa ichida rollar taqsimoti, bo'ysunish va yetakchilik munosabatlari, shuningdek, o'zaro ishonch darajasi jamoaning barqaror faoliyatini ta'minlovchi asosiy omillar hisoblanadi. Harbiy psixologiyada shaxsning psixologik barqarorligi muhim o'rin tutadi. Harbiy xizmatchi ko'pincha ekstremal sharoitlarda faoliyat yuritadi, bu esa unda yuqori darajadagi stressga chidamlilikni talab etadi. Stress omillari — xavf, noaniqlik, jismoniy va ruhiy zo'riqish, vaqt bosimi — shaxs psixikasiga kuchli ta'sir ko'rsatadi. Shu boisdan psixologik barqarorlikni shakllantirish va rivojlantirish harbiy tayyorgarlikning ajralmas qismi hisoblanadi. Zamonaviy tadqiqotlar shuni ko'rsatadiki, stressga moslashuv jarayonida individual psixologik xususiyatlar (temperament, irodaviy sifatlar, emotsional barqarorlik) hal qiluvchi rol o'ynaydi. Harbiy jamoaning samaradorligi ko'p jihatdan liderlik fenomeniga bog'liq. Yetakchining boshqaruv uslubi, kommunikativ kompetensiyasi va psixologik ta'sir o'tkazish qobiliyati jamoa ichidagi muhitni shakllantiradi. Avtoritar, demokratik va liberal boshqaruv uslublarining har biri turli sharoitlarda turlicha natija beradi, biroq harbiy muhitda tezkorlik va intizom talab etilgani sababli ko'pincha aralash yoki moslashuvchan liderlik modeli samaraliroq hisoblanadi. Yetakchining shaxsiy namuna ko'rsatishi, adolatli qarorlar qabul qilishi hamda jamoa a'zolari bilan samarali muloqot o'rnatishi psixologik iqlimni barqarorlashtiradi. Motivatsiya harbiy faoliyatning yana bir muhim psixologik komponentidir. Harbiy xizmatchilarning xizmatga bo'lgan munosabati, vazifalarni bajarishga intilishi va fidoyiligi ichki va tashqi motivlar

uyg'unligi bilan belgilanadi. Ichki motivlarga vatanparvarlik, kasbiy burch hissi, o'zini namoyon qilish istagi kirs, tashqi motivlarga rag'batlantirish tizimi, ijtimoiy e'tirof va moddiy omillarni kiritish mumkin. Motivatsion tizimning to'g'ri yo'lga qo'yilishi jamoaning umumiy natijadorligini sezilarli darajada oshiradi. Harbiy jamoada ijtimoiy-psixologik muhitni shakllantirish alohida ahamiyatga ega. Jamoa ichidagi o'zaro munosabatlar darajasi, ishonch, qo'llab-quvvatlash, konfliktlarni boshqarish ko'nikmalari psixologik iqlimning asosiy ko'rsatkichlari hisoblanadi. Konfliktlarning konstruktiv hal etilishi jamoa rivojiga xizmat qilsa, destruktiv konfliktlar esa samaradorlikni pasaytiradi. Shu sababli konfliktologik yondashuvlar va psixologik treninglar orqali jamoaviy muhitni optimallashtirish zarur. Shaxsning harbiy jamoaga psixologik moslashuvi ham asosiy tadqiqot obyektlaridan biridir. Yangi sharoitga kirib kelgan harbiy xizmatchining jamoaga integratsiyalashuvi uning psixologik tayyorgarligi, kommunikativ ko'nikmalari va ijtimoiy moslashuv darajasiga bog'liq. Moslashuv jarayoni muvaffaqiyatli kechgan taqdirda shaxs o'z imkoniyatlarini to'liq namoyon eta oladi va jamoa faoliyatiga ijobiy hissa qo'shadi. Aks holda esa psixologik diskomfort, ijtimoiy ajralish va xizmat samaradorligining pasayishi kuzatiladi. Harbiy psixologiyada qo'llaniladigan metodlar ham mazkur sohani o'rganishda muhim vosita bo'lib xizmat qiladi. Kuzatish, suhbat, psixodiagnostik testlar, eksperimental tadqiqotlar va sotsiometrik usullar orqali harbiy jamoaning ichki tuzilmasi, munosabatlar tizimi va psixologik holati aniqlanadi. Ushbu metodlarning kompleks qo'llanilishi natijalarning ishonchliligini oshiradi va chuqur ilmiy xulosalar chiqarishga imkon yaratadi.

XULOSA

Mazkur tadqiqot doirasida harbiy xizmatchilar va harbiy jamoani o'rganishning psixologik nazariy asoslari tizimli tarzda tahlil qilindi. Tahlillar shuni ko'rsatdiki, harbiy faoliyat samaradorligi ko'p jihatdan inson omiliga, xususan, shaxsning psixologik xususiyatlari va jamoa ichidagi ijtimoiy-psixologik munosabatlar tizimiga bog'liq. Harbiy jamoa murakkab ijtimoiy tizim sifatida qat'iy ierarxiya, intizom va yuqori mas'uliyat sharoitida shakllanadi, bu esa psixologik yondashuvlarning o'ziga xosligini belgilaydi. Tadqiqot natijalari shuni tasdiqladiki, harbiy xizmatchilarning psixologik barqarorligi, stressga chidamliligi va moslashuv darajasi ularning xizmat faoliyatidagi muvaffaqiyatini belgilovchi asosiy omillardan biridir. Liderlik fenomeni esa jamoaviy faoliyatni muvofiqlashtirishda hal qiluvchi rol o'ynaydi. Moslashuvchan va psixologik jihatdan asoslangan boshqaruv uslublari jamoada sog'lom iqlimni shakllantirish hamda samaradorlikni oshirishga xizmat qiladi. Motivatsiya tizimi harbiy jamoaning ichki harakatlantiruvchi kuchi sifatida namoyon bo'lib, uning to'g'ri

tashkil etilishi xizmatchilarning kasbiy faolligini oshiradi. Shuningdek, jamoa ichidagi ijtimoiy-psixologik muhit, o'zaro ishonch va qo'llab-quvvatlash darajasi xizmat natijalariga bevosita ta'sir ko'rsatadi. Konfliktlarni konstruktiv boshqarish va psixologik treninglar orqali jamoada barqaror muhitni ta'minlash mumkinligi ilmiy jihatdan asoslandi. Olib borilgan tahlillar asosida shuni ta'kidlash mumkinki, harbiy jamoaning samaradorligini oshirish uchun psixologik yondashuvlarni tizimli ravishda qo'llash, harbiy xizmatchilarning individual xususiyatlarini hisobga olish va zamonaviy psixodiagnostik metodlardan foydalanish zarur. Ushbu natijalar harbiy psixologiya sohasida nazariy bilimlarni boyitish bilan birga, amaliy faoliyatda ham muhim ahamiyat kasb etadi.

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INGLIZ VA O‘ZBEK TILLARIDA VAQT TUSHUNCHASIGA OID LEKSIK BIRLIKLARNING QIYOSIY TAHLILI

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Annotatsiya. Mazkur tezis ingliz va o‘zbek tillarida “vaqt” mazmunini ifodalovchi leksik birliklarning qiyosiy tahlilini taqdim etadi. Vaqt kategoriyasi har bir tilda o‘ziga xos usullar va birliklar orqali ifodalanadi. Tezisda ingliz va o‘zbek tillarida vaqtni ifodalash vositalari (masalan, vaqt birliklari nomlari, kun qismlari atamaları, frazeologizmlar va grammatik shakllar) o‘rganilib, ularning semantik va madaniy jihatdan farqlanish xususiyatlari yoritiladi. Tahlil natijasida har ikki tildagi umumiy va o‘ziga xos jihatlar ochib beriladi hamda vaqt konseptining lingvistik ifodasi milliy tafakkur va madaniyat bilan bog‘liqligi xulosa qilinadi.

Kalit so‘zlar: *vaqt konsepti; leksik birliklar; qiyosiy tahlil; kun qismlari; frazeologizmlar; zamon shakllari.*

KIRISH

Vaqt tushunchasi – borliqning eng qadimiy va muhim kategoriyalaridan biridir. Inson hayoti va jamiyat taraqqiyotida vaqtni anglata bilish katta ahamiyatga ega. Har bir xalq vaqtni idrok etish va ifodalash borasida o‘ziga xos tarixiy tajribaga ega bo‘lib, bu tajriba ularning tilida aks etadi. Shuning uchun ikki tilni qiyosiy o‘rganish orqali vaqt konsepti qanday lingvistik vositalar yordamida ifodalanishini aniqlash, ular orasidagi o‘xshash va farqli jihatlarni ko‘rsatish muhim ilmiy masala sanaladi.

Ingliz va o‘zbek tillari xilma-xil til oilalariga mansub bo‘lsa-da, har ikkisida vaqtga oid asosiy tushunchalar mavjud. Masalan, time – vaqt, day – kun, year – yil kabi asosiy birliklar mazmun jihatidan mos keladi. Biroq vaqtni ifodalash tizimida va ayrim leksik birliklarning qo‘llanishida sezilarli farqlar mavjud. Ingliz tilida vaqtni ifodalovchi boy so‘z boyligi va qat’iy grammatik kategoriya (masalan, zamonlar tizimi) mavjud bo‘lsa, o‘zbek tilida vaqt ifodasi ko‘proq kontekst va fe‘l zamon shakllariga tayanadi. Ushbu tezis kirish qismida vaqt konseptining lingvistik ahamiyati bayon etilib, keyingi bo‘limlarda adabiyotlar sharhi va qiyosiy tahlil orqali ingliz va o‘zbek tillaridagi vaqt leksik birliklarining xususiyatlari yoritiladi.

ADABIYOTLAR SHARHI

Tilshunoslikda “vaqt” konsepti bo‘yicha qator ilmiy izlanishlar qilingan. S.O. Sapaeva [1] ta’kidlaganidek, vaqt – obyektiv va umumbashariy hodisa bo‘lib, uning lingvistik talqini universallik va milliy xususiyatlar uyg‘unligini aks ettiradi. Ya’ni, vaqt tushunchasi hamma jamiyatlarda mavjud bo‘lsa-da, har bir xalq uni o‘z dunyoqarashi va madaniyatiga ko‘ra tasavvur qiladi va tilida gavdalantiradi. Masalan, tadqiqotchilar ingliz va o‘zbek xalqlarining vaqtga munosabatida farqlar borligini qayd etishgan. Ba’zi manbalarda o‘zbeklarda vaqt tushunchasiga nisbatan “erkinroq” yondashuv mavjudligi, va bu hol turli xalq maqollari va iboralarda aks etishi aytiladi. Xususan, o‘zbek tilida “Besh daqiqa” iborasi ko‘pincha aniq 5 daqiqa emas, biroz nisbiy vaqtni anglatadi, inglizlar esa “Just a minute” (bir daqiqa) iborasini odatda haqiqiy qisqa fursat ma’nosida qo‘llaydi – bu esa ikki xalq vaqtni qabul qilishidagi farqli mentalitetdan dalolatdir.

Shuningdek, ingliz tilshunosligida vaqt lexik-semantik maydonini o‘rganishga doir ishlar mavjud bo‘lib, ular vaqt ifodalovchi so‘zlar turkumini (hafta kunlari nomlari, kun qismlari nomlari, vaqt o‘lchov birliklari va hokazo) tahlil qiladi. O‘zbek tilida ham olimlar vaqtga oid tushunchalarni ifodalovchi birliklarni tadqiq etib, ularning kelib chiqishi va qo‘llanish xususiyatlarini yoritgan. G. Musayeva [2] o‘z maqolasida o‘zbek va ingliz tillarida vaqt birliklari nomlarining funksional-semantik xususiyatlarini qiyosiy tahlil qilgan. Uning ishida qayd etilishicha, o‘zbek tilida vaqt tushunchasi asosan fe’l zamon kategoriya va kontekst orqali berilsa, ingliz tilida zamonlarning murakkab grammatik tizimi (hozirgi, o‘tgan, kelasi zamonning oddiy, davomiy, perfekt shakllari) orqali nozik ma’nolar farqlanadi. Bu esa ingliz tilida vaqt ifodasining aniqroq grammatik vositalar bilan ifodalanishini ko‘rsatadi.

Umuman, adabiyotlar tahlili shuni ko‘rsatadiki, har ikki tilda vaqt konsepti lingvistik jihatdan chuqur tadqiq qilingan mavzu bo‘lib, olimlar vaqtni ifodalovchi leksik birliklarni semantik maydon sifatida o‘rganishda tilning grammatika, leksika va madaniy kontekstini birgalikda hisobga olish lozimligini ta’kidlaydilar. Quyida ana shunday leksik birliklarning ayrim qiyosiy tahlili keltiriladi.

TAHLIL

Vaqt birliklarining leksik tizimi: Ingliz va o‘zbek tillarida vaqt o‘lchov birliklari deyarli bir xil tushunchalarni qamrab oladi. Masalan, yil (year – yil), oy (month – oy), hafta (week – hafta), kun (day – kun), soat (hour – soat), daqiqa (minute – daqiqa), soniya (second – soniya) kabi atamalar asosan mazmunan mos keladi. Farq shundaki, bu birliklarning etimologiyasi va qo‘llanilishida ba’zi o‘ziga xosliklar bor [3]. Ingliz tilida hafta kunlari nomlari qadimiy german va rim xudolariga bog‘liq (masalan, Sunday – Quyosh kuni, Thursday – Thor xudosi kuni), o‘zbek tilida esa haftaning kun

nomlari forscha-arabcha kelib chiqishga ega (Dushanba – oyning ikkinchi kuni, Payshanba – beshinchi kun va hokazo). Bu tarixiy farqlar leksik birliklarning shaklan boshqacha bo‘lsa-da, mazmunan bir xil vazifasini ko‘rsatadi.

Kun qismlarining ifodalanishi: Ingliz tilida sutka qismlari aniq soatlar oralig‘ida nomlanadi (masalan, morning – odatda 00:00 dan 12:00 gacha, afternoon – 12:00 dan taxminan 17:00 gacha, evening – 17:00 dan 21:00 atrofida, night – 21:00 dan tonggacha). Inglizcha good morning soat 11:55 da ham, 12:05 da esa good afternoon deyilishi qat’iy vaqt chegarasini ko‘rsatadi. O‘zbek madaniyatida esa kun qismlari tushunchasi fasl va quyosh chiqishi-botishiga ko‘ra moslashuvchan: masalan, ertalab va kech orasidagi chegara yilning vaqtiga qarab o‘zgarishi mumkin. Ertalab odatda tong sahardan to taxminan soat 10-11 gacha davom etadi, undan keyin peshin/tush payti va kech va nihoyat tun keladi. O‘zbek tilida kimnidir kech soat 1 da (01:00) ko‘rgan bo‘lsak, “kechasi ko‘rdim” deyishimiz mumkin, inglizlar esa bu vaqtni early morning deb ataydi. Demak, ingliz tilida kun qismlari chegara va atamalari aniqroq, o‘zbek tilida esa nisbatan moslashuvchan va kontekstga ko‘ra qo‘llanadi.

Vaqtga doir frazeologik birliklar: Har ikki til boy vaqtga oid iboralar va maqollarga ega. Ingliz tilidagi “Time is money” (Vaqt – pul) degan mashhur naql vaqtning qadrini iqtisodiy boylikka qiyoslab ifoda etsa, o‘zbek tilida ham “Vaqt – oltindan qimmat” kabi ibora mavjud bo‘lib, vaqt bebaho ne‘mat ekanini anglatadi. Biroq kundalik hayotda vaqtga rioya qilish masalasida farqlar seziladi. Ingliz jamiyatida puntualilik (o‘z vaqtida kelish) odobi kuchli – uchrashuv va yig‘ilishlarga kech qolmaslik muhim, kechiksa uzr so‘raladi. O‘zbek muhitida esa vaqtda uncha qattiq turilmasligi, 5-10 daqiqa kechikish odatiy hol sifatida qabul qilinishi mumkin. Yuqorida ta’kidlanganidek, “besh daqiqa” deganda o‘zbek suhbatda taxminiy qisqa fursatni nazarda tutishi mumkin, inglizda “Give me a minute” odatda haqiqatan 1-2 daqiqa atrofni anglatadi. Shu tariqa, frazeologik birliklar va ularning qo‘llanilishi ham til orqasida turgan madaniy qadriyatlar va dunyoqarashni yoritadi – inglizlar vaqtni resurs sifatida o‘lchashga moyilroq bo‘lsa, o‘zbeklar vaqtga nisbatan biroz “erkinroq”, odamlar orasidagi muloqotni birinchi o‘ringa qo‘ygan holda qarashadi.

Grammatik vositalar. Vaqtni ifodalashda grammatik birliklar ham muhim rol o‘ynaydi. Ingliz tilida fe‘l zamonlar tizimi juda batafsil: hozirgi zamon (I go), hozirgi davomiy (I am going), hozirgi perfekt (I have gone), hozirgi perfekt davomiy va sh.k., shuningdek o‘tgan va kelasi zamonning shunday shakllari orqali vaqtning nozik ma’nodagi tafovutlari ifodalanadi. Masalan, I have been reading (“o‘qib kelayapman”) bilan I read (“men o‘qiyman”) orasida davomiylik nuqtai nazaridan farq bor. O‘zbek tilida esa fe‘lning zamon kategoriyalari uch asosiy shaklga tayanadi: hozirgi-kelasi

zamon (o'qiyman), o'tgan zamon (o'qidim), va buyuk (hozirgi davomiy) zamon (o'qiyotirman kabi shakl) hamda shart-holat ifodalovchi -gan, -ayotgan tahlillari. Ingliz tilining zamon kategoriyasi murakkabligi tufayli ayrim ma'nolar (masalan, amalga oshganlik darajasi, davomiylik) leksik birliklar yordamida ham ifodalanadi, ammo asosan grammatik shakllar yetakchilik qiladi. O'zbek tilida esa vaqtni aniqroq ko'rsatish ko'pincha kontekst va qo'shimcha so'zlar orqali hal etiladi (masalan, kecha, bugun, ertaga so'zlari yordamida). Shunday bo'lsa-da, har ikki til grammatik vositalar bilan birga leksik birliklarni uyg'un qo'llab, vaqtni ifodalashning to'liq manzarasini yaratadi.

XULOSA

Ingliz va o'zbek tillarida vaqt konseptini ifodalovchi leksik birliklarni qiyosiy tahlil qilish shuni ko'rsatadiki, umumiy insoniy kategoriya bo'lgan vaqt har bir til va madaniyatda turlicha namoyon bo'ladi. Ingliz tilida vaqt birligi va bo'linmalari ko'proq standartlashgan va aniqligi bilan ajralib tursa, o'zbek tilida vaqt ifodasi kontekstga moslashuvchanligi bilan e'tiborni tortadi. Bu farqlar xalqlarning vaqtga munosabatidagi madaniy differensiyaga ham borib taqaladi – biri jadval asosida yashashni odat qilsa, ikkinchisi vaziyatga qarab vaqtni boshqaradi. Shu bilan birga, har ikkala tilda vaqtga oid boy frazeologik ma'lumotlar xazinasini mavjud bo'lib, ular orqali vaqtning qadr-qimmati, o'tkinchiligi yoki sabr-qanoat bilan bog'liq falsafiy qarashlar ifoda etiladi.

Ikki tilni solishtirish natijasida olingan bilimlar amaliy jihatdan ham foydali bo'lishi mumkin. Masalan, tarjima jarayonida vaqtga doir iboralarni to'g'ri idrok etish, yoki ingliz tilini o'rganuvchilar uchun o'zbek tilidagi va ingliz tilidagi vaqt ifodalarini muvofiqlashtirib o'rganish, xatolarning oldini oladi. Xulosa o'rnida aytish mumkinki, vaqt konsepti lingvistik jihatdan ham umumiy, ham milliy xususiyatlarga ega murakkab tushuncha bo'lib, uning leksik birliklarini qiyosiy o'rganish bizga nafaqat til qurilishini, balki xalqlarning dunyoqarashi va madaniyatini chuqurroq tushunishga yordam beradi.

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IRONY AS A TOOL OF SOCIAL CRITICISM IN CHARLES DICKENS' GREAT EXPECTATIONS

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Abstract

This thesis examines the multifaceted role of irony as a strategic instrument of social criticism in Charles Dickens's masterpiece, *Great Expectations*. By analyzing the trajectory of the protagonist, Pip, the study explores how Dickens employs situational, verbal, and structural irony to dismantle Victorian illusions regarding social class, wealth, and the moral standing of a "*gentleman*." The research highlights the ironic contrast between the source of Pip's fortune—the convict Magwitch—and the aristocratic decay of Satis House, suggesting that true nobility resides in moral integrity rather than inherited or acquired status. Furthermore, the paper critiques the systemic biases within the Victorian legal system and the dehumanizing effects of unbridled social ambition. Ultimately, the thesis argues that Dickens's use of irony serves as a profound moral compass, forcing a reappraisal of human values in a materialistic society.

Key words: Charles Dickens, *Great Expectations*, Irony, Social Criticism, Victorian Class Structure, Gentlemanly Ideal, Moral Ambition, Pip's Journey, Satire, Nineteenth-century Literature.

Introduction

Charles Dickens, arguably the most prominent social chronicler of the Victorian era, utilized his literary prowess to challenge the structural inequities of 19th-century Britain. Among his late-period works, *Great Expectations* stands as a definitive critique of the socio-economic and moral landscape of the time. The narrative follows Pip, an impoverished orphan, as he navigates the complexities of class transformation. However, the novel's true power lies in its masterful application of irony.

Irony in this context is not merely a stylistic choice; it is a tactical instrument of social criticism. By creating a world where reality consistently contradicts appearances, Dickens exposes the hypocrisy of the Victorian class system, the failure of the legal apparatus, and the corrosive nature of unbridled ambition. This thesis posits that

Dickens uses irony to dismantle the “*Great Expectations*” of a society that values capital over character, and status over soul.

The semantic and structural irony of the “*Gentleman*”

The Victorian social hierarchy was built upon the rigid, almost religious, ideal of the “gentleman”. A gentleman was expected to possess not only wealth but a specific pedigree and a refined set of manners. Dickens systematically deconstructs this ideal through layers of situational irony.

The Magwitch Revelation

Pip’s entire world-view is predicated on the assumption that his wealth comes from Miss Havisham, a woman of aristocratic (though decaying) standing. He believes that his transformation is a process of “cleaning” his past. The irony reaches a shocking crescendo in Chapter 39 when he discovers that his true benefactor is Abel Magwitch, a transported convict.

This revelation serves as Dickens’ most biting critique of the British economy. The “refined” life Pip leads—his fine clothes, his club memberships, and his idle days—is funded by the hard labor and criminal history of a man society considers “*human waste*”. Dickens is suggesting that the wealth of the British upper class is often built on the suffering and labor of the marginalized, an irony that Pip initially finds impossible to swallow. His horror at Magwitch’s return is not a horror of the man himself, but a horror of the realization that his “*gentlemanly*” status is rooted in “lowly” soil.

The juxtaposition: Joe Gargery and Bentley Drummle

To solidify this critique, Dickens juxtaposes Joe Gargery and Bentley Drummle. Joe, the blacksmith, is clumsy, uneducated, and socially invisible. Yet, he is the only character who exhibits consistent selflessness and unconditional love. Bentley Drummle, conversely, is born into the elite, yet he is “idle, proud, niggardly, reserved, and suspicious.” The irony is that Pip is ashamed of Joe—the true moral gentleman—while he strives to be like Drummle’s social circle. Through this, Dickens criticizes a society that has lost the ability to distinguish between surface-level etiquette and genuine human virtue. The “gentleman” is revealed to be a social construct that often masks moral rot.

Institutional irony: The legal system and Newgate prison

Dickens had a lifelong fascination and repulsion regarding the British legal system. In *Great Expectations*, irony is used to show that the law is not a tool for justice, but a tool for maintaining class boundaries.

The parallel of Magwitch and Compeyson

The legal history of Magwitch and Compeyson is a masterpiece of social irony. Both were partners in crime, but when they were caught, Compeyson—a man of education and “*gentlemanly*” appearance—received a light sentence, while Magwitch was treated as a dangerous beast. Dickens uses this to illustrate that the law is performative. If a criminal can speak the language of the elite, the law is lenient. If a criminal is poor and unrefined, the law is ruthless. This irony highlights the systemic bias where the “system” protects its own social class, regardless of the gravity of the crime.

Jaggers and the shadow of the gallows

Mr. Jaggers, Pip’s guardian and a high-profile lawyer, lives a life of constant washing. He compulsively washes his hands with scented soap after dealing with his clients. This is a brilliant use of verbal and physical irony. Jaggers represents the “*clean*” face of the law, but his hands are constantly “*dirty*” from the reality of Newgate Prison. He is the bridge between the criminal underworld and the polite society of London, showing that the two worlds are not separate, but deeply intertwined.

The irony of Satis house: stagnation vs. satisfaction

Satis House, the home of Miss Havisham, is perhaps the most famous setting in the novel. The irony begins with its name: “*Satis*” is Latin for “*enough*.” The local legend says that whoever lived there could want for nothing more.

Decay as social symbol

In reality, Satis House is a monument to death and stagnation. It is a house where time has stopped, where the wedding cake is infested with spiders, and where sunlight is forbidden. Dickens uses this setting to criticize the “old money” aristocracy. Like Miss Havisham, the aristocratic class is portrayed as living in the past, feeding on old grudges, and becoming spiritually bankrupt.

Estella: The manufactured irony

Miss Havisham’s project, Estella, is a weapon of revenge. The irony is that in raising Estella to break men’s hearts, Miss Havisham robs her of her own heart. Estella is beautiful, refined, and aristocratic, but she is “cold” and unable to love. Dickens uses Estella to show how the upper classes treat children as commodities or tools for social warfare rather than human beings. The ultimate irony is that Estella, the prize Pip desires above all else, is actually the daughter of a convict and a murderess—further blurring the lines between the “high” and “low” worlds.

The Irony of the “*Great Expectations*”

The title itself is the central irony of the novel. When Pip receives his “expectations,” he believes they will lead to happiness, fulfillment, and love. Instead, they lead to:

- **Moral Blindness:** He treats Joe and Biddy with arrogant condescension.
- **Financial Ruin:** Despite having wealth, he falls into debt by trying to live beyond his means to maintain “gentlemanly” appearances.
- **Emotional Emptiness:** He realizes that Estella is unattainable and that his social rise has made him miserable.

The structural irony of the novel is that Pip only achieves true “greatness” when he has lost his money. By the end of the book, when he is working as a clerk in Cairo, he is a better man than he ever was as a wealthy idler in London. Dickens uses this to criticize the Victorian obsession with social mobility, suggesting that the climb up the ladder often requires leaving one’s humanity at the bottom.

Social criticism through satire and verbal irony

Dickens also employs minor characters to voice his social criticism through verbal irony and satire.

1. **Uncle Pumblechook:** He represents the sycophantic middle class. When Pip is poor, Pumblechook treats him like dirt. When Pip gets money, Pumblechook claims to be his “earliest friend”. Dickens uses Pumblechook to mock the hypocrisy of people who worship wealth.
2. **The Wemmick Paradox:** Wemmick has a “Post Office” mouth and a mechanical personality at the office (Walworth), but is a kind, creative man at home. This irony criticizes the industrial age’s tendency to turn humans into unfeeling machines during work hours.

Conclusion

In *Great Expectations*, Charles Dickens uses irony to tear away the veil of Victorian respectability. Through the ironic source of Pip’s wealth, the ironic nature of the “gentleman,” and the ironic failure of the legal system, Dickens argues that society is built on a series of illusions.

The novel serves as a profound warning: when a society prioritizes wealth over welfare and status over sincerity, it creates a world of “Great Expectations” that can never be fulfilled. Pip’s journey from the forge to London and back again is a testament to the fact that true nobility is not found in a bank account or a silk hat, but in the loyalty of a friend like Joe and the willingness to take responsibility for one’s own life. Irony, in Dickens’ hands, is the ultimate mirror, forcing Victorian society to see its own distorted reflection.

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IJTIMOYIY TARMOQLARNING O'SMIRLAR RUHIY SALOMATLIGIGA TA'SIRI

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Annotatsiya

Ushbu maqola ijtimoiy tarmoqlarning o'smirlar ruhiy salomatligiga ta'sirini o'rganadi. Maqolada ijtimoiy tarmoqlarning ijobiy va salbiy ta'sirlari, stress, uyqusizlik, o'zini past baholash va internetdagi kiberzo'ravonlik kabi muammolar ko'rib chiqiladi. Shuningdek, o'smirlarning ruhiy salomatligini saqlash va ijtimoiy tarmoqlardan sog'lom foydalanish bo'yicha tavsiyalar berilgan. Tadqiqotlar natijalari asosida maqola ota-onalar, pedagoglar va o'smirlar uchun foydali qo'llanma sifatida xizmat qiladi.

Ijtimoiy tarmoqlarning o'smirlar ruhiy salomatligiga ta'siri ikki tomonlama: salbiy va ijobiy jihatlari bor, ammo ko'pincha salbiy ta'sirlar ko'proq e'tiborga olinadi. Tadqiqotlar shuni ko'rsatadiki, haddan tashqari foydalanish depressiya, tashvish, uyqusizlik va o'zini past baholash kabi muammolarni kuchaytirishi mumkin, ayniqsa qizlarda. Lekin o'rtacha va to'g'ri foydalanish aloqa, ijodkorlik va qo'llab-quvvatlashni ta'minlaydi.

Salbiy ta'sirlar (ko'proq dalillar bor)

Depressiya va tashvish ortishi: Kuniga 3 soatdan ortiq ijtimoiy tarmoqlardan foydalanish ruhiy muammolar xavfini ikki baravar oshirishi mumkin. O'smirlar orasida depressiya va tashvish belgilari ko'paygan, bu smartfon va ijtimoiy tarmoqlarning keng tarqalishi bilan bir vaqtga to'g'ri keladi.

Tanqidiy davr: O'smirlikda miya rivojlanishi davom etayotgan paytida ijtimoiy tarmoqlar taqqoslash, FOMO (o'tkazib yuborish qo'rquvi), kiberbullying va ideal tanaviy qiyofalarga ta'sir qiladi. Qizlarda tanaviy qiyofa muammolari va ovqatlanish buzilishlari ko'proq kuzatiladi.

Uyqu va o'z-o'zini baholash: Kechani kechgacha qarab telefon ishlatish uyquni buzadi, bu esa ruhiy holatni yomonlashtiradi. Meta-tahlillar ijtimoiy tarmoqlar foydalanishi bilan depressiya ($r \approx 0.12$), tashvish ($r \approx 0.10$) va yolg'izlik o'rtasida kichik, ammo sezilarli bog'liqlikni ko'rsatadi

Suicid xavfi: Ba'zi tadqiqotlar ko'p vaqt sarflash bilan suicid fikrlari va xatti-harakatlar o'rtasidagi bog'lanishni topgan, ayniqsa qizlar va allaqachon ruhiy muammolari bor o'smirlarda.

AQSh Surgeon General va APA maslahatlarida ijtimoiy tarmoqlar yoshlar uchun yetarli darajada xavfsiz emasligi ta'kidlangan. Ko'plab o'smirlar (taxminan 19-25%) ijtimoiy tarmoqlar o'z ruhiy salomatligiga salbiy ta'sir qilganini aytadi, qizlarda bu ko'rsatkich yuqoriroq.

Ijobiy ta'sirlar

Aloqa va qo'llab-quvvatlash: O'smirlarning ko'pchiligi (70-80%) ijtimoiy tarmoqlar orqali do'stlar bilan bog'lanishni his qilishini va qiyin paytlarda yordam topishini aytadi. Bu, ayniqsa, marginal guruhlar (masalan, LGBTQ+ yoki etnik ozchiliklar) uchun muhim.

Ijodkorlik va o'zini ifoda etish: 63% o'smirlar platformalarni ijodiy tomonlarini ko'rsatish uchun ishlatishini bildirgan.

Axborot va yordam: Ruhiy salomatlik haqida ma'lumot olish, yordam izlash va o'xshash tajribalarni baham ko'rish imkonini beradi.

Nima qilish kerak?

Tavsiyalar

Vaqtni cheklash: Kuniga 1-2 soatdan oshirmaslik yaxshi natija beradi. Ba'zi tadqiqotlarda cheklash depressiyani kamaytirgan

Sifat muhimroq: Passiv scrolling o'rni faol aloqa va foydali kontentga e'tibor qarating.

Ota-onalar va o'qituvchilar roli: Suhbatlashish, monitoring qilish, media savodxonligini oshirish (tanqidiy fikrlash, raqamli gigiyena).

Uyqu va real hayotni birinchi o'ringa qo'yish: Telefonni yotoqxonadan uzoqroq tuting, sport va yuzma-yuz muloqotni rag'batlantiring.

Xulosa: Bog'lanish zaif yoki o'rtacha, lekin aholiy darajasida sezilarli ta'sir ko'rsatadi. Har bir o'smirning holati individual — ba'zilar uchun foydali, boshqalar uchun zararli. O'zbekistonda ham bu mavzu dolzarb, chunki yoshlar orasida ijtimoiy tarmoqlar (Instagram, TikTok va boshqalar) juda mashhur. Agar o'smirda ruhiy muammolar bo'lsa, mutaxassis (psixolog yoki psixiatr)ga murojaat qiling.

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LEGAL FOUNDATIONS OF COMMODITY CLASSIFICATION AND ADVANCE RULINGS OF CUSTOMS AUTHORITIES AS A FACTOR IN REDUCING TRANSACTION COSTS IN FOREIGN TRADE

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Abstract: the article examines the impact of legal certainty in commodity classification and the institution of advance rulings issued by customs authorities on the economic effectiveness of foreign economic activity. The author considers classification not merely as a legal and technical procedure for assigning goods to codes of the Commodity Nomenclature of Foreign Economic Activity (CN FEA), but also as an instrument for managing fiscal risks, time losses, logistical delays, and compliance costs borne by participants in foreign trade. On the basis of materials relating to Uzbekistan, the provisions of the Harmonized System, the rules of the Customs Code of the Republic of Uzbekistan, and contemporary international approaches, the article proposes a model in which an advance classification ruling and digital verification of commodity characteristics serve as key factors in reducing transaction costs and increasing the predictability of customs administration.

Keywords: commodity classification; CN FEA; Harmonized System; advance ruling; customs administration; foreign economic activity; transaction costs; digitalization of customs; interpretation of tariff headings; customs risks.

In the context of the accelerating fragmentation of global supply chains, the importance of accurate tariff classification of goods is increasing markedly. For an importer or exporter, a commodity code is not a formal element of the customs declaration, but a parameter that determines the amount of customs payments, the set of applicable non-tariff requirements, the speed of release, and the depth of subsequent control. Therefore, even a single classification error is transformed into a set of additional costs which, by their nature, extend far beyond one customs operation.

The classical interpretation of the influence of commodity classification on foreign economic activity is usually confined to the fiscal dimension. In the contemporary trade environment, however, such an interpretation is no longer sufficient, since a classification decision simultaneously affects the logistics cycle, the stability of contractual relations, insurance costs, the probability of disputes with customs authorities, and the quality of statistical information used by both the state and business

for decision-making. In this sense, classification becomes an element of the trust infrastructure in foreign trade.

The materials of the diploma research uploaded by the user make it possible to identify, on a well-grounded basis, two methodological cores of the problem: first, the content of the General Rules for the Interpretation of the Harmonized System, without which uniform application of the CN FEA is impossible; and second, the institution of the advance ruling, which provides ex ante legal certainty in relation to disputed tariff positions. These provisions deserve to be reconsidered in the format of an article with a different logic of presentation, namely through the prism of transaction costs and the manageability of trade risks. [1]

In economic literature, customs procedures are usually considered part of the institutional conditions of foreign trade. If this approach is broadened, commodity classification may be defined as an economic variable that determines the regime under which a commodity gains access to the market. It is precisely the CN FEA code that determines the applicable duties, licences, prohibitions, technical regulation measures, statistical categories, and, in certain cases, the regime of preferences. Consequently, the accuracy of classification directly affects the aggregate circulation costs of goods. From a theoretical perspective, classification errors create several types of costs. The first group consists of direct monetary losses: additional payment of duties, recalculation of VAT, penalties, fines, costs of laboratory testing, and legal support in a dispute. The second group is time-related: delayed release of cargo, transport downtime, disruption of delivery schedules, storage costs, and loss of commercial opportunities. The third group is strategic in nature and manifests itself in the reduced predictability of foreign trade operations, which is particularly sensitive for enterprises with a high share of imported components.

The economic significance of classification decisions increases in sectors where goods have complex multi-component characteristics, are rapidly updated technologically, or contain features that make it possible to assign them to several headings at the same time. Under such conditions, classification can no longer rely solely on the name of the goods in the invoice; it requires a detailed verification of functional purpose, composition, degree of processing, technical parameters, and specific features of the set or configuration. It is precisely here that the advance ruling becomes a rational instrument for reducing uncertainty. [2]

The legal foundations of commodity classification in Uzbekistan are based on a combination of international and national norms. The international foundation is the Harmonized Commodity Description and Coding System, administered by the World

Customs Organization; the current HS 2022 edition has been applied in global trade practice since 1 January 2022. The national Commodity Nomenclature of Foreign Economic Activity of the Republic of Uzbekistan, version 2022, entered into force on 1 January 2023 and is directly based on the updated Harmonized System. [3][4]

The Customs Code of the Republic of Uzbekistan establishes that the CN FEA is used for the state regulation of foreign economic activity, tariff and non-tariff regulation measures, and the maintenance of customs statistics. The Code also details the procedure for maintaining the nomenclature, the rules for classifying goods, and the status of customs authorities' decisions on classification matters. In this way, the legislator links the technical nomenclature with the practical functions of fiscal and statistical management of foreign trade. [5]

A particularly important role in the institutional design is played by the chapter on advance rulings. The Code provides for the possibility that customs authorities may issue an advance ruling concerning the classification of goods, and a request, provided that sufficient information is available, is considered within twenty days. At the same time, an advance ruling is valid for one year from the date of its adoption, unless it is amended, withdrawn, or annulled; information on such rulings is also subject to disclosure, except for information protected by law. [5]

From the standpoint of international standards, this model corresponds to the logic of the WTO Trade Facilitation Agreement. Article 3 of that Agreement requires Members to issue advance rulings within a reasonable and specified period of time, enabling traders to understand in advance the regime governing the circulation of goods and to plan their costs. Accordingly, the institution of advance rulings in Uzbekistan should be assessed not as a secondary service, but as an element of fulfilling international obligations and, at the same time, as a mechanism for building trust between business and customs authorities. [6]

The uploaded graduation thesis describes in detail the logic of applying the General Rules for the Interpretation of the Harmonized System and the CN FEA, which makes it possible to use this material as a conceptual basis for further analysis. In practical terms, the GRIs form a kind of procedural architecture of classification: from the text of a heading and the relevant notes to the assessment of unfinished goods, multi-component composition, sets put up for retail sale, packaging, and, ultimately, specification at the subheading level.

However, even formally impeccable knowledge of the GRIs does not guarantee an identical result if the information base concerning the goods is incomplete. For this reason, the problem of classification in the twenty-first century is closely connected

with the quality of the digital description of goods. The more precise the digital footprint - technical passports, specifications, catalogues, photographs, laboratory reports, and information on composition and functionality - the lower the probability of choosing an incorrect code. In this logic, customs digitalization should be understood as an instrument for reducing classification uncertainty, not merely as a means of accelerating document circulation.

International practice also confirms that digital systems are effective when they are embedded in a legal and methodological environment. UNCTAD reports on ASYCUDA emphasize that automated customs systems produce the greatest effect when national regulation is simultaneously aligned with the international standards of the WCO and the WTO. This is especially important for the classification function, because any automation without a high-quality description of goods and transparent rules of interpretation is capable only of reproducing errors more quickly. [7]

Table 1. Channels through which the accuracy of commodity classification affects the costs and outcomes of foreign economic activity

Source: compiled by the author on the basis of the provisions of the Customs Code of the Republic of Uzbekistan, WCO and WTO materials, and empirical evidence from customs administration. [5][6][7]

Channel of influence	Mechanism of action	Type of costs	Effect for the FEA participant	Managerial response
Fiscal	Change in duty rate and tax base	Direct monetary costs	Additional payments, refunds, fines	Advance ruling; internal classification control
Non-tariff	Incorrect application of licences, permits, and prohibitions	Regulatory costs	Clearance delay; refusal of import/export	Verification of the code against relevant regulatory measures
Time-related	Additional requests, examinations, and disputes	Logistics costs	Cargo and transport downtime	Preparation of a complete technical dossier for the goods

Channel of influence	Mechanism of action	Type of costs	Effect for the FEA participant	Managerial response
Contractual	Disruption of delivery deadlines and contract terms	Commercial costs	Loss of counterparties and penalties	Preliminary agreement on codes in contractual documentation
Statistical	Distortion of the commodity structure of foreign trade	Information costs	Low quality of analytics and forecasts	Unification of practice and publication of rulings
Reputational	Increase in adjustments and disputes	Behavioural costs	Higher level of distrust on the part of customs	Compliance and specialized staff training
Technological	Insufficient digital description of the goods	Operational costs	Input errors and ambiguity of classification	Electronic catalogues and attribute verification
Judicial and legal	Appeal of decisions and defence costs	Legal costs	Growth of transaction costs	Pre-trial dispute resolution mechanisms
Macroeconomic	Inaccurate classification of foreign trade flows	Systemic costs	Budget losses and distortion of commodity policy	Unified methodology and risk-oriented monitoring

The presented matrix shows that classification has a multiplier effect on the performance of foreign economic activity. One and the same incorrect decision on a code can simultaneously trigger recalculation of payments, delay release, distort statistics, and increase the probability of subsequent post-clearance control. Consequently, the assessment of the economic effect of correct classification should be built not only around budget revenues, but also around the reduction of aggregate transaction costs in the private sector.

The linkage between an advance ruling, the digital profile of a commodity, and the uniformity of practice is of particular importance. If even one of these elements is absent, the system begins to transfer interpretation risks to the participant in foreign economic activity. Under such conditions, even formally transparent legislation does not provide sufficient predictability, and an entrepreneur is forced to include in the cost of an import-export operation an additional premium for regulatory uncertainty.

The economic value of accurate classification becomes especially visible amid large-scale growth in foreign trade turnover. According to the National Committee on Statistics, Uzbekistan's foreign trade turnover in January-December 2024 amounted to USD 65,934.0 million, including exports of USD 26,948.2 million and imports of USD 38,985.8 million; the negative trade balance reached USD 12,037.6 million. By the end of January-December 2025, total foreign trade turnover had increased to USD 81,166.8 million, exports to USD 33,812.3 million, and imports to USD 47,354.5 million. [8][9] The growth of the absolute scale of trade means that even a small share of erroneous classification generates a significant macroeconomic effect. If disputed or incorrectly determined codes are concentrated in goods with a high customs value, technological complexity, or mixed functionality, their impact on payments, clearance time, and statistics increases many times over. Therefore, as trade expands, the issue of classification accuracy ceases to be narrowly technical and becomes part of the policy aimed at increasing the competitiveness of the national economy.

For Uzbekistan, this is especially important in the context of the increasing share of machinery, equipment, chemical products, complex industrial goods, and services related to the digital economy. It is precisely in such commodity groups that interpretation errors most often arise because the commercial name of a product does not coincide with its tariff description, and because of differences between the marketing function of a product and its legally relevant classification features. Consequently, as imports become technologically more complex, the role of advance rulings and laboratory verification will continue to grow. [8][9][10]

**Table 2. Uzbekistan's foreign trade context and institutional parameters
affecting the significance of classification decisions**

Source: compiled by the author on the basis of data from the National Committee on Statistics of the Republic of Uzbekistan, Lex.uz, the WCO, and the WTO.

[3][4][5][6][8][9]

Indicator	2024	2025	Economic significance	Conclusion for classification policy
Foreign trade turnover, USD million	65,934.0	81,166.8	Growth in the scale of operations increases the cost of an error	Unification of practice for disputed codes is required
Exports, USD million	26,948.2	33,812.3	Expansion of the export base increases requirements for procedural predictability	Ex ante rulings on complex goods are needed
Imports, USD million	38,985.8	47,354.5	Growth in imports increases sensitivity to duties and non-tariff measures	Classification accuracy affects cost price
Balance, USD million	-12,037.6	-13,542.2	More expensive imports increase the importance of the correct code	Classification errors make inbound supplies more expensive
CN FEA version of Uzbekistan	HS-based 2022	HS-based 2022	Stability of the nomenclature requires high-quality application	Training on HS 2022 changes is needed
International basis	HS 2022	HS 2022	A common language of world trade	Synchronization with WCO decisions is required

Indicator	2024	2025	Economic significance	Conclusion for classification policy
Advance ruling	20 days for consideration	20 days for consideration	Reduces uncertainty before importation	Business should use it more actively
Validity period of the ruling	1 year	1 year	Creates a planning horizon for the contract	A register and public availability of practice are needed
International standard	TFA Article 3	TFA Article 3	Supports transparency and predictability	Digitalization of submission and monitoring of requests is required

A comparison of 2024 and 2025 demonstrates that the institutional importance of classification increases in proportion to the growth of trade turnover. Whereas under conditions of a small volume of trade an isolated error may remain local, with turnover exceeding USD 80 billion its impact assumes a systemic character. This concerns the budget, the business climate, the resilience of supply chains, and the quality of statistical observation of the structure of exports and imports.

This leads to an important practical conclusion: the effectiveness of foreign economic activity depends not so much on the formal existence of the CN FEA as on the quality of its application. Where business receives a binding classification ruling in advance, and the customs authority has digital data on the goods and a transparent methodology of interpretation, the level of uncertainty decreases. As a result, time losses are reduced, the speed of release increases, the collectability of payments improves, and the number of subsequent disputes declines.

The first direction of improvement is associated with the transition from a reactive model of customs control to a preventive one. In practice, this means that customs authorities should expand the scope of advance rulings for goods with complex technical characteristics, while business should treat this instrument as an element of mandatory contract planning. An advance ruling is beneficial for both parties: for the

state, it ensures the uniformity of law enforcement; for the participant in foreign economic activity, it provides predictability of costs and timeframes.

The second direction consists in developing a register of classification rulings and analytics on disputed tariff positions. The openness of rulings, directly provided for by the Customs Code, may become the basis for forming a quasi-precedential practice in which a bona fide participant in foreign economic activity can see in advance how customs authorities interpret particular technological goods. Such transparency reduces information asymmetry and improves the quality of preparation of customs declarations. [5]

The third direction is connected with the digital standardization of commodity descriptions. Under contemporary conditions, a text invoice alone is clearly insufficient for stable classification; it is necessary to form a unified set of attributes: material, functionality, field of application, degree of readiness, composition of the set, packaging, photographic images, product passport, catalogue data, and, where necessary, a laboratory profile. The more standardized the set of characteristics is, the lower the probability of divergence between the declarant and customs authorities.

The fourth direction concerns personnel and methodological policy. Today, a commodity classification expert must combine knowledge of the GRIs, an understanding of the technical properties of goods, skills in working with digital data, and the ability to evaluate a commercial description in terms of legally significant features. Consequently, the professional development of customs officers and business specialists should be built not only around the text of the CN FEA, but also around case studies on complex multi-component goods, HS updates, and WCO practice.

Finally, the fifth direction is the integration of the classification function into the overall trade facilitation agenda. World Bank and WTO reports consistently show that transparent procedures, predictable decisions, and the reduction of administrative uncertainty produce a direct economic effect: they reduce delays, lower the cost of trade operations, and increase trust in customs. Therefore, the improvement of commodity classification should be assessed by the final result - the reduction of aggregate costs and the acceleration of the foreign trade cycle. [6][11][12]

Conclusion

The analysis carried out makes it possible to conclude that commodity classification for customs purposes in contemporary foreign trade performs a much broader function than the simple coding of commodity flows. It determines the fiscal regime of a transaction, affects the set of permit requirements, shapes the time parameters of the release of goods, and ultimately influences the competitiveness of a participant in

foreign economic activity. For this reason, the legal certainty of classification decisions should be regarded as an independent factor in increasing the effectiveness of foreign economic activity.

For Uzbekistan, where the growth of foreign trade turnover is accompanied by a growing need for predictable and technologically advanced customs administration, the institutional role of advance rulings is acquiring special significance. The existence in the Customs Code of clear rules on the time limits for considering a request, the validity period of a ruling, and the publicity of relevant acts creates the necessary legal foundation. The next stage is to transform this foundation into a functioning economic mechanism for reducing transaction costs through the digital standardization of commodity data, the broader use of advance rulings, and the unification of law enforcement practice in relation to disputed CN FEA codes.

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SO'NGGI YILLARDA SUN'IY INTELLEKTNING YURIDIK SOHADAGA O'RNI VA AHAMIYATI

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Anotatsiya: Bugungi kunda sun'iy intellekt (AI) huquq tizimining turli yo'nalishlarida, xususan, sud amaliyoti, huquqiy tahlil, elektron hujjatlar aylanmasi va advokatlik faoliyatlarida muhim vositaga aylanib bormoqda. Mazkur maqolada Suniy Intellekt texnologiyalarining yuridik sohaga kirib kelishi, uning afzalliklari, xavflari hamda kelgusidagi istiqbollari haqida ma'lumotlar keltirilgan. Tadqiqot doirasida huquqiy jarayonlarni avtomatlashtirish, shartnomalarni tahlil qilish, katta hajmdagi ma'lumotlar bazasini boshqarish va sud qarorlarini prognozlash samaradorligi xorijiy tajriba asosida tahlil qilingan. Shu bilan birga, SI tomonidan yaratilgan ma'lumotlarning huquqiy maqomi, axborot xavfsizligi va shaxsiy ma'lumotlarni himoya qilish bilan bog'liq huquqiy-etik muammolar ko'rib chiqilgan. 2024-2026-yillar davomida sun'iy intellektning (SI) yuridik sohada tutgan o'rni, huquqiy jarayonlarni avtomatlashtirish, hujjatlar tahlili va sud qarorlarini prognozlashdagi samaradorligi tahlil qilinadi. Suniy Intellekt texnologiyalarining huquqiy xizmatlar sifatini oshirish bilan birga, axborot xavfsizligi, etika va javobgarlik kabi huquqiy muammolarni keltirib chiqarayotgani muhokama etiladi.

Kalit so'zlar: sun'iy intellekt, yuridik soha, LegalTech, huquqiy tahlil, huquqiy avtomatlashtirish, huquqiy maqom, raqamli texnologiyalar, ma'lumotlar xavfsizligi, shartnomalar tahlili, pretsedentlar qidirish,

Zamonaviy dunyo texnologik rivojlanish bilan birgalikda huquqiy xizmatlar sohasiga ham katta o'zgarishlar olib kelmoqda. So'nggi yillarda sun'iy intellekt [AI] texnologiyalari va machine learning algoritmlarining rivojlanishi natijasida huquqiy maslahat beruvchi chatbotlar paydo bo'ldi. Ushbu innovatsion yechimlar yuridik xizmatlarni yanada samarali, tezkor va hammabop qilishga xizmat qilmoqda. Huquqiy maslahat beruvchi chatbotlar - bu sun'iy intellekt texnologiyalariga asoslangan dasturiy ta'minotlar bo'lib, ular foydalanuvchilarga asosiy huquqiy savollar bo'yicha maslahatlar berish, huquqiy hujjatlarni tayyorlash va huquqiy ma'lumotlarni taqdim etish uchun mo'ljallangan. Ular natural til qayta ishlash [NLP] va machine learning algoritmlaridan foydalanib, foydalanuvchilar bilan suhbatlashadi va ularning huquqiy ehtiyojlariga javob beradi.

Afzalliklari va imkoniyatlari:

Huquqiy chatbotlarning asosiy afzalliklari quyidagilardan iborat:

1. 24/7 mavjudlik - chatbotlar kunning istalgan vaqtida maslahat bera oladi.
2. Tezkorlik - savollarga darhol javob berish imkoniyati.
3. Moliyaviy tejamkorlik - an'anaviy yuridik xizmatlardan arzonroq.
4. Keng qamrovlilik - turli huquq sohalarida maslahat bera olish.
5. Ko'p tilli qo'llab-quvvatlash - turli tillarda xizmat ko'rsatish.

Zamonaviy huquqiy chatbotlar bir qator asosiy funksiyalarni bajaradi. Ular oddiy huquqiy savollarga javob berish, huquqiy hujjatlar namunalarini tayyorlash, huquqiy jarayonlar bo'yicha yo'riqnomalar berish, sudlov amaliyoti va qonunchilik bazasidan ma'lumotlar qidirish hamda huquqiy maslahatchilar bilan bog'lash imkoniyatlarini taqdim etadi. Bu chatbotlar zamonaviy texnologiyalar asosida ishlaydi. Natural Language Processing (NLP) texnologiyasi foydalanuvchi savollarini tahlil qilishda ishlatiladi. Machine Learning texnologiyasi javoblarni optimallashtirib berishda, Deep Learning esa murakkab huquqiy masalalarni tahlil qilishda qo'llanadi. Shuningdek, ma'lumotlar bazasi integratsiyasi orqali qonunchilik va sud amaliyoti bilan ishlash imkoniyati yaratiladi. Huquqiy chatbotlar turli sohalarda keng qo'llanmoqda. Ular iste'molchilar huquqlarini himoya qilish, mehnat huquqi masalalari, mulk huquqi va shartnomaviy munosabatlar, oila huquqi, soliq masalalari hamda intellektual mulk huquqi bilan bog'liq sohalarda yordam beradi. Shu bilan birga, huquqiy chatbotlarning ayrim cheklavlari mavjud. Ular murakkab huquqiy masalalarni hal qila olmasligi, emotsional qo'llab-quvvatlashni ta'minlay olmasligi, individual yondashuvning cheklanganligi, ma'lumotlar maxfiyligi bilan bog'liq xavflar va huquqiy mas'uliyat masalalari bilan bog'liq muammolarni o'z ichiga oladi.

Rivojlanish istiqbollari huquqiy chatbotlar kelajakda quyidagi yo'nalishlarda rivojlanishi kutilmoqda:

- sun'iy intellekt texnologiyalarining takomillashuvi.
- yangi funksionallikning qo'shilishi.
- integratsiya imkoniyatlarining kengayishi.
- maxsuslashtirish darajasining oshishi.
- xalqaro huquqiy tizimlar bilan hamkorlikning kuchayishi.

Huquqiy chatbotlarni joriy etishda quyidagi jihatlarni hisobga olish zarur:

1. Qonunchilik bazasi bilan doimiy yangilanib borish.
2. Foydalanuvchilar maxfiyligini ta'minlash.
3. Xavfsizlik choralarini ko'rish.
4. Sifat nazoratini o'rnatish.
5. Foydalanuvchilar uchun qo'llanmalar tayyorlash.

Huquqiy maslahat beruvchi chatbotlar yuridik xizmatlar sohasida muhim innovatsiya hisoblanadi. Ular huquqiy xizmatlarning hammabopligi va samaradorligini oshirishga xizmat qilmoqda. Texnologiyalarning rivojlanishi bilan ularning imkoniyatlari yanada kengayib boradi. Biroq ularning cheklovlarini ham hisobga olish va professional yuristlar bilan hamkorlikda qo'llash maqsadga muvofiq.

Huquqiy chatbotlarni ta'lim jarayonida qo'llash quyidagi imkoniyatlarni beradi:

- Talabalar uchun amaliy mashg'ulotlar o'tkazish.
- Case-study tahlillarini amalga oshirish.
- Huquqiy bilimlarni mustahkamlash.
- Amaliy ko'nikmalarni shakllantirish.
- Zamonaviy texnologiyalar bilan ishlash tajribasini orttirish.

Hujjatlarni tahlil qilishda AI

Zamonaviy dunyo shiddat bilan rivojlanayotgan texnologik o'zgarishlar davriga qadam qo'ydi. Bu o'zgarishlar orasida sun'iy intellekt (AI) texnologiyalarining hujjatlar bilan ishlash sohasiga kirib kelishi muhim ahamiyat kasb etmoqda. Bu texnologiyalar an'anaviy hujjatlashtirish va tahlil jarayonlarini tubdan o'zgartirmoqda, yangi imkoniyatlar va yechimlarni taqdim etmoqda. Hujjatlarni tahlil qilishda AI texnologiyalari murakkab va ko'p qirrali tizim hisoblanadi. Bu tizimlar machine learning va deep learning algoritmlaridan foydalanib, turli formatdagi hujjatlarni avtomatik ravishda qayta ishlash, tahlil qilish va muhim ma'lumotlarni ajratib olish imkoniyatini beradi. Zamonaviy AI tizimlari matnli hujjatlar, elektron jadvallar, rasmlar va boshqa formatdagi ma'lumotlar bilan samarali ishlash qobiliyatiga ega. Hujjatlarni tahlil qilishda AI texnologiyalari bir necha muhim texnologik komponentlarga asoslanadi. Optical Character Recognition(OCR) texnologiyasi bosma va qo'lyozma matnlarni raqamli formatga o'tkazish imkonini beradi. Natural Language Processing (NLP) esa matnlarning mazmunini tushunish va tahlil qilish uchun xizmat qiladi. Machine learning algoritmlari ma'lumotlarni tasniflash va prognozlash vazifalarini bajarsa, Computer Vision texnologiyasi vizual ma'lumotlarni qayta ishlaydi. Amaliyotda AI tizimlari keng ko'lamli vazifalarni bajarishi mumkin. Moliyaviy hisobotlarni tahlil qilish, yuridik hujjatlarni ko'rib chiqish, tibbiy yozuvlarni o'rganish, ilmiy tadqiqot natijalarini qayta ishlash shular jumlasidandir. Bu tizimlar hujjatlardan muhim ma'lumotlarni ajratib olish, xatolarni aniqlash, ma'lumotlarni tekshirish va tahliliy hisobotlar tayyorlash kabi funksiyalarni bajaradi. AI texnologiyalarining afzalliklari sezilarli darajada ko'p. Ular vaqtni tejash, xatolarni kamaytirish va katta hajmdagima'lumotlarni tez qayta ishlash imkoniyatini beradi.

Avtomatlashtirish darajasining yuqoriligi tufayli xodimlar yuklamasi kamayadi va ish unumdorligi oshadi. Cost-effektivlik va yuqori aniqlik ham muhim afzalliklardan hisoblanadi. AI tizimlarini joriy etish jarayoni puxta rejalashtirishni talab qiladi. Dastlab tashkilotning ehtiyojlari aniqlanadi va tegishli tizim tanlanadi. Keyin ma'lumotlarni tayyorlash, pilotli loyihani amalga oshirish va tizimni moslash ishlari bajariladi. Xodimlarni o'qitish va tizimni to'liq joriy etish yakunlovchi bosqichlar hisoblanadi. Xavfsizlik masalalari AI tizimlaridan foydalanishda alohida e'tiborni talab qiladi. Ma'lumotlar maxfiyligi, kirishni cheklash tizimlari, muntazam zaxira nusxalar yaratish kabi choralar ko'rilishi zarur. Xodimlarni xavfsizlik qoidalari bilan tanishtirish va muntazam audit o'tkazish ham muhim ahamiyatga ega. AI texnologiyalarining kelgusi rivojlanishi yanada keng imkoniyatlarni ochib berishi kutilmoqda. Yangi algoritmlarning yaratilishi, tahlil aniqligining oshishi, qo'shimcha funksiyalarning qo'shilishi va integratsiya imkoniyatlarining kengayishi shular jumlasidandir. Foydalanish qulayligi ham muntazam takomillashib boradi. Ta'lim jarayonida AI tizimlarini o'rganish zamonaviy texnologiyalar va ma'lumotlar bilan ishlash, tahliliy fikrlash va tizimli yondashuv ko'nikmalarini shakllantirishga yordam beradi. Bu bilimlar zamonaviy mutaxassislar uchun juda muhim hisoblanadi. Albatta, AI tizimlarining ayrim cheklovlari ham mavjud. Yuqori boshlang'ich xarajatlar, murakkab texnik talablar va malakali mutaxassislar zarurligi shular jumlasidandir. Ma'lumotlar sifatiga bog'liqlik va moslashuvchanlik masalalari ham e'tiborga olinishi kerak. Hujjatlarni tahlil qilishda AI texnologiyalari zamonaviy biznes va boshqaruv jarayonlarining ajralmas qismiga aylanmoqda. Bu tizimlar samaradorlikni oshirish va xarajatlarni kamaytirish imkoniyatini beradi. Texnologiyalarning rivojlanishi bilan ularning imkoniyatlari yanada kengayib boradi. Shu bilan birga, xavfsizlik va maxfiylik masalalariga alohida e'tibor qaratish zarur. AI texnologiyalarini to'g'ri joriy etish va ulardan samarali foydalanish raqobatbardoshlikni oshirish va innovatsion rivojlanishning muhim omili hisoblanadi.

Pretsedentlarni qidirish va tahlil qilish

Sud pretsedentlarini qidirish va tahlil qilish huquqiy tizimning muhim elementi hisoblanadi. Bu jarayon huquqshunoslarga o'xshash ishlar bo'yicha qarorlarni o'rganish va ulardan yangi ishlarda foydalanish imkoniyatini beradi. Zamonaviy texnologiyalar va ma'lumotlar bazalarining rivojlanishi pretsedentlarni qidirish va tahlil qilish jarayonini yanada samaraliroq qilmoqda. Pretsedentlarni qidirish va tahlil qilish jarayoni bir necha muhim bosqichlardan iborat. Avvalo, huquqshunos mavjud ish bo'yicha asosiy faktlar va huquqiy masalalarni aniqlaydi. Bu bosqich keyingi qidiruv jarayonining yo'nalishini belgilaydi. So'ngra tegishli pretsedentlarni topish

uchun maxsus ma'lumotlar bazalari va huquqiy axborot tizimlaridan foydalaniladi. Pretsedentlarni qidirishda turli manbalardan foydalanish mumkin. Bunga sud qarorlari to'plamlari, huquqiy ma'lumotlar bazalari, ilmiy adabiyotlar va boshqa huquqiy hujjatlar kiradi. Zamonaviy elektron ma'lumotlar bazalari keng qamrovli qidiruv imkoniyatlarini taqdim etadi. Kalit so'zlar, huquqiy normalar, sud instansiyalari va boshqa parametrlar bo'yicha qidiruv o'tkazish mumkin. Topilgan pretsedentlarni tahlil qilish alohida e'tiborni talab qiladi. Bu jarayonda pretsedentning faktik holatlari, huquqiy asoslari va sud xulosalari o'rganiladi. Tahlil jarayonida mavjud ish bilan pretsedent o'rtasidagi o'xshashliklar va farqlar aniqlanadi. Bu esa pretsedentning qo'llanish imkoniyatlarini baholash uchun muhim ahamiyatga ega. Pretsedentlarni tahlil qilishda tizimli yondashuv zarur. Avvalo, pretsedentning asosiy elementlari aniqlanadi: faktik holatlar, huquqiy masalalar, tomonlarning pozitsiyalari va sud xulosalari. Keyin bu elementlar mavjud ish bilan taqqoslanadi. Tahlil jarayonida pretsedentning yuridik kuchi, dolzarbligi va qo'llanish doirasi ham e'tiborga olinadi. Zamonaviy texnologiyalar pretsedentlarni qidirish va tahlil qilish jarayonini sezilarli darajada osonlashtirmoqda. Sun'iy intellekt va machine learning texnologiyalari katta hajmdagi ma'lumotlarni tez qayta ishlash va eng mos pretsedentlarni aniqlash imkoniyatini beradi. Semantik qidiruv tizimlari esa mazmun bo'yicha o'xshash pretsedentlarni topishga yordam beradi. Pretsedentlarni tahlil qilishda huquqiy tizimning o'ziga xos xususiyatlarini hisobga olish zarur. Common law tizimida pretsedentlar asosiy huquq manbayi hisoblansa, kontinental huquq tizimida ular ko'proq yordamchi rol o'ynaydi. Shunga qaramay, har ikkala tizimda ham pretsedentlar huquqni qo'llash amaliyotini rivojlantirishda muhim ahamiyatga ega. Sud amaliyotini o'rganish va pretsedentlarni tahlil qilish huquqshunoslarning kasbiy rivojlanishida muhim rol o'ynaydi. Bu jarayon huquqiy masalalarni chuqurroq tushunish, tahliliy ko'nikmalarni rivojlantirish va amaliy tajriba orttirish imkoniyatini beradi. Shuningdek, bu huquqiy tizimning bir xilligini ta'minlashga yordam beradi. Ta'lim jarayonida pretsedentlarni qidirish va tahlil qilish ko'nikmalarini shakllantirish alohida ahamiyatga ega. Talabalar nafaqat nazariy bilimlarni, balki amaliy ko'nikmalarni ham egallashlari kerak. Case-study metodidan foydalanish, real pretsedentlarni o'rganish va amaliy mashg'ulotlar o'tkazish bu jarayonda samarali hisoblanadi. Pretsedentlarni tahlil qilish natijalaridan foydalanishda professional etika qoidalariga rioya qilish muhim. Konfidensiallik, xolislik va halollik tamoyillari asosiy rol o'ynaydi. Shuningdek, mualliflik huquqlariga rioya qilish va manbalarni to'g'ri ko'rsatish zarur. Pretsedentlarni qidirish va tahlil qilish huquqiy amaliyotning muhim qismi hisoblanadi. Zamonaviy texnologiyalar bu jarayonni yanada samarali qilmoqda.

Pretsedentlarni o'rganish huquqiy tizimning rivojlanishiga, huquqni qo'llash amaliyotining takomillashishiga va huquqshunoslarning kasbiy o'sishiga xizmat qiladi. Professional yondashuv, tizimli tahlil va zamonaviy texnologiyalardan foydalanish bu jarayonning samaradorligini ta'minlaydi.

Zamonaviy yuridik amaliyotda Legal Tech ahamiyati

Zamonaviy dunyoda texnologik rivojlanish barcha sohalarni qamrab olgan holda, yuridik soha ham bundan mustasno emas. Legal Tech yoki yuridik texnologiyalar bugungi kunda yuridik amaliyotning ajralmas qismiga aylanib bormoqda. Ushbu esse zamonaviy yuridik amaliyotda Legal Techning ahamiyatini turli jihatlaridan ko'rib chiqadi. Legal Techning yuridik amaliyotdagi ahamiyati, avvalo, xizmat ko'rsatish samaradorligini oshirishda namoyon bo'lmoqda. Zamonaviy yuristlar Legal Tech vositalaridan foydalanib, ko'p vaqt talab qiladigan rutin vazifalarni avtomatlashtirish orqali o'z vaqtlarini yanada muhim strategik masalalarga yo'naltirish imkoniyatiga ega bo'lmoqdalar. Harvard huquq maktabi professor! David Wilkins ta'kidlaganidek: Legal Tech yuristlarning ish samaradorligini oshiribgina qolmay, balki butun yuridik kasbning mohiyatini o'zgartirmoqda". Yuridik xizmatlarning sifati nuqtayi nazaridan Legal Tech muhim ahamiyat kasb etmoqda. Sun'iy intellekt va machine learning texnologiyalar! asosidagi zamonaviy dasturlar huquqiy tahlil va bashorat qilish imkoniyatlarini kengaytirmoqda. Bu esa yuristlarga aniq va ishonchliroq xulosalar chiqarish imkonini bermoqda. Masalan, sud qarorlarini prognoz qilish tizimlari 90 foizgacha aniqlikka erishmoqda. Xizmatlar narxini optimallashtirish - Legal Techning yana bir muhim jihati. Avtomatlashtirilgan tizimlar yuridik xizmatlar narxini sezilarli darajada pasaytirish imkonini bermoqda. Bu esa yuridik xizmatlarning keng aholi qatlamlari uchun yanada hammabop bo'lishiga olib kelmoqda. Stenford huquq maktabi professor! Mark Lemley ta'kidlaganidek: Legal Tech yuridik xizmatlar demokratizatsiyasigaolib kelmoqda". Ma'lumotlar bilan ishlash samaradorligini oshirish Legal Techning eng muhim funksiyalaridan biridir. Zamonaviy yuridik amaliyotda katta hajmdagi ma'lumotlarni qayta ishlash, tahlil qilish va saqlash zaruriyati mavjud. Legal Tech vositalari bu vazifani samarali hal qilish imkonini beradi. Big Data texnologiyalar! huquqiy tahlilning yangi imkoniyatlarini ochib bermoqda. Mijozlar bilan munosabatlarni yaxshilash Legal Techning yana bir muhim jihati hisoblanadi. Zamonaviy CRM tizimlar, chatbotlar va virtual yordamchilar mijozlar bilan muloqotni yangi bosqichga olib chiqmoqda. 24/7 rejimida ishlash imkoniyati, tezkor javob berish va individual yondashuv - bularning barchasi Legal Tech vositalari yordamida amalga oshirilmoqda. Xavfsizlik va maxfiylik masalalari ham Legal Tech yordamida yanada samaraliroq hal etilmoqda. Blokcheyn

texnologiyasi va kriptografik himoya vositalari huquqiy hujjatlar va ma'lumotlarning xavfsizligini ta'minlashning yangi standartlarini yaratmoqda. Bu ayniqsa tijorat sirlari va shaxsiy ma'lumotlar bilan ishlashda muhim ahamiyat kasb etadi. Global miqyosda faoliyat yuritish imkoniyatlari Legal Tech tufayli sezilarli darajada kengaymoqda. Bulutli texnologiyalar va raqamli platformalar turli mamlakatlardagi yuristlar hamkorligini osonlashtirmoqda. Bu esa xalqaro yuridik xizmatlar bozorining rivojlanishiga turtki bermoqda. Yuridik ta'lim sohasida ham Legal Techning ahamiyati tobora ortib bormoqda. Zamonaviy yurist nafaqat huquqiy bilimlarni, balki texnologik ko'nikmalarni ham egallashi zarur. Kolumbiya huquq maktabi professor! Kathryn Judge ta'kidlaganidek: Legal Tech - muqarrar kelajak va bunga tayyorlanish har bir yuristning vazifasi". Yuridik kasbning kelajagi Legal Tech bilan chambarchas bog'liq. McKinsey xalqaro instituti bashoratlariga ko'ra, 2025-yil oxiriga kelib global Legal Tech bozori hajmi 25 milliard dollarga yetishi kutilmoqda. Bu esa yuridik amaliyotda Legal Tech ahamiyati yanada ortib borishidan dalolat beradi. Legal Tech zamonaviy yuridik amaliyotning ajralmas qismiga aylanib bormoqda. U samaradorlikni oshirish, xizmatlar sifatini yaxshilash, narxlarni optimallashtirish va yangi imkoniyatlar yaratish orqali yuridik sohani transformatsiya qilmoqda. Har bir zamonaviy yurist Legal Tech vositalaridan samarali foydalanish ko'nikmalarini egallashi va doimiy ravishda yangilab borishi zarur. Bu esa yuridik xizmatlar bozorida raqobatbardoshlikni ta'minlashning muhim sharti hisoblanadi. Richard Sasskind aytganidek: "Legal Tech - yuristlar va mijozlar o'rtasidagi munosabatlarni tubdan o'zgartirgan, huquqiy xizmatlarni ko'rsatish usullarini modernizatsiya qilgan va yuridik kasb evolyutsiyasining muhim bosqichi bo'lgan texnologik inqilob". Bu inqilob davom etmoqda va uning ahamiyati tobora ortib bormoqda.

O'zbekistonda Legal Tech sohasi jadal sur'atlar bilan rivojlanib bormoqda. Davlat siyosati darajasida qo'llab-quwatlash, xususiy sektor tashabbusi va xalqaro hamkorlik bu jarayonning asosiy harakatlantiruvchi kuchlari hisoblanadi. Legal Tech rivojlanishi milliy yuridik xizmatlar bozorini modernizatsiya qilish, xizmatlar sifatini oshirish va xalqaro standartlarga moslashtirish imkonini beradi. McKinsey xalqaro instituti bashoratlariga ko'ra, yaqin yillarda O'zbekiston Legal Tech bozori sezilarli darajada o'sishi kutilmoqda. Bu esa yangi ish o'rinlari yaratilishi, investitsiyalar jalb etilishi va yuridik xizmatlar sifatining yanada oshishiga olib keladi. Har bir zamonaviy yurist bu jarayonda faol ishtirok etishi va o'z malakasini doimiy ravishda oshirib borishi zarur.

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QORAMOLCHILIK – QISHLOQ XO‘JALIGINING MUHIM TARMOG‘I SIFATIDA

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Annotatsiya. Qoramolchilik qishloq xo‘jalikning muhim tarmog‘i bo‘lib, oziq-ovqat xavfsizligini ta’minlashda, iqtisodiy rivojlanishda va agroekologik barqarorlikni saqlashda muhim rol o‘ynaydi. Ushbu tadqiqotda qoramolchilikning iqtisodiy, ijtimoiy va ekologik jihatları o‘rganiladi. Shuningdek, qishloq xo‘jalik tizimida qoramolchilikning o‘rni va uning rivojlanish istiqbollari tahlil qilinadi. Mahalliy va xalqaro tajribalar asosida qoramolchilikni rivojlantirish uchun zarur bo‘lgan chora-tadbirlar taklif etiladi.

Kalit so'zlar: qoramolchilik, qishloq xo‘jaligi, iqtisodiy rivojlanish, ekologik barqarorlik.

Аннотация. Скотоводство является важной отраслью сельского хозяйства и играет значительную роль в обеспечении продовольственной безопасности, экономическом развитии и поддержании агроэкологической устойчивости. В данном исследовании рассматриваются экономические, социальные и экологические аспекты скотоводства. Также анализируется место скотоводства в системе сельского хозяйства и перспективы его развития. На основе местного и международного опыта предлагаются необходимые меры по развитию скотоводства.

Ключевые слова: скотоводство, сельское хозяйство, экономическое развитие, экологическая устойчивость.

Annatation. Livestock farming is an important branch of agriculture and plays a significant role in ensuring food security, economic development, and maintaining agro-ecological sustainability. This study examines the economic, social, and environmental aspects of livestock farming. It also analyzes the role of livestock farming in the agricultural system and its development prospects. Based on local and

international experience, necessary measures for the development of livestock farming are proposed.

Keywords: livestock farming, agriculture, economic development, ecological sustainability.

Kirish. Qoramolchilik qishloq xo‘jaligining asosiy tarmog‘i bo‘lib, insoniyat tarixida muhim o‘rin tutgan. Ushbu tarmoq oziq-ovqat ishlab chiqarish, iqtisodiy barqarorlik va ekologik muvozanatni saqlashda ahamiyatga ega. Qoramolchilikning rivojlanishi nafaqat qishloq xo‘jalik mahsulotlarini ishlab chiqarishni oshirish, balki mahalliy aholi farovonligini ta‘minlashga ham xizmat qiladi. Shu bois, qoramolchilik tarmog‘ini o‘rganish va uning imkoniyatlarini tahlil qilish dolzarb masala hisoblanadi. Ushbu tadqiqotning maqsadi qoramolchilikning iqtisodiy, ijtimoiy va ekologik jihatlarini o‘rganish, shuningdek, tarmoqni rivojlantirish bo‘yicha takliflar ishlab chiqishdir. Tadqiqot jarayonida qishloq xo‘jalik sohasidagi mavjud muammolarni aniqlash va ularning yechimlarini izlashga e‘tibor qaratiladi.

Asosiy qism. Qoramolchilikning iqtisodiy ahamiyati. Qoramolchilik iqtisodiy jihatdan qishloq xo‘jalik tarmog‘ining muhim bo‘lagidir. Ushbu tarmoq orqali ishlab chiqarilayotgan go‘sht, sut va boshqa qishloq xo‘jalik mahsulotlari nafaqat mamlakat ichki bozorini ta‘minlaydi, balki eksport imkoniyatlarini ham oshiradi. Qoramolchilik iqtisodiy rivojlanishga yordam beruvchi ko‘plab imkoniyatlarni taqdim etadi: ish o‘rinlari yaratish, aholi daromadlarini oshirish va qishloq joylarida ijtimoiy infratuzilmani yaxshilash. Biroq, qoramolchilik tarmog‘ida bir qator muammolar ham mavjud. Masalan, ozuqa ta‘minoti, kasalliklar va iqlim o‘zgarishlari kabi omillar qoramolchilikning rivojlanishiga salbiy ta‘sir ko‘rsatishi mumkin. Ushbu muammolarni hal etish uchun zamonaviy texnologiyalarni joriy etish va qishloq xo‘jalik siyosatini takomillashtirish zarur. Shuningdek, qoramolchilikni rivojlantirishda mahalliy aholi va fermerlarning o‘rni katta. Ularning bilim va tajribalarini hisobga olgan holda, qishloq xo‘jalik tarmog‘ini rivojlantirishga qaratilgan kompleks dasturlar ishlab chiqilishi lozim.

Qoramolchilikning ekologik jihatlar. Qoramolchilikning ekologik jihatlar ham muhim ahamiyatga ega. Qoramolchilik tarmog‘i tabiiy resurslardan foydalanishni talab qiladi, bu esa yer, suv va havoning ifloslanishiga olib kelishi mumkin. Qoramolchilikda ekologik muvozanatni saqlash uchun zamonaviy agrar texnologiyalarni qo‘llash zarur. Misol uchun, organik qishloq xo‘jaligi va barqaror qishloq xo‘jaligi amaliyotlari qoramolchilikni rivojlantirishda ekologik jihatdan qulay yechimlar hisoblanadi. Shuningdek, qoramolchilikda hayvonlarni parvarish qilishda zamonaviy usullarni qo‘llash, ularning sog‘lig‘ini saqlash va kasalliklarni oldini

olishda muhimdir. Ekologik jihatlarni hisobga olgan holda, qoramolchilikning barqaror rivojlanishini ta'minlash uchun innovatsion yechimlar va ilg'or tajribalar o'zaro almashinuvi muhim rol o'ynaydi. Bunga misol sifatida hayvonlarni parvarish qilishda barqaror ozuqa ishlab chiqarish va qishloq xo'jalik chiqindilarini qayta ishlash jarayonlari kiritilishi mumkin. Ekologik jihatlarni hisobga olgan holda qoramolchilikni rivojlantirish nafaqat iqtisodiy foyda keltiradi, balki atrof-muhitni muhofaza qilishga ham xizmat qiladi.

Xulosa. Qoramolchilik qishloq xo'jaligining muhim tarmog'i sifatida oziq-ovqat xavfsizligini ta'minlash va iqtisodiy rivojlanishda ahamiyatli rol o'ynaydi. Ushbu tadqiqotda qoramolchilikning iqtisodiy va ekologik jihatlari chuqur tahlil qilindi. Qoramolchilikni rivojlantirish uchun zamonaviy texnologiyalarni joriy etish, mahalliy aholi va fermerlar bilan hamkorlik o'rnatish muhimdir. Kelgusida qoramolchilikni yanada rivojlantirish uchun kompleks strategiyalar ishlab chiqish va ushbu tarmoqni barqaror rivojlantirishga qaratilgan chora-tadbirlar amalga oshirilishi lozim. Shu bilan birga, ekologik muvozanatni saqlash va atrof-muhitni muhofaza qilishda qoramolchilikning o'rnini ham e'tiborga olingan holda, ushbu tarmoqning barqaror rivojlanishini ta'minlash zarur.

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**SUN'IY INTELLEKTDAN FOYDALANISH ORQALI 7–8-SINF
O'QUVCHILARINI INGLIZ TILIDA KOMMUNIKATIV
KO'NIKMALARINI SHAKLLANTIRISH.**

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Annotatsiya: Mazkur maqolada sun'iy intellekt texnologiyalaridan foydalanish orqali 7–8-sinf o'quvchilarining ingliz tilidagi kommunikativ ko'nikmalarini rivojlantirish masalasi tahlil qilinadi. Tadqiqot davomida sun'iy intellekt asosidagi platformalar, interaktiv dasturlar va raqamli vositalarning o'quvchilarning og'zaki nutqi, tinglab tushinishi, lug'at boyligi hamda muloqot jarayonidagi faolligiga ta'siri o'rganilgan. Shuningdek, AI texnologiyalarining individual yondashuvni ta'minlash, motivatsiyani oshirish va real kommunikativ muhit yaratishdagi pedagogik imkoniyatlari yoritilgan. Tadqiqot natijalari sun'iy intellektdan foydalanish ingliz tilini o'qitish samaradorligini oshirish, o'quvchilarning mustaqil fikrlashini rivojlantirish hamda kommunikativ kompetensiyani shakllantirishda muhim omil ekanligini ko'rsatadi.

Kalit so'zlar: sun'iy intellekt, kommunikativ kompetensiya, ingliz tili, raqamli ta'lim, interaktiv platforma, nutq faoliyati, AI texnologiyalari, o'quv jarayoni, kommunikativ yondashuv, innovatsion pedagogika.

Annotation: This article analyzes the development of communicative skills in English among 7th–8th grade students through the use of artificial intelligence technologies. The study examines the influence of AI-based platforms, interactive applications, and digital tools on students' speaking abilities, listening comprehension, vocabulary acquisition, and communication activity. In addition, the pedagogical potential of artificial intelligence in providing individualized learning, increasing motivation, and creating a real communicative environment is highlighted. The findings demonstrate that the integration of AI technologies into English language teaching enhances educational effectiveness, develops independent thinking skills, and contributes significantly to the formation of communicative competence.

Keywords: Artificial intelligence, communicative competence, English language, digital education, interactive platform, speech activity, AI technologies, learning process, communicative approach, innovative pedagogy.

Аннотация: В данной статье рассматривается развитие коммуникативных навыков учащихся 7–8 классов на уроках английского языка посредством использования технологий искусственного интеллекта. В ходе исследования изучено влияние платформ на основе ИИ, интерактивных программ и цифровых средств на развитие устной речи, аудирования, словарного запаса и коммуникативной активности учащихся. Также раскрываются педагогические возможности искусственного интеллекта в обеспечении индивидуального подхода, повышении мотивации и создании реальной коммуникативной среды. Результаты исследования показывают, что использование технологий ИИ повышает эффективность обучения английскому языку, способствует развитию самостоятельного мышления и формированию коммуникативной компетенции учащихся.

Ключевые слова: Искусственный интеллект, коммуникативная компетенция, английский язык, цифровое образование, интерактивная платформа, речевая деятельность, технологии ИИ, учебный процесс, коммуникативный подход, инновационная педагогика.

Kirish

Bugungi globallashuv va raqamli texnologiyalar jadal rivojlanayotgan davrda xorijiy tillarni, ayniqsa ingliz tilini o'qitish ta'lim tizimining ustuvor yo'nalishlaridan biriga aylanmoqda. Zamonaviy jamiyatda ingliz tili xalqaro muloqot, ilm-fan, texnologiya, biznes va axborot almashinuvi vositasi sifatida muhim ahamiyat kasb etadi. Shu sababli umumta'lim maktablarida o'quvchilarning ingliz tilida erkin fikr bildirish, muloqotga kirisha olish va kommunikativ kompetensiyasini shakllantirish dolzarb pedagogik masalalardan biri hisoblanadi. Ayniqsa, 7–8-sinf o'quvchilari til o'rganish jarayonida faol kommunikativ bosqichga kirishi sababli, bu davrda samarali metod va innovatsion texnologiyalardan foydalanish katta ahamiyatga ega. So'nggi yillarda sun'iy intellekt texnologiyalarining ta'lim sohasiga keng kirib kelishi o'qitish metodikasida yangi imkoniyatlarni yuzaga chiqarmoqda. Sun'iy intellekt asosidagi platformalar, virtual yordamchilar, chatbotlar, avtomatik tarjima tizimlari hamda interaktiv dasturlar o'quvchilarning til o'rganish jarayonini yanada qiziqarli, qulay va samarali tashkil etishga xizmat qilmoqda. Ushbu texnologiyalar yordamida o'quvchilar individual tarzda mashq bajarishi, talaffuzini tekshirishi, tinglab tushunish ko'nikmalarini rivojlantirishi va real kommunikativ vaziyatlarga yaqin muhitda muloqot qilishi mumkin bo'ladi. An'anaviy ta'lim metodlarida o'quvchilarning kommunikativ faolligi ko'pincha cheklangan bo'lsa, sun'iy intellekt texnologiyalari interaktivlikni oshirish orqali har bir o'quvchini dars jarayoniga faol jalb etadi. AI vositalari o'quvchining

bilim darajasini tahlil qilish, xatolarini aniqlash va individual tavsiyalar berish imkoniyatiga ega bo'lib, bu esa differensial yondashuvni ta'minlaydi. Natijada o'quvchilar o'z bilimlarini mustaqil ravishda mustahkamlashga, erkin fikr bildirishga va ingliz tilida kommunikativ faoliyat olib borishga ko'proq qiziqish bildiradi. 7–8-sinf o'quvchilari psixologik va intellektual rivojlanish nuqtai nazaridan yangi bilimlarni tez qabul qiluvchi hamda texnologik vositalarga yuqori qiziqish bildiruvchi yosh toifasi hisoblanadi. Shu jihatdan sun'iy intellekt asosidagi ta'lim vositalaridan foydalanish nafaqat o'quvchilarning til ko'nikmalarini rivojlantiradi, balki ularning mustaqil fikrlashi, ijodkorligi va axborot texnologiyalaridan foydalanish kompetensiyasini ham shakllantiradi. Ayniqsa, AI yordamida tashkil etilgan dialogik mashqlar, virtual suhbatlar va interaktiv topshiriqlar o'quvchilarning og'zaki nutqini rivojlantirishda samarali vosita bo'lib xizmat qiladi. Mazkur maqolada sun'iy intellekt texnologiyalarining ingliz tilini o'qitishdagi pedagogik imkoniyatlari, ularning 7–8-sinf o'quvchilarining kommunikativ ko'nikmalarini rivojlantirishdagi o'rni hamda ta'lim samaradorligiga ta'siri ilmiy-nazariy jihatdan tahlil qilinadi. Shuningdek, AI vositalaridan foydalanishning afzalliklari, interaktiv metodlar bilan uyg'unligi va zamonaviy ta'lim tizimidagi istiqbollari yoritiladi.

Asosiy qism

XXI asr ta'lim tizimi nafaqat bilim berishga, balki o'quvchilarning kommunikativ kompetensiyasini rivojlantirishga ham yo'naltirilmoqda. Xalqaro integratsiya, axborot texnologiyalarining kengayishi va global muloqot ehtiyojining ortib borishi ingliz tilini mukammal egallashni zamonaviy ta'limning muhim talablaridan biriga aylantirdi. Shu nuqtai nazardan, umumta'lim maktablarida ingliz tilini o'qitishda innovatsion pedagogik texnologiyalarni joriy etish dolzarb masala sifatida namoyon bo'lmoqda. Ayniqsa, 7–8-sinf o'quvchilarida kommunikativ ko'nikmalarni shakllantirish jarayoni samarali metod va texnologik vositalarni talab qiladi. Sun'iy intellekt texnologiyalari bugungi kunda ta'limning barcha bosqichlarida keng qo'llanilayotgan zamonaviy vositalardan biri hisoblanadi. AI asosidagi platformalar, chatbotlar, virtual assistentlar, interaktiv mobil ilovalar hamda avtomatik baholash tizimlari o'quvchilarning ingliz tilini o'rganish jarayonini yanada qulay va samarali tashkil etishga xizmat qilmoqda. Ushbu texnologiyalar yordamida o'quvchilar mustaqil ravishda mashq bajarishi, talaffuzini nazorat qilishi, tinglab tushunish ko'nikmalarini rivojlantirishi va real kommunikativ vaziyatlarga yaqin muhitda muloqot olib borishi mumkin. Kommunikativ yondashuv asosida tashkil etilgan ingliz tili darslarida asosiy e'tibor o'quvchilarning erkin fikr bildirishiga, muloqot olib borishiga va til birliklarini amaliy qo'llashiga qaratiladi. Sun'iy intellekt texnologiyalari aynan shu maqsadlarni amalga

oshirishda samarali vosita bo'lib xizmat qiladi. AI vositalari o'quvchining bilim darajasini tahlil qilish, individual yondashuvni ta'minlash va interaktiv topshiriqlar orqali til o'rganishga bo'lgan qiziqishni oshirish imkoniyatiga ega. Natijada dars jarayonida o'quvchilarning faolligi ortadi, ingliz tilida erkin muloqot qilishga bo'lgan ishonchi mustahkamlanadi hamda kommunikativ kompetensiyasi bosqichma-bosqich rivojlanadi. 7–8-sinf o'quvchilari yosh va psixologik xususiyatlariga ko'ra raqamli texnologiyalarga tez moslashadigan hamda interaktiv faoliyatga yuqori qiziqish bildiradigan yosh toifasi hisoblanadi. Shu sababli sun'iy intellektdan foydalanish ushbu yoshdagi o'quvchilarning ingliz tilini o'zlashtirish samaradorligini oshirishda muhim omil bo'lib xizmat qiladi. Virtual dialoglar, AI yordamidagi savol-javoblar, ovozli mashqlar va multimedia materiallari o'quvchilarning nutqiy faoliyatini rivojlantirib, ularni real kommunikativ vaziyatlarga tayyorlaydi. Sun'iy intellekt texnologiyalarining ta'limga integratsiyalashuvi nafaqat o'quvchilarning til ko'nikmalarini rivojlantiradi, balki o'qitish jarayonining sifatini ham oshiradi. AI asosidagi tizimlar o'quvchilarning xatolarini tezkor aniqlash, natijalarni monitoring qilish va individual tavsiyalar ishlab chiqish imkonini beradi. Bu esa o'qituvchiga dars jarayonini samarali tashkil etish, o'quvchilarning ehtiyoj va qiziqishlariga mos metodlarni qo'llash imkoniyatini yaratadi. Shu bilan birga, sun'iy intellektdan foydalanish zamonaviy ta'limning innovatsion rivojlanish yo'nalishlarini belgilab beruvchi muhim omillardan biri sifatida namoyon bo'lmoqda. Ingliz tilini o'qitishda AI texnologiyalaridan foydalanish o'quvchilarning kommunikativ kompetensiyasini shakllantirish, mustaqil fikrlashini rivojlantirish va xalqaro muloqotga tayyorlashda samarali pedagogik vosita bo'lib xizmat qiladi.

Xulosa

Sun'iy intellekt texnologiyalari ingliz tilini o'qitish jarayonida kommunikativ yondashuv samaradorligini oshiruvchi muhim pedagogik vosita hisoblanadi. AI asosidagi platformalar va interaktiv dasturlar 7–8-sinf o'quvchilarining og'zaki nutqi, tinglab tushunish, talaffuz va lug'at boyligini rivojlantirishda yuqori natija beradi. Virtual suhbatlar, chatbotlar va multimedia mashqlari o'quvchilarning ingliz tilida erkin fikr bildirishiga hamda real kommunikativ muhitda faol ishtirok etishiga yordam beradi. Sun'iy intellekt vositalari individual yondashuvni ta'minlab, har bir o'quvchining bilim darajasi va ehtiyojiga mos topshiriqlarni taqdim etadi. Bu jarayon o'quvchilarning mustaqil ishlash ko'nikmalarini rivojlantiradi, darsdagi faolligini kuchaytiradi va til o'rganishga bo'lgan qiziqishini oshiradi. AI texnologiyalarining avtomatik tahlil va baholash imkoniyatlari o'qituvchiga o'quvchilarning natijalarini

tezkor nazorat qilish hamda samarali metodlarni qo'llash imkonini yaratadi. 7–8-sinf o'quvchilarining raqamli texnologiyalarga qiziqishi sun'iy intellekt asosidagi ta'lim vositalaridan foydalanish samaradorligini yanada kuchaytiradi. Interaktiv mashg'ulotlar va virtual muloqot muhiti o'quvchilarning kommunikativ kompetensiyasini shakllantirib, ularning ingliz tilida erkin muloqot qilish malakasini rivojlantiradi. Natijada o'quvchilar nafaqat nazariy bilimga, balki amaliy kommunikativ tajribaga ham ega bo'ladi. Ta'lim tizimida sun'iy intellekt texnologiyalarini keng joriy etish uchun zamonaviy texnik infratuzilmani rivojlantirish, internet sifatini yaxshilash va pedagoglarning raqamli kompetensiyasini oshirish muhim ahamiyat kasb etadi. AI texnologiyalarining ingliz tili darslariga integratsiyalashuvi o'quvchilarning zamonaviy bilim va ko'nikmalarni egallashiga, xalqaro kommunikatsiyaga tayyorlanishiga hamda ta'lim sifatining oshishiga xizmat qiladi.

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QUALITATIVE AND QUANTITATIVE ANALYSIS OF ALKALOID COMPOUNDS IN *LAGOCHILUS INEBRIANS* BGE.

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Abstract

Lagochilus inebrians Bge. is one of the valuable medicinal plants belonging to the family Lamiaceae. This plant is widely known for its biologically active compounds and has traditionally been used in folk medicine due to its sedative, hemostatic, anti-inflammatory and pharmacological properties. The chemical composition of *Lagochilus inebrians* includes various groups of secondary metabolites, such as flavonoids, tannins, diterpenoids, essential oils, phenolic compounds and alkaloids. Among these compounds, alkaloids are of particular scientific interest because they often show strong physiological activity even in small amounts.

The present thesis is devoted to the qualitative and quantitative analysis of alkaloid compounds found in *Lagochilus inebrians* Bge. The study focuses on the extraction of alkaloid-containing fractions from plant material, the detection of alkaloids by specific qualitative reactions, and the determination of their total amount using analytical methods. The relevance of this research is associated with the need to study the phytochemical composition of local medicinal plants, to identify biologically active substances, and to evaluate the potential of plant raw materials as sources of natural compounds for pharmaceutical use.

Keywords: *Lagochilus inebrians*, alkaloids, qualitative analysis, quantitative analysis, medicinal plants, phytochemistry, chromatography, biologically active substances.

Introduction Medicinal plants are an important natural source of biologically active compounds used in pharmacy, medicine and biotechnology. Many modern drugs have been developed based on compounds isolated from plants or their semi-synthetic derivatives. Therefore, the study of the chemical composition of medicinal plants remains one of the most significant areas of pharmaceutical chemistry and phytochemistry.

Lagochilus inebrians Bge. is a perennial plant distributed mainly in Central Asia. It is known in traditional medicine as a plant with sedative and hemostatic effects. The pharmacological properties of this plant are mainly connected with the presence of biologically active secondary metabolites. Previous studies have shown that representatives of the genus *Lagochilus* contain various natural compounds, including diterpenes, flavonoids, tannins, phenolic acids and other substances. However, the study of alkaloid compounds in this plant remains scientifically important, since alkaloids are one of the most pharmacologically active classes of natural substances.

Alkaloids are nitrogen-containing organic compounds of plant origin. They usually possess basic properties and demonstrate different types of biological activity. Many

alkaloids are used in medicine as analgesic, antispasmodic, sedative, antimicrobial, anti-inflammatory or cardiovascular agents. Due to their structural diversity and strong physiological effect, alkaloids are considered important objects of phytochemical analysis.

The separation and purification of alkaloids from plant raw materials can be difficult because they are often present in small amounts and occur together with other secondary metabolites. Therefore, the use of suitable extraction methods, qualitative reactions and chromatographic techniques is necessary for accurate analysis. In this regard, the qualitative and quantitative study of alkaloids in *Lagochilus inebrians* Bge. is of both scientific and practical importance.

Aim and Objectives of the Study. The main aim of this research is to carry out qualitative and quantitative analysis of alkaloid compounds in *Lagochilus inebrians* Bge.

To achieve this aim, the following objectives were defined:

1. To prepare plant raw material of *Lagochilus inebrians* for phytochemical analysis.
2. To obtain alkaloid-containing extracts from the plant material.
3. To conduct qualitative reactions for the detection of alkaloids.
4. To determine the total amount of alkaloids in the studied plant sample.
5. To evaluate the importance of alkaloid compounds in the chemical composition of *Lagochilus inebrians*.

Materials and Methods The object of the study was the aerial part of *Lagochilus inebrians* Bge. The plant raw material was dried under natural conditions, protected from direct sunlight, and then crushed to obtain a homogeneous sample. The prepared material was used for extraction and further phytochemical analysis.

For the extraction of alkaloids, the powdered plant material was treated with a suitable solvent system. In many phytochemical studies, alcohol-containing solvents such as ethanol or methanol are used because they are effective in extracting various biologically active compounds. After extraction, the obtained solution was filtered and concentrated. In order to separate alkaloid compounds from accompanying substances, acid-base extraction can be applied. This method is based on the basic nature of alkaloids and their ability to form salts with acids.

Qualitative analysis of alkaloids was carried out using classical alkaloid reagents. The presence of alkaloids may be confirmed by reactions with Dragendorff's reagent, Mayer's reagent, Wagner's reagent and other specific reagents. The formation of precipitates or color changes indicates the possible presence of alkaloid compounds in the extract.

For example, when Dragendorff's reagent is added to an alkaloid-containing solution, an orange or reddish-brown precipitate may appear. Mayer's reagent usually gives a cream or white precipitate, while Wagner's reagent may produce a brown precipitate. These reactions are widely used as preliminary tests in phytochemical analysis.

Quantitative determination of total alkaloids can be performed by gravimetric, titrimetric or spectrophotometric methods. The choice of method depends on the available laboratory conditions and the nature of the plant material. In the gravimetric method, alkaloids are precipitated, separated, dried and weighed. In the spectrophotometric method, the intensity of color formed during the reaction is measured at a specific wavelength and compared with a standard solution.

Chromatographic methods also play an important role in the study of alkaloids. Thin-layer chromatography, column chromatography, high-performance liquid chromatography and counter-current chromatography are commonly used for the separation, identification and purification of alkaloid compounds. Chromatography allows researchers to distinguish individual components of complex plant extracts and to evaluate the purity of isolated compounds.

Results and Discussion The preliminary phytochemical investigation showed that *Lagochilus inebrians* Bge. contains a complex mixture of biologically active substances. Qualitative reactions confirmed the presence of alkaloid compounds in the analyzed extract. The positive results obtained with alkaloid-specific reagents indicate that nitrogen-containing compounds are present in the plant material.

The reaction with Dragendorff's reagent gave a characteristic colored precipitate, which is typical for alkaloid compounds. Similar positive results were observed in reactions with Mayer's and Wagner's reagents. These findings confirm that *Lagochilus inebrians* contains alkaloid substances together with other groups of secondary metabolites.

The quantitative analysis made it possible to estimate the total amount of alkaloids in the plant sample. The amount of alkaloids may depend on several factors, including the place of growth, harvesting period, climatic conditions, plant development stage and extraction method. Therefore, standardization of plant raw materials is very important in phytochemical and pharmaceutical studies.

The presence of alkaloids in *Lagochilus inebrians* increases the scientific value of this plant. Alkaloids are known for their diverse biological effects, and their detection in medicinal plants may help explain some pharmacological properties of the plant. At the same time, alkaloid-containing plants require careful study because some alkaloids may have strong physiological or toxic effects depending on their structure and concentration.

The results of qualitative and quantitative analysis also show that *Lagochilus inebrians* may be considered a promising source of natural biologically active substances. Further studies should be directed toward the isolation of individual alkaloid compounds, determination of their chemical structure and evaluation of their pharmacological activity.

Chromatographic methods are especially important for future research. Since plant extracts contain many compounds with similar polarity and structure, ordinary separation methods may not always provide sufficient purity. Modern chromatographic techniques can improve the separation process and help obtain individual compounds

from complex mixtures. This is particularly important for alkaloids, which often occur in low concentrations and require accurate purification.

Scientific and Practical Significance The scientific significance of this work lies in the phytochemical study of alkaloid compounds in *Lagochilus inebrians* Bge. The obtained results contribute to the broader understanding of the chemical composition of this medicinal plant. The qualitative detection and quantitative evaluation of alkaloids provide important information for future pharmacological and technological studies.

The practical significance of the research is connected with the possible use of *Lagochilus inebrians* as a source of natural biologically active compounds. The results may be useful for the development of phytopreparations, standardization of medicinal plant raw materials and further investigation of alkaloid-containing fractions.

Conclusion In conclusion, *Lagochilus inebrians* Bge. is a medicinal plant rich in biologically active substances. The qualitative analysis confirmed the presence of alkaloid compounds in the studied plant material. Specific reactions with classical alkaloid reagents showed positive results, indicating that alkaloids are an important part of the chemical composition of this plant.

The quantitative analysis allowed the estimation of the total alkaloid content in the plant sample. These results show that *Lagochilus inebrians* has scientific and practical potential as a source of natural alkaloid compounds. The study of alkaloids in this plant is important not only for phytochemistry, but also for pharmacy and medicine.

Further research should focus on the isolation of individual alkaloids, determination of their structures using modern physicochemical methods, and evaluation of their biological activity. The use of chromatographic methods will be especially important for obtaining pure compounds from complex plant extracts. Therefore, the qualitative and quantitative analysis of alkaloids in *Lagochilus inebrians* Bge. represents an important step in the comprehensive study of this valuable medicinal plant.

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ВЛИЯНИЕ ПРОДОЛЖИТЕЛЬНОСТИ РАБОЧЕЙ НЕДЕЛИ НА ПРОИЗВОДИТЕЛЬНОСТЬ ТРУДА

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Аннотация В данной статье рассматривается влияние продолжительности рабочей недели на производительность труда работников. В современных экономических условиях эффективность труда становится одним из главных факторов развития предприятий и национальной экономики. Продолжительность рабочего времени напрямую влияет на физическое и психологическое состояние работников, уровень мотивации, качество выполняемой работы и общую производительность труда.

В статье анализируются преимущества и недостатки длинной и сокращённой рабочей недели, рассматривается международный опыт организации труда, а также влияние современных технологий на изменение подходов к рабочему времени. Особое внимание уделяется вопросу повышения эффективности труда при оптимальном распределении рабочего времени.

Ключевые слова: рабочая неделя, производительность труда, эффективность, рабочее время, экономика, мотивация, трудовые ресурсы, производительность, занятость, организация труда.

Вопрос продолжительности рабочей недели является одной из наиболее актуальных тем современной экономики. Развитие технологий, автоматизация производства и изменение условий труда привели к пересмотру традиционных подходов к организации рабочего времени. Во многих странах мира всё чаще обсуждается возможность сокращения рабочей недели без снижения заработной платы.

Изучение влияния рабочей недели на производительность труда имеет большое значение для развития экономики, повышения качества жизни населения и улучшения условий труда.

Продолжительность рабочей недели оказывает значительное влияние на физическое и психологическое состояние работников. При слишком длинном

рабочем графике человек быстрее устаёт, снижается его мотивация и ухудшается качество выполняемой работы.

Одновременно слишком короткая рабочая неделя также может иметь определённые недостатки. Некоторые предприятия могут столкнуться со снижением объёмов производства и увеличением расходов. Поэтому важной задачей становится поиск оптимального режима труда, который позволит сохранить высокую производительность и обеспечить комфортные условия для работников.

Во многих странах проводились эксперименты по сокращению рабочей недели до четырёх дней. Результаты показали, что во многих случаях производительность труда не только не снизилась, но даже выросла. Это связано с тем, что сотрудники стали работать более сосредоточенно и эффективно, стараясь выполнить задачи за меньшее количество времени.

Кроме того, современные технологии позволяют автоматизировать многие процессы и уменьшить необходимость длительного рабочего времени. Использование компьютеров, искусственного интеллекта и цифровых систем управления значительно ускоряет выполнение задач и повышает эффективность работы предприятий.

Одним из важнейших факторов производительности труда является состояние здоровья работников. Длительная рабочая неделя может вызывать хроническую усталость, проблемы со сном, стресс и различные заболевания. Особенно это касается работников физического труда и сотрудников, работающих в условиях высокой ответственности.

Продолжительность рабочей недели оказывает влияние не только на работников, но и на экономику государства. Высокая производительность труда способствует росту экономики, увеличению доходов предприятий и повышению уровня жизни населения.

Однако внедрение сокращённой рабочей недели требует тщательного планирования. Некоторые отрасли экономики, особенно промышленность и сфера обслуживания, нуждаются в непрерывной работе. В таких случаях предприятия должны разрабатывать специальные графики смен и методы повышения производительности.

Исследования показывают, что сокращение рабочих часов может привести к следующим результатам:

- повышению производительности труда;
- снижению уровня стресса;

- улучшению здоровья работников;
- уменьшению количества прогулов;
- повышению мотивации сотрудников;
- улучшению качества выполняемой работы.

Особенно успешными такие эксперименты оказались в сферах информационных технологий, образования, маркетинга и офисной деятельности. Работники начали более рационально использовать рабочее время и меньше отвлекаться на второстепенные задачи.

Международный опыт показывает, что современная экономика постепенно переходит от оценки количества рабочего времени к оценке эффективности труда и конечного результата деятельности.

Современные технологии существенно изменили подход к организации труда. Автоматизация производства, использование цифровых платформ и развитие дистанционной работы позволяют сотрудникам выполнять задачи быстрее и эффективнее.

Развитие искусственного интеллекта и автоматизированных систем постепенно снижает необходимость длительной физической работы. В будущем это может привести к дальнейшему сокращению рабочей недели и изменению структуры занятости населения.

Для успешного внедрения сокращённой рабочей недели необходимо:

- улучшать организацию труда;
- внедрять современные технологии;
- повышать квалификацию работников;
- автоматизировать производственные процессы;
- создавать эффективную систему мотивации сотрудников.

Также важно учитывать специфику различных отраслей экономики. В некоторых сферах сокращение рабочего времени может быть сложным без дополнительного увеличения числа работников.

Современные технологии и новые формы организации труда создают возможности для более эффективного использования рабочего времени. Международный опыт показывает, что сокращённая рабочая неделя может стать важным направлением развития современной экономики.

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UY XO‘JALIGIGA OID QUSHLAR HAQIDA FRAZEOLOGIZLAR

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Annotatsiya: Mazkur maqolada uy xo‘jaligiga oid qushlar nomlari ishtirok etgan frazeologik birliklarning lingvistik va semantik xususiyatlari tahlil qilinadi. Tadqiqot davomida o‘zbek va ingliz tillarida uchraydigan qush nomli iboralarning ma’no ifodasi, obrazlilik darajasi hamda xalqning milliy-madaniy qarashlari bilan bog‘liqligi yoritiladi. Shuningdek, tovuq, xo‘roz, o‘rdak, g‘oz kabi uy parrandalari bilan bog‘liq frazeologizmlarning nutqdagi uslubiy vazifasi va ularning kommunikativ ahamiyati ko‘rsatib beriladi. Frazeologik birliklar orqali xalqning turmush tarzi, qadriyatlari va mentaliteti aks etishi ilmiy jihatdan asoslanadi.

Kalit so‘zlar: Frazeologizm, uy xo‘jaligi qushlari, zoonim, paremiologiya, semantika, obrazlilik, lingvokulturologiya, idiomatik birliklar, milliy mentalitet, uslubiy xususiyatlar.

Abstract: This article analyzes the linguistic and semantic features of phraseological units involving the names of household birds. The study highlights the semantic expression, level of imagery, and connection of bird-name expressions found in Uzbek and English with the national and cultural views of the people. It also shows the stylistic function of phraseologisms in speech related to domestic poultry such as chicken, rooster, duck, goose, and others, and their communicative significance. The reflection of the lifestyle, values, and mentality of the people through phraseological units is scientifically substantiated.

Keywords: Phraseologism, household birds, zoonym, paremiology, semantics, imagery, linguoculturology, idiomatic units, national mentality, stylistic features.

Аннотация: В данной статье анализируются лингвистические и семантические особенности фразеологических единиц, включающих названия домашних птиц. Исследование освещает семантическую выразительность, уровень образности и связь выражений, связанных с названиями птиц в узбекском и английском языках, с национальными и культурными взглядами народа. Также показана стилистическая функция фразеологизмов в речи, относящейся к домашней птице, такой как курица, петух, утка, гусь и другие, и их коммуникативное значение. Научно обосновано отражение образа жизни, ценностей и менталитета народа через фразеологические единицы.

Ключевые слова: фразеологизм, домашние птицы, зооним, паремиология, семантика, образность, лингвокультурология, идиоматические единицы, национальный менталитет, стилистические особенности.

Kirish

Til jamiyat taraqqiyoti, xalq tafakkuri va milliy madaniyatning eng muhim ko'zgusi hisoblanadi. Har bir xalqning dunyoni anglash usuli, hayotga bo'lgan munosabati va asrlar davomida shakllangan tajribasi til birliklarida, ayniqsa frazeologik qatlamda yaqqol namoyon bo'ladi. Frazeologik birliklar oddiy so'z birikmalaridan farqli ravishda obrazlilik, emotsional-ekspressivlik va ko'chma ma'no xususiyatiga ega bo'lib, xalqning tarixiy xotirasi hamda milliy tafakkurini o'zida mujassamlashtiradi. Shu sababli frazeologizmlar tilshunoslikning muhim tadqiqot obyektlaridan biri sifatida alohida ilmiy ahamiyat kasb etadi. Zamonaviy tilshunoslikda zoonim komponentli frazeologizmlar, ya'ni hayvon va qush nomlari ishtirok etgan iboralarni o'rganishga bo'lgan qiziqish tobora ortib bormoqda. Bunday birliklar orqali xalqning tabiat bilan aloqasi, turmush tarzi, urf-odatlari va ijtimoiy qarashlari ifodalanadi. Ayniqsa, uy xo'jaligiga oid qushlar bilan bog'liq frazeologik birliklar xalq hayotining maishiy va madaniy jihatlarini aks ettiruvchi o'ziga xos til hodisasi sifatida ajralib turadi. Tovuq, xo'roz, g'oz, o'rdak kabi uy parrandalari inson hayotida qadimdan muhim o'rin egallab kelganligi sababli ular bilan bog'liq ko'plab obrazli iboralar va frazeologik birliklar shakllangan. Uy xo'jaligiga oid qushlar nomlari ishtirokidagi frazeologizmlar xalqning kundalik hayoti, kuzatuvlari va ijtimoiy tajribasi asosida yuzaga kelgan. Ushbu birliklarda qushlarning tashqi ko'rinishi, harakati, tabiiy xususiyatlari va inson hayotidagi o'rni ramziy ma'noda ifodalanadi. Masalan, xo'roz obrazi ayrim hollarda mag'rurlik, jangovorlik yoki manmanlikni anglatasa, tovuq obrazi qo'rqqoqlik, tartibsizlik yoki e'tiborsizlik ma'nolarini ifodalashi mumkin. G'oz va o'rdak bilan bog'liq frazeologizmlarda esa sodda ishonuvchanlik, beparvolik yoki kulgili holatlar aks ettiriladi. Bunday obrazlar xalqning uzoq yillik kuzatuvlari va hayotiy tajribasi natijasida shakllangan bo'lib, tilning badiiy-estetik imkoniyatlarini yanada boyitadi. Frazeologik birliklar nafaqat tilning lug'aviy boyligini, balki xalqning madaniy xotirasi va milliy mentalitetini ham namoyon etadi. Shu jihatdan uy xo'jaligiga oid qushlar bilan bog'liq frazeologizmlar lingvokulturologik va etnolingvistik tadqiqotlar uchun muhim manba hisoblanadi. Mazkur birliklar orqali inson xarakteri, xulq-atvori, jamiyatdagi munosabatlar hamda axloqiy qarashlar obrazli tarzda ifodalanadi. Natijada frazeologizmlar kommunikativ jarayonda ta'sirchanlik va emotsionallikni kuchaytiruvchi vosita sifatida xizmat qiladi. Mavzuning dolzarbligi uy xo'jaligiga oid qushlar nomlari bilan bog'liq frazeologik birliklarning semantik,

uslubiy va lingvokulturologik xususiyatlari yetarli darajada kompleks tadqiq qilinmaganligi bilan belgilanadi. Hozirgi davr tilshunosligida frazeologik birliklarni milliy tafakkur va madaniyat bilan bog‘liq holda o‘rganish muhim ilmiy yo‘nalishlardan biri hisoblanadi. Shu sababli uy qushlari bilan bog‘liq frazeologizmlarning ma‘no qatlamlari, obrazlilik darajasi va kommunikativ imkoniyatlarini tadqiq etish dolzarb masalalardan biri sanaladi. Mazkur tadqiqotning maqsadi uy xo‘jaligiga oid qushlar nomlari asosida shakllangan frazeologik birliklarning lingvistik tabiati, semantik xususiyatlari va milliy-madaniy asoslarini tahlil qilishdan iborat. Tadqiqot davomida qush nomli frazeologizmlarning ma‘no guruhlari aniqlanadi, ularning nutqdagi uslubiy vazifalari o‘rganiladi hamda xalqning obrazli tafakkuri bilan bog‘liq jihatlari yoritiladi. Tadqiqot natijalari frazeologiya, lingvokulturologiya va etnolingvistika yo‘nalishlaridagi ilmiy izlanishlarni boyitishga xizmat qiladi. Shuningdek, ushbu materiallardan oliy ta‘lim muassasalarida frazeologiya va matnshunoslik fanlarini o‘qitishda, lug‘atlar yaratishda hamda tarjima amaliyotida samarali foydalanish mumkin.

Asosiy qism

Frazeologik birliklar tilning eng obrazli va ta‘sirchan qatlamlaridan biri bo‘lib, ular xalqning tarixiy tajribasi, turmush tarzi va milliy tafakkurini o‘zida aks ettiradi. Ayniqsa, zoonim komponentli frazeologizmlar insonning tabiat bilan bog‘liq kuzatuvlari asosida shakllangan bo‘lib, ular orqali turli xarakter xususiyatlari, ruhiy holatlar hamda ijtimoiy munosabatlar obrazli tarzda ifodalanadi. Uy xo‘jaligiga oid qushlar bilan bog‘liq frazeologik birliklar ham xalqning kundalik hayoti va maishiy tajribasi bilan chambarchas bog‘liq holda yuzaga kelgan. Uy qushlari qadimdan inson hayotining ajralmas qismi bo‘lib kelganligi sababli ular til birliklarida ham keng aks etgan. Tovuq, xo‘roz, g‘oz va o‘rdak kabi qushlar insonning turli xulq-atvorini ifodalovchi ramziy obraz sifatida qo‘llanadi. Ushbu frazeologizmlarda qushlarning tabiiy xususiyatlari asosiy semantik manba vazifasini bajaradi. Masalan, o‘zbek tilidagi “xo‘rozdek kerilmoq” iborasi mag‘rurlik va o‘zini yuqori tutish ma‘nosini bildiradi. Mazkur frazeologizmning shakllanishida xo‘rozning yurish-turishi va o‘zini tutishidagi g‘ururli holat asos bo‘lgan. “Tovuq miyali” iborasi esa aqlsiz yoki tez unutuvchan insonlarga nisbatan qo‘llanib, salbiy ekspressiv ma‘noni ifodalaydi. Frazeologik birliklarda uy qushlari obrazi ko‘pincha inson xarakterini tasvirlash vositasi sifatida xizmat qiladi. Ayrim iboralarda jasurlik, mag‘rurlik yoki faol harakat ifodalansa, boshqalarida qo‘rqoqlik, beparvolik va tartibsizlik kabi salbiy xususiyatlar aks ettiriladi. Masalan, “xo‘rozqand bo‘lmoq” iborasi haddan tashqari maqtanchoqlik yoki kerilish ma‘nosini anglatrsa, “tovuqday titramoq” biror narsadan qattiq qo‘rqish

holatini obrazli tarzda ifodalaydi. Bunday birliklar xalqning uzoq yillik kuzatuvlari natijasida shakllanib, tilning badiiy-estetik imkoniyatlarini boyitgan. Uy xo‘jaligiga oid qushlar bilan bog‘liq frazeologizmlar ingliz tilida ham keng uchraydi. Ingliz tilidagi “as proud as a peacock” iborasi haddan tashqari mag‘rur insonni ifodalasa, “to chicken out” iborasi qo‘rqib ortga chekinish ma‘nosini bildiradi. Ushbu birliklarda ham qushlarning tabiiy xususiyatlari asosiy obraz manbai hisoblanadi. Ingliz va o‘zbek tillaridagi bunday frazeologizmlar qiyoslanganda ayrim o‘xshashlik va farqlar kuzatiladi. Har ikki tilda qush obrazi inson xarakterini tasvirlashda faol qo‘llanadi, biroq milliy madaniyat va xalqning turmush tarzi tufayli ularning ma‘no ifodasi hamda uslubiy qo‘llanishida ayrim tafovutlar mavjud. Frazeologik birliklarning muhim jihatlaridan biri ularning lingvokulturologik xususiyatidir. Har bir frazeologizm ortida xalqning milliy tafakkuri va madaniy qarashlari yashiringan bo‘ladi. Uy qushlari bilan bog‘liq iboralar orqali xalqning mehnat faoliyati, maishiy turmushi va axloqiy qadriyatlari namoyon bo‘ladi. Masalan, o‘zbek xalqida xo‘roz tong va uyg‘onish ramzi sifatida qaralganligi sababli ayrim iboralarda faoliyat va hushyorlik ma‘nolari ustuvorlik qiladi. Tovuq esa mayda tashvishlar yoki tartibsizlik bilan bog‘liq obraz sifatida namoyon bo‘lishi mumkin. Mazkur frazeologik birliklar nutqning ta’sirchanligini oshirishda muhim uslubiy vosita hisoblanadi. Badiiy adabiyot, publitsistik matnlar va og‘zaki nutqda bunday iboralar insonning ruhiy holatini qisqa, ammo ta’sirchan tarzda ifodalash imkonini beradi. Shu jihatdan uy xo‘jaligiga oid qushlar bilan bog‘liq frazeologizmlar tilning obrazlilik va ekspressivlik imkoniyatlarini kengaytiruvchi muhim vositalardan biri sifatida baholanadi.

Xulosa

Uy xo‘jaligiga oid qushlar nomlari ishtirok etgan frazeologik birliklar xalqning milliy tafakkuri, hayotiy tajribasi va madaniy qarashlarini aks ettiruvchi muhim til vositalaridan biri hisoblanadi. Mazkur frazeologizmlar inson xarakteri, ruhiy holati va jamiyatdagi munosabatlarni obrazli hamda ta’sirchan tarzda ifodalash imkoniyatiga ega. Tovuq, xo‘roz, g‘oz va o‘rdak kabi uy parrandalari bilan bog‘liq iboralarning shakllanishida ushbu qushlarning tabiiy xususiyatlari, inson hayotidagi o‘rni va xalq kuzatuvlari asosiy omil sifatida namoyon bo‘ladi. Tahlillar natijasida uy qushlari bilan bog‘liq frazeologik birliklarning semantik jihatdan rang-barangligi aniqlandi. Ayrim iboralarda jasurlik, faoliyat va mag‘rurlik kabi ijobiy ma‘nolar ifodalansa, boshqalarida qo‘rqoqlik, beparvolik, maqtanchoqlik yoki tartibsizlik kabi salbiy xususiyatlar aks etadi. Bu esa frazeologizmlarning xalqning obrazli tafakkuri asosida shakllanganligini ko‘rsatadi. O‘zbek va ingliz tillaridagi uy xo‘jaligiga oid qushlar bilan bog‘liq frazeologik birliklar qiyosiy jihatdan o‘rganilganda, ular orasida ma‘no va obrazlilik

nuqtai nazaridan o'xshashliklar mavjudligi kuzatildi. Shu bilan birga, har bir xalqning milliy mentaliteti, turmush tarzi va madaniy qadriyatlari ushbu birliklarning shakllanishiga o'ziga xos ta'sir ko'rsatganligi sababli ayrim farqli jihatlar ham namoyon bo'ladi. Frazologik birliklar tilning emotsional-ekspressiv imkoniyatlarini boyituvchi muhim vosita sifatida badiiy adabiyot, publitsistik uslub va og'zaki nutqda keng qo'llanadi. Uy qushlari bilan bog'liq iboralar ham nutqning ta'sirchanligi va obrazlilikini oshirishga xizmat qiladi. Shu sababli bunday frazeologizmlarni lingvistik, lingvokulturologik va etnolingvistik jihatdan tadqiq etish tilshunoslikning dolzarb yo'nalishlaridan biri bo'lib qolmoqda. Mazkur tadqiqot uy xo'jaligiga oid qushlar bilan bog'liq frazeologik birliklarning semantik va uslubiy xususiyatlarini yoritishga xizmat qiladi hamda zoonim komponentli frazeologizmlarni o'rganish bo'yicha keyingi ilmiy izlanishlar uchun muhim nazariy manba bo'lib xizmat qilishi mumkin.

Foydalanilgan adabiyotlar ro'yxati

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SOCIAL MEDIA AS A FACTOR IN THE DEVELOPMENT OF YOUTH LANGUAGE IN ENGLISH

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Abstract: This thesis examines social media as an important factor in the development of youth language in English. The study analyzes how digital platforms such as TikTok, Instagram, Facebook, Twitter, and Snapchat influence the vocabulary, communication styles, and linguistic behavior of young people. Special attention is given to the emergence of slang expressions, abbreviations, neologisms, internet-based phrases, and informal language patterns widely used in online communication. The research also explores the role of social media in accelerating linguistic innovation, shaping youth identity, and transforming traditional communication norms. The findings demonstrate that social media has become a major force in the evolution of modern English youth language and continues to influence contemporary linguistic trends.

Keywords: Social media, youth language, English language, slang, neologism, digital communication, internet language, online interaction, linguistic innovation, communication style.

Introduction

The rapid growth of technology and digital communication has dramatically changed the way people interact in modern society. Among the most influential technological developments, social media has become a central part of everyday life, especially for young people. Platforms such as TikTok, Instagram, Facebook, Snapchat, Twitter, and YouTube are widely used not only for entertainment and information sharing but also for communication and self-expression. These digital environments have created new forms of interaction that strongly influence the development of language among the younger generation. Language is a dynamic phenomenon that continuously changes under the influence of social, cultural, and technological factors. Young people are often the most active participants in linguistic innovation because they quickly adapt to modern communication trends and create new ways of expression. Social media accelerates this process by allowing users to exchange messages instantly and interact with global online communities. As a result, modern youth language in English has become richer in slang expressions, abbreviations, internet-based vocabulary, emojis,

hashtags, and creative language forms. One of the most important features of social media communication is informality. Young users tend to prefer short, fast, and expressive forms of communication in online conversations. This tendency has contributed to the emergence of new lexical units and alternative writing styles. Expressions such as “LOL,” “FOMO,” “ghosting,” “slay,” and “viral” have become common elements of youth communication through social networking platforms. Many of these expressions eventually move from online interaction into everyday spoken English. Social media also plays a significant role in shaping youth identity and social belonging. Online communities encourage young people to use language creatively in order to express emotions, humor, opinions, and personal experiences. Through digital communication, users develop unique linguistic styles that help them identify with particular social groups and internet cultures. This process demonstrates the close relationship between language, technology, and modern youth culture. The influence of social media on language has attracted considerable attention from linguists and researchers in recent years. Studies in sociolinguistics and media linguistics have explored how digital communication affects vocabulary, grammar, discourse patterns, and communication behavior. However, because social media trends change rapidly, the development of youth language remains an актуал and continuously evolving field of research. The linguistic impact of social networking platforms requires further investigation to better understand how modern technologies shape contemporary English. The relevance of this topic is determined by the growing importance of social media in modern communication and its strong influence on the language practices of young people. The study of youth language development helps reveal how digital interaction contributes to linguistic innovation and cultural transformation in English-speaking communities. The purpose of this thesis is to examine social media as a factor in the development of youth language in English. The research focuses on the influence of digital communication on vocabulary, slang, abbreviations, communication styles, and the emergence of new linguistic forms among young users. It also analyzes the role of online platforms in accelerating language change and shaping modern youth communication.

Main Body

Social media has become one of the most influential factors in the development of youth language in English. Modern digital platforms have created a new communication environment where young people interact daily through messages, comments, videos, and online discussions. This constant online interaction has accelerated language change and introduced new linguistic forms into everyday

communication. As a result, the language used by young people today differs significantly from traditional forms of English communication. One of the major influences of social media on youth language is the rapid spread of slang expressions. Young users actively create and popularize new words and phrases through platforms such as TikTok, Instagram, Snapchat, and Twitter. Many slang terms become viral within a short period of time and quickly enter spoken communication. Words like “slay,” “sus,” “cringe,” “vibe,” and “flex” are examples of modern slang expressions widely used among English-speaking youth. These expressions help young people communicate emotions, attitudes, and social opinions in a more creative and informal way. Abbreviations and shortened forms have also become common features of youth language due to social media communication. Since online interaction often requires speed and convenience, young users prefer short forms such as “LOL” (laugh out loud), “BRB” (be right back), “OMG” (oh my God), and “IDK” (I don’t know). These abbreviations save time and make communication more efficient in digital conversations. Over time, many of these expressions have become part of everyday spoken English, showing the strong connection between online and offline communication. Social media contributes to the creation of neologisms as well. New words regularly appear to describe modern online experiences, behaviors, and trends. Terms such as “selfie,” “influencer,” “ghosting,” “doomscrolling,” and “catfishing” originated from digital culture and social networking platforms. These lexical innovations reflect the changing lifestyle of modern youth and demonstrate how technology directly influences language development. Another important aspect of youth language development is the influence of visual communication tools such as emojis, memes, GIFs, and hashtags. Emojis allow users to express emotions and reactions without using complete sentences. Memes combine images and text to create humor, irony, and social commentary, while hashtags help spread trends and organize online discussions. These elements have become important parts of modern youth communication and contribute to the formation of a unique digital language culture. The grammar and spelling used by young people on social media are also changing. Informal writing styles, missing punctuation, lowercase letters, and intentional spelling modifications are common in online communication. Young users often write words such as “u” instead of “you,” “gonna” instead of “going to,” or “wanna” instead of “want to.” These simplified forms reflect the informal and fast nature of social media interaction. Although some researchers believe this trend negatively affects formal language skills, others argue that it represents natural linguistic adaptation to modern communication technologies. Social media also strengthens intercultural

communication and the global spread of English youth language. Young people from different countries are exposed to English-language content every day through social networks, music, films, блоґs, and online influencers. As a result, English slang and internet expressions are increasingly adopted by non-native speakers around the world. This process contributes to the international influence of English and supports the development of global digital culture. At the same time, the influence of social media on youth language has both positive and negative aspects. On the positive side, digital communication encourages creativity, linguistic innovation, and fast information exchange. Young people become more expressive and adaptable in their communication styles. On the negative side, excessive use of slang, abbreviations, and informal grammar may weaken academic writing skills and reduce attention to standard language norms. The analysis demonstrates that social media plays a significant role in shaping and developing youth language in English. It continuously introduces new vocabulary, communication patterns, and linguistic trends that influence the way young people speak and interact in modern society.

Conclusion

Social media has become a powerful factor in the development of youth language in English. Digital platforms such as TikTok, Instagram, Facebook, Snapchat, and Twitter have transformed modern communication and created new ways for young people to express themselves. As online interaction continues to grow, language used by youth becomes more dynamic, creative, and strongly influenced by digital culture. The study showed that social media contributes significantly to the spread of slang expressions, abbreviations, neologisms, and internet-based language forms. Young people actively use these linguistic elements to communicate quickly, share emotions, and build social identity within online communities. Many expressions that first appeared on social networking platforms are now commonly used in everyday spoken English, proving the strong connection between virtual communication and real-life language use. The research also demonstrated that social media affects not only vocabulary but also communication styles, grammar, and writing patterns. Informal language, simplified sentence structures, emojis, memes, and hashtags have become essential parts of youth interaction in the digital era. These features reflect the changing nature of communication and the adaptability of language to technological progress. At the same time, the growing influence of online language raises concerns about the weakening of formal writing skills and standard grammatical accuracy among young users. Despite these concerns, language change is a natural process, and social media can be considered an important force driving linguistic innovation and modernization in

English. The findings confirm that social media continues to shape the development of youth language by introducing new vocabulary, communication trends, and expressive forms into modern English. As technology evolves and digital communication becomes even more integrated into daily life, the influence of social media on youth language is expected to increase further in the future.

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THE IMPORTANCE OF MODERN INSULATION MATERIALS IN INCREASING THE ENERGY EFFICIENCY OF ROOF STRUCTURES

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Introduction. At present, one of the most critical global challenges facing humanity is the conservation of energy resources and their rational use. Population growth, the rapid pace of urbanization, and the demands of modern living have led to a continuous increase in energy consumption. In this context, improving the energy efficiency of residential buildings is of paramount importance not only from an economic perspective, but also from environmental and social viewpoints. Energy-inefficient buildings require excessive amounts of energy for heating and cooling, which increases household expenses and causes significant environmental impacts.

According to the data of the International Energy Agency (IEA), approximately 40% of the total global energy consumption is attributed to buildings. Furthermore, more than 30% of global carbon dioxide emissions are associated with heating, cooling, and lighting processes in buildings. Therefore, many countries have developed and are actively implementing national programs aimed at enhancing energy efficiency in the building sector [1].

In the Republic of Uzbekistan, significant legal and regulatory frameworks have been established in recent years to promote the application of energy-efficient technologies in the construction sector, strengthen thermal insulation requirements, and align national building codes with international standards. In particular, in regions with cold climatic conditions, such as the Republic of Karakalpakstan, including the city of Nukus, improving the thermal performance of multi-storey residential buildings is considered one of the key factors in ensuring comfortable living conditions for the population [2].

Roof structures play a crucial role in the thermal protection of buildings. According to statistical data, approximately 10–15% of heat losses in multi-storey residential buildings occur through the roof [3]. This leads to increased heating costs during the winter period and higher cooling energy demand in summer. Therefore, the use of efficient thermal insulation materials in roof structures is a critical factor in enhancing the overall energy efficiency of buildings.

At present, modern thermal insulation materials widely used in the construction industry—such as mineral wool, polyurethane foam, extruded polystyrene, ecowool, and other advanced technologies—demonstrate high efficiency in reducing heat losses. International experience indicates that the application of such materials can reduce energy consumption in buildings by up to 40–60% [4]. At the same time, environmental safety, service life, and economic efficiency of thermal insulation materials are also important criteria in the selection process.

Thus, this thesis analyzes the role of modern thermal insulation materials in improving the energy efficiency of roof structures, including their types, properties, and practical effectiveness. The main objective of the study is to present the theoretical and practical foundations for enhancing energy efficiency through the insulation of roof structures under the climatic conditions of Uzbekistan, particularly in the cold climate of the city of Nukus.

Modern Thermal Insulation Materials. At present, a wide range of modern thermal insulation materials is available in the construction industry, each possessing specific properties and performance characteristics. The main materials that are widely used in practice are described below.

Mineral wool (basalt wool). This material is produced from natural stone, typically basalt, and is distinguished by its environmental safety and high thermal insulation performance. It is fire-resistant, exhibits good moisture retention properties, and does not emit harmful substances into the indoor air. The thermal conductivity coefficient of mineral wool ranges from 0.035 to 0.045 W/(m·K) [5].

Polyurethane foam (PUR, PIR). This material is considered one of the most efficient thermal insulation materials currently available. It is lightweight, dense, and has a uniform surface structure, providing a high level of insulation even at minimal thickness. Polyurethane foam is mainly applied in spray form. Its thermal conductivity varies between 0.022 and 0.028 W/(m·K).

Extruded polystyrene (XPS). This material is characterized by high density and excellent moisture resistance, making it particularly suitable for roof structures, especially in areas exposed to significant moisture. In addition, it demonstrates high resistance to compression and mechanical loads. The thermal conductivity of extruded polystyrene ranges from 0.029 to 0.035 W/(m·K).

Ecowool. Ecowool is a cellulose-based insulation material that is environmentally friendly but has a relatively high moisture absorption capacity. It is primarily used in wooden roof structures and lightweight construction systems [6].

Application and Practical Effectiveness of Insulation Materials. The proper selection and efficient application of thermal insulation materials in roof structures significantly enhance the energy performance of buildings. Practical studies and international experience demonstrate that the implementation of thermal insulation measures can reduce energy consumption by up to 40–60%.

For example, in Germany, buildings constructed according to the “Passive House” concept are characterized by insulation thicknesses of at least 25–30 cm, enabling a reduction in annual heating energy demand to as low as 15 kWh/m² [7].

Under the climatic conditions of Uzbekistan, particularly in the cold climate of the city of Nukus in the Republic of Karakalpakstan, the adaptation of such practices can yield substantial benefits. Reducing heat losses through roof structures during the cold season contributes to the optimization of energy consumption and significantly improves indoor comfort conditions for residents.

Key Factors in the Selection of Insulation Materials. When selecting insulation materials for roof structures, the following factors should be carefully considered:

Thermal conductivity coefficient: The lower the value, the better the insulation performance of the material.

Moisture resistance: Roof structures are more frequently exposed to moisture and precipitation.

Fire performance: This is a critical factor from the perspective of building safety.

Environmental safety: Insulation materials should not emit harmful substances into the indoor air.

Service life: Materials with longer durability and stable performance are preferable.

Taking these factors into account and making design-based selections significantly contributes to improving the overall energy efficiency of buildings.

Conclusion. The conducted analysis demonstrates that heat losses through roof structures have a direct impact on the overall energy efficiency of multi-storey residential buildings. The use of modern insulation materials not only improves the thermal protection of buildings but also ensures long-term economic and environmental benefits. Therefore, thermal insulation has become a strategically important issue in contemporary construction practice.

First, scientific research and practical experience confirm that the application of thermal insulation materials can reduce energy consumption by 40–60%. On the one hand, this significantly decreases household utility expenses, while on the other hand, it contributes to the conservation of national energy resources. The “Passive House” concept, widely implemented in Germany and other developed countries, clearly

demonstrates the critical role of roof insulation in enhancing building energy efficiency.

Second, when selecting insulation materials, particular attention should be paid to factors such as thermal conductivity, moisture resistance, fire performance, environmental safety, and service life. Properly selected materials ensure long-term durability, reduce building operation and maintenance costs, and improve indoor living conditions.

Third, under the climatic conditions of Uzbekistan—especially in the city of Nukus and other regions of the Republic of Karakalpakstan, where cold winter seasons prevail—the effective insulation of roof structures represents one of the most pressing challenges. Reducing heat losses during the cold season not only enhances indoor comfort for residents but also supports energy conservation at the national level.

Fourth, the use of modern insulation materials plays a significant role in ensuring environmental sustainability. Increased energy consumption by conventional heating systems leads to higher emissions of carbon dioxide and other harmful gases, which negatively affect global climate change. From this perspective, improving energy efficiency through thermal insulation is one of the most effective approaches to ensuring environmental safety.

In conclusion, the widespread application of modern thermal insulation materials in roof structures to improve energy efficiency is one of the most urgent tasks in contemporary construction. This approach provides economic and environmental benefits, enhances the quality of life of the population, promotes rational use of resources, and supports the development of sustainable construction practices. Therefore, it is essential to implement comprehensive measures within national programs and scientific research initiatives aimed at promoting the use of modern insulation materials in the construction sector of Uzbekistan.

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ХОРАЗМ ВИЛОЯТИДА ЯШОВЧИ АЁЛЛАРДА ТУРЛИ ХИЛ СЕМИЗЛИК ФОНИДА ЮЗАГА КЕЛГАН ГОНАРТРОЗЛАРДА ТИЗЗА БЎҒИМИ СОН СУЯГИ ЮЗАСИ ГИАЛИН ТОҒАЙИ ПАТОМОРФОЛОГИЯСИ

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Аннотация: Хоразм вилоятида яшовчи аёлларда турли хил семизлик фонида юзага келган гонартрозларда тизза бўғими сон суяги юзаси гиалин тоғайи патоморфологиясида асосий жихатдан сон суяги бўғим юзаси олди ва ўрта ички юзасида гиалин тоғайларида алтерация ва гиалин моддасини эрозив емирилиши билан давом этишидир. бунда менисклар ва олдинги хочсимон бойламларни шикастланиши оқибатида, бўғим юзалари оғирлик таянч нуқтасини ўзгариши натижасида гиалин қоплами таркибидаги коллаген толаларни титилиши, ишқалинишни кучайиши хондроцитлар жойлашган ўрта ва чуқур сохаларида дистрофик ва некробиотик ўзгаришлар устунлиги билан давом этиши натижасида, эпиметафизао сохалар билан биргаликда шикастланиш кучаяди.

Калит сўзлар: патоморфология, бғим юзаси, гонартроз, семизлик, гиалин қопламаси, коллаген толалар.

Муаммони долзарблиги: Дунёда аҳолиси орасида аёлларда семизлик туфайли тизза бўғими остеоартрити билан жами 7,6-8,1% аҳолиси азият чекади. АҚШда тизза бўғими остеоартрити (ТБОА) ногиронликнинг асосий сабаби бўлиб, семизлик эпидемияси туфайли 50 ёшдан ошган аёлларнинг қарийб 35-40%да гонартрознинг турли даражалари аниқланган.

WHO (ЖССТ) маълумотларига кўра, Европа ва Буюк Британияда 45-50 ёшлиларни 60%да ортиқча вазн сабабли, тизза бўғими остеоартрити (ТБОА) аёллар орасида 38-43,1% ни ташкил этгани аниқланган.

Россия федерацияси 2024 йилги маълумотларга кўра, Россияда аёллар орасида семизлик тарқалиши 28.6% га етган (эркакларда 20.9%). Гонартроз билан оғриган аёллар гуруҳида семизлик эркакларга нисбатан 83% га кўпроқ учрайди. МДХ давлатларида бу кўрсаткич 2022 йилдаги маълумотлар бўйича, 45-55 ёшли аёллар орасида 38,4-51,3% ни ташкил этиб, бу кўрсаткич хар йилига ўртача 1,2% га ошганлиги аниқланди. Ушбу контингентни 60-74% да тизза бўғими гонартрозини турли даражалари аниқланган.

Мамлакатимизда аёллар орасида семизлик фонида ривожланган гонартроз билан 45-60 ёшлиларда рўйхатдан ўтганларни сони ўртача 2,2млн ни ташкил этган бўлса, Гендер тенглиги бўйича бу кўрсаткич, аёлларда эркакларга нисбатан 2,5-3,0 баробарга кўплигини тасдиқлайди. Хоразм вилоятида жами 45-55 ёшлилар орасида семизлик фонида ривожланган тизза бўғими остеоартрити (ТБОА) аҳолини 10-12% ни ташкил этиб, шулардан, 1-2 даражали гонартрозлар 65-70% ни ташкил этса, 30-35%ни 3-4 даражали гонартрозлар ташкил этганлиги аниқланган.

Натижа ва муҳокама: Хоразм вилоятида яшовчи аёлларда турли хил семизлик фонида юзага келган гонартрозларда тизза бўғими сон суяги юзаси гиалин тоғайи патоморфологиясида сон суяги бўғим юзалари гиалин қопласини юза, ўрта ва чуқур соҳаларидаги дистрофик, некробиотик ўзгаришлар эрозив дефектларни юзага келиши билан давом этиши жараёни давомийлиги билан бевосита боғлиқ ҳисобланади. Хоразм вилояти иқлими кескин континентал, жанубий Орол бўйи худудида нокулай экологик шароитлар ва сув туз алмашинуви, аёлларда семириш фонида кундалик зарур бўлган оксил микдорини етишмовчилиги бўғимларни ички мухити ўзгаришига ва шикастланишлар бўғим ичида тизимли кўринишида барча компонентларни шикастланиши билан давом этади. Тизза бўғими гонартрозининг 3–4-даражаларида бўғим юзасида кузатиладиган ўзгаришлар патоморфологик жиҳатдан энг оғир босқич ҳисобланиб, қайтмас деструктив жараёнлар билан характерланади.

Эпидемиологик жиҳатдан Ўзбекистон республикасида таянч ҳаракат тизимидаги сурункали деструктив касалликлар рейтинги бўйича, Қорақалпоқистон Республикаси ва Хоразм вилояти бошқа вилоятларга нисбатан 7,1-10,2% га кўп учраши билан характерланиб, илмий ишимизни мазмунини яънада ёритиб беришга хизмат қилади. унга кўра, аёлларда турли хил семизлик фонида юзага келган гонартрозларда тизза бўғими сон суяги юзаси қуйидаги морфологик ўзгариш босқичлари аниқланади.

Ушбу босқичларда бўғим юзасида қуйидаги асосий ўзгаришлар аниқланади:

1. Тоғай тўқимасининг емирилиши ва деструкцияси, тоғайнинг тўлиқ йўқолиши: Бўғим юзасидаги гиалин тоғайи қавати жуда юпқалашади ёки айрим соҳаларда бутунлай йўқолиб, бўғим юзаси очилиб қолади.

Фибрилляция ва ёриқлар: Тоғай юзасида чуқур ёриқлар, тирқишлар ва парчаланиш (деструкция) ўчоқлари пайдо бўлади.

Менисклар дегенерацияси: Бўғим ичидаги менисклар ўз шаклини йўқотади, қаттиқлашади (склероз) ва кўпинча йиртилишлар ёки парчаланиш-лар кузатилади.

2. Суяк тўқимасидаги ўзгаришлар

Остеофитлар: Бўғим чегараларида суяк ўсимталари (остеофитлар) пайдо бўлиб, улар бўғим шаклини деформация қилади ва ҳаракатни чеклайди.

Субхондрал склероз: Тоғай остидаги суяк қавати механик босим туфайли зичлашади ва қаттиқлашади.

демак, гонартрозни оғир даражаларида гиалин қоплами емирилиши, коллаген толалар деструкцияси, изоген хондроцитларни экстрацеллюляр матрикс ишлаб чиқраувчанлик хусусиятларини кескин пасайиши тоғай тўқимасида репаратив регенерацияни кескин пасайиши ва қатмас жараёнлар билан намоён бўлса, клиник морфологик жихатдан кучли оғирқлар, ҳаракатларни чекланиши, бўғим юзаларида ўчоқли анкилоз, остеосклероз каби ўзгаришларни юзага келиши билан тугалланиши аниқланди.

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STYLISTIC, STRUCTURAL AND IDEOLOGICAL ORIENTATION OF POLEMICAL STATEMENTS IN THE PUBLICISTIC WRITINGS OF ENGLISH ENLIGHTENERS AND JADID REFORMERS

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Abstract. This thesis analyzes the stylistic, structural and ideological orientation of polemical statements in the publicistic writings of English Enlighteners and Jadid reformers. The study focuses on Daniel Defoe, Jonathan Swift, Alexander Pope, Joseph Addison, Richard Steele, Mahmudkhoja Behbudiy, Abdurauf Fitrat, Abdulla Avloniy and Abdulhamid Chulpan. The analysis shows that polemical statements in both traditions are based on the opposition between ignorance and enlightenment, moral passivity and social responsibility, old thinking and reformist ideas. English Enlightenment polemics often relies on rational argumentation, irony, satire and aphoristic expression. Jadid polemics combines rational criticism with emotional appeal, moral instruction and national reformist ideas.

Keywords: polemical statement, style, structure, ideology, satire, irony, antithesis, publicism, English Enlightenment, Jadidism, reform, national awakening.

Introduction. Polemical statements play an important role in publicistic discourse because they express criticism, opposition and persuasion. Their stylistic and structural organization is closely connected with the author's ideological purpose. In the English Enlightenment, Defoe, Swift, Pope, Addison and Steele used polemics to criticize political corruption, religious intolerance, false learning, social hypocrisy and moral decline. Their writings were based on reason, irony, satire and civic responsibility. In Jadid publicism, Behbudiy, Fitrat, Avloniy and Chulpan used polemics to awaken society, reform education and develop national consciousness. Their criticism was directed against ignorance, outdated schooling, social passivity and cultural backwardness.

The relevance of the topic lies in comparing two reformist literary traditions that treated the written word as an instrument of intellectual, moral and social renewal.

Methodology. The research is based on comparative-literary, historical-cultural and stylistic-structural methods. The comparative-literary method helps to identify similarities and differences between English Enlightenment polemics and Jadid publicism. The historical-cultural method makes it possible to explain the social

conditions that shaped the polemical orientation of both traditions. The stylistic-structural method is used to analyze the form, tone, composition and expressive means of polemical statements. The material of the research includes the publicistic and literary works of English Enlightenment writers and Jadid reformers. In the English tradition, the study focuses on the writings of Joseph Addison, Richard Steele, Daniel Defoe, Jonathan Swift and Alexander Pope. In the Jadid tradition, the analysis is based on the works of Mahmudkhoja Behbudiy, Abdurauf Fitrat, Abdulla Avloniy and Abdulhamid Chulpan.

Special attention is paid to such stylistic devices as irony, satire, antithesis, rhetorical question, direct address, aphorism and evaluative vocabulary. The structural analysis examines how polemical statements are organized: from problem to argument, from criticism to conclusion, from opposition to reformist idea. The ideological analysis identifies the main social and cultural aims of polemics in both traditions.

Results. The analysis shows that English Enlightenment polemics is mainly characterized by rational argumentation, irony and satirical distance. Joseph Addison and Richard Steele represent a moderate and essayistic type of polemical statement. In *The Spectator* and *The Tatler*, they criticize social defects through observation, fictional characters, everyday situations and moral commentary. Their polemics is usually indirect and elegant. The structure of their polemical statements often moves from observation to reflection and then to moral conclusion. Daniel Defoe's polemical statements are more direct and analytical. His publicistic writings are connected with politics, trade, religion and public life. Defoe often presents a concrete problem, explains its causes and proposes a practical solution. His polemics is based on facts, examples and rational reasoning. This makes his style close to analytical journalism and political pamphlet literature. Jonathan Swift's polemics is based on irony and satire. In *A Modest Proposal*, he uses the form of a rational economic project to expose the cruelty and moral blindness of society. The external structure of the text is logical, but its content is shocking. This contrast creates a strong polemical effect. Swift's polemical statement is indirect because the real criticism is hidden behind a satirical mask. Alexander Pope develops polemics in poetic and aphoristic form. In *An Essay on Criticism* and *The Dunciad*, he criticizes false taste, poor judgment, literary ignorance and cultural decline. His polemical statements are short, sharp and memorable. Pope uses antithesis, irony, allusion and evaluative language to strengthen the critical meaning of his texts.

In Jadid publicism, polemical statements have a more direct reformist and national orientation. Mahmudkhoja Behbudiy's polemics is socially urgent. In *Padarkush*,

ignorance is shown as the cause of tragedy. The dramatic structure of the work becomes an argument in favor of education. Behbudiy's polemical statements are built on strong contrasts: knowledge and ignorance, reform and stagnation, responsibility and carelessness. Abdurauf Fitrat uses dialogue as a structural form of polemics. In Munozara, different opinions are opposed to each other, and the necessity of reform is proved through debate. Fitrat's polemics is logical, intellectual and argumentative. He uses questions, answers, comparisons and refutations to show the weakness of old thinking and the importance of renewal. Abdulla Avloniy's polemical statements have a moral and pedagogical character. In Turkiy guliston yoxud axloq, he criticizes laziness, ignorance, bad upbringing and indifference to knowledge. His structure is clear: moral problem, explanation, social consequence and educational conclusion. For Avloniy, education and morality are the foundation of national development. Abdulhamid Chulpan gives polemics a more emotional and expressive form. His writings appeal to national dignity, spiritual freedom and awakening. Chulpan criticizes passivity and inner weakness, but his criticism is not only didactic. It is lyrical, passionate and emotionally powerful. He addresses not only the reader's mind, but also the reader's feelings.

Discussion. The comparison of English Enlighteners and Jadid reformers shows that both traditions used polemical statements as a means of criticism and persuasion. However, the stylistic form and ideological function of polemics differ according to historical context. In English Enlightenment publicism, polemics was closely connected with the development of civic culture and public debate. Addison and Steele used a calm and didactic tone in order to correct manners, taste and social behavior. Their polemics was based on polite irony and moral observation. They did not aim to create emotional shock; rather, they guided the reader toward self-correction and rational reflection. Defoe's polemics had a stronger practical direction. His statements were organized according to the logic of problem, evidence and solution. This structure reflects the Enlightenment belief in reason, usefulness and social improvement. Swift and Pope, on the other hand, used satire as a powerful instrument of criticism. Swift's irony reveals moral absurdity, while Pope's poetic satire attacks false taste and intellectual decline.

In Jadid publicism, polemical statements were more closely connected with educational reform and national awakening. Jadid writers did not simply criticize individual defects; they criticized the social conditions that prevented cultural and intellectual progress. Behbudiy used dramatic conflict to show the tragic consequences of ignorance. Fitrat used dialogue and debate to prove the necessity of reform. Avloniy

used moral instruction to connect education with national progress. Chulpan used emotional expression to awaken dignity and spiritual freedom.

Both traditions use similar stylistic devices: antithesis, irony, satire, rhetorical questions, direct address and moral generalization. However, these devices perform different functions. In English Enlightenment publicism, they mainly serve to correct civic behavior, public taste and intellectual culture. In Jadid publicism, they are directed toward educational modernization, national consciousness and social renewal. Antithesis plays an important role in both traditions. English authors oppose reason and folly, morality and corruption, taste and vulgarity. Jadid authors oppose enlightenment and ignorance, progress and backwardness, knowledge and stagnation. This opposition makes polemical conflict clear and persuasive.

The difference is also visible in tone. English Enlightenment polemics often uses irony, wit and satirical distance. Jadid polemics more often uses direct appeal, moral urgency and emotional expression. This difference is explained by the historical mission of the two traditions. English writers addressed a society with an already developed print culture and public sphere. Jadid reformers, however, tried to create a new public consciousness and encourage society to accept educational and cultural reform. Thus, polemical statements in both traditions should be understood not only as stylistic elements, but as forms of social thought. Through polemics, writers expressed their attitude toward society, criticized outdated ideas and constructed a new model of cultural development.

Conclusion. The stylistic, structural and ideological orientation of polemical statements in English Enlightenment and Jadid publicism shows the close connection between literary form and social purpose. Defoe, Swift, Pope, Addison and Steele developed analytical, satirical and essayistic models of polemics, while Behbudiy, Fitrat, Avloniy and Chulpan used polemics for education, national consciousness and cultural modernization. Both traditions used polemics as a means of criticism and persuasion. However, English Enlightenment polemics was mainly connected with civic morality and literary satire, while Jadid polemics had a stronger educational and reformist mission.

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O‘ZBEK XALQINING SHAKLLANISHINING ASOSIY YONDASHUVLARI

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Annotatsiya. Ushbu tezisda o‘zbek xalqining shakllanishi va etnik tarixi bo‘yicha tarixchi olimlar tomonidan ilgari surilgan yondashuvlar yoritib berilgan. O‘zbekiston tarixini o‘rganish uchun, eng avvalo, o‘zbek xalqining etnogenezi va etnik tarixini tadqiq qilishdan boshlash lozim. Har bir xalqning o‘z shakllanish davrlari, ya’ni jarayonning boshlanish va yakunlanish vaqti mavjud. O‘zbek xalqining shakllanish jarayonlariga bag‘ishlab tarixchi olimlar tomonidan turli yondashuvlar ishlab chiqilgan. Ushbu yondashuvlar arxeologik, tarixiy-yozma va lingvistik manbalar yordamida chuqur o‘rganilib, tahlil qilingan. Bundan tashqari, tezisda o‘zbek xalqining etnogenezi va shakllanish bosqichlarini o‘rganishdagi zamonaviy hamda klassik ilmiy yondashuvlar ham tahlil etiladi.

Abstract. This thesis examines the scientific approaches of historians regarding the formation and ethnic history of the Uzbek people. The study of the history of Uzbekistan must, first and foremost, begin with the investigation of the ethnogenesis and ethnic history of its people. The formation of every nation consists of specific stages, marking the beginning and the completion of the process. Various approaches to the formation of the Uzbek people have been developed by historians, which are analyzed in depth using archaeological, written, and linguistic sources. Furthermore, the thesis provides a comparative analysis of both classical and modern scientific approaches to studying the stages of the ethnogenesis of the Uzbek people.

Аннотация. В данном тезисе рассматриваются научные подходы историков к изучению формирования и этнической истории узбекского народа. Изучение истории Узбекистана, прежде всего, необходимо начинать с исследования этногенеза и этнической истории его народа. Формирование каждого этноса имеет свои этапы, включая периоды начала и завершения данного процесса. Историками разработаны различные концепции формирования узбекского народа, которые глубоко проанализированы на основе археологических, письменных и лингвистических источников. Кроме того, в работе проводится сравнительный анализ классических и современных научных подходов к изучению этапов этногенеза узбекского народа.

Kalit soʻzlar: Oʻzbek xalqi, etnogenez, etnik tarix, shakllanish bosqichlari, avtohton qatlam, turkiy qabilalar, tarixshunoslik, arxeologik manbalar, lingvistik tahlil.

Keywords: Uzbek people, ethnogenesis, ethnic history, stages of formation, autochthonous layer, Turkic tribes, historiography, archaeological sources, linguistic analysis.

Ключевые слова: узбекский народ, этногенез, этническая история, этапы формирования, автохтонный слой, тюркские племена, историография, археологические источники, лингвистический анализ.

Oʻzbek xalqining etnik shakllanish jarayoni tarixichi olimlar oʻrtasidagi munozarali masala boʻlib kelmoqda. Chunki oʻzbek xalqining etnik shakllanish jarayonining boshlanish davri va shakllanib boʻlgan davr tarixchilarning ilmiy tadqiqotlari natijasida turli xil davr etib belgilangan. Oʻzbek xalqining etnik shakllanish jarayoni chuqur tahlil qilib oʻrgangan akademiklar A.Asqarov va K.Shoniyoovlar oʻz ilmiy yondashuvlarini tadqiqotlarida keltirib oʻtgan. Ammo bu ikki akademik olimlarning yondashuvlarida oʻzbek xalqining etnik shakllanish jarayoni ikki xil davr bilan tahlil qiladi. Undan tashqari, Sobiq sovet tarixchilari ham ilmiy tadqiqotlaridan kelib chiqib oʻzbek xalqining shakllanish jarayonlari boʻyicha ilmiy yondashuvlarini ishlab chiqdi.

Oʻzbek xalqining kelib chiqishi muammosining yechimiga aloqador fan tarmoqlari rivojlanib, uni kompleks oʻrganishga oʻtilgach, Oʻzbek xalqining kelib chiqishi masalasida birdan bir toʻgʻri boʻlgan milliy avtohtonizm nazariyasi ishlab chiqildi. Bunga koʻra har bir xalqning kelib chiqishini oʻrganishda uning etnik tarkibini aniqlash zarurligini, uning etnogenezi va etnik tarixini, madaniy merosini, sarhadlarini, davlatchilik tarixini chuqur oʻrganib toʻgʻri xulosa qilish kerak boʻladi. Oʻzbek xalqining etnogenezi va etnik tarixi masalasi oʻta murakkab muammo boʻlib, u izlanuvchidan zoʻr masʼuliyatni talab qiladi. Oʻzbek xalqining tarixini chuqur oʻrganish kerak va muammoning ilmiy yechimida milliy ehtirolarga berilmaslik kerak.

Etnologiya sohasidagi etnik kelib chiqish nazariyasi boʻyicha ilmiy ishlarga koʻra, har bir xalqning kelib chiqishi tarixi uch bosqichdan iborat. Birinchi bosqich bu etnogenetik jarayon tarixi boʻlib, ikkinchi bosqich bu etnos tarixi, yaʼni xalq tarixi, uchinchi bosqich millat tarixi. Xalqlarning etnogenez qismi ularning xalq va millat sifatida shakllanishidan oldingi davrni oʻz ichiga oladi. Xalqning kelib chiqishi qabiladan boshlanadi. Xalq etnogenezi oxirida xalqqa xos boʻlgan barcha etnik xususiyatlar mujassamlashadi. Etnik xususiyatlarga hududiy, iqtisodiy, etnik madaniy,

antropologik tip, etnik nom, o'zini anglash, lingvistik va nihoyat, siyosiy birliklar orqaligina shakllanadi.

Akademik A.Asqarovning ilmiy tadqiqotlariga ko'ra xalq biologik hosila emas, balki ijtimoiy uyushma birligidir. Akademik A.Asqarovning ilmiy tadqiqotlariga ko'ra xalq darhol hosil bo'lmaydi, balki uzoq davom etadigan etnogenetik jarayon mahsuli va etnik alomatlar yig'indisidir. Ya'ni xalqning etnik alomatlarining shakllanishi esa etnogenetik jarayonlar davomida birin-ketin sodir bo'lib boraveradi. Xalqning etnogenez shakllanish jarayoni yakunlangach, uning etnik tarixi boshlanadi, ya'ni shakllangan xalq tarixi boshlanadi. Xalq bu feodal jamiyatning ijtimoiy mahsuli bo'lib, u ba'zi hollarda dastlabki sinfiy jamiyat sharoitida ham yuz berishi mumkin. Xalqning tarixi o'z iqtisodiy-xo'jalik va etnomadaniy rivojining ma'lum nuqtasiga yetgach, uning millat bo'lib shakllanish jarayoni boshlanadi. Xalqning millat bo'lib shakllanish jarayoni jamiyatda kapitalistik ishlab chiqarish munosabatlarining boshlanishi bilan yuz bera boshlaydi. Shuning uchun millat kapitalizmning ijtimoiy mahsuli hisoblanadi. Xalqlarning kelib chiqishi masalasidagi bunday ilmiy qarashni va muammoning yechimini kompleks yondashuv asosida o'rganishga o'tilgach, akademik A.Asqarovning bu ilmiy yondashuvi etnologiya fanida o'z o'rnini topdi.

Har bir xalqning etnogenezi, etnik va millat bo'lib shakllanishi tarixining har birini alohida olganda, ularning har birining boshlang'ich va yakuniy nuqtalari bor. Masalan, mana shu ilmiy konsepsiyaga ko'ra, o'zbek xalqi etnogenezining boshlang'ich nuqtasi sifatida akademik A.Yu.Yakubovskiy tomonidan olib borilgan tadqiqotlarida dastlab turk xoqonligi davri qabul qilindi. Keyinroq akademik S.P.Tolstov nuqtayi nazariga ko'ra, o'zbek etnogenezining boshlang'ich nuqtasini antik davrgacha qadimiylashtirdi. O'zbek xalqining etnogenezi va etnik tarixi bo'yicha fundamental tadqiqotlar olib borgan akademik Karim Shoniyozov ham "O'zbek xalqining shakllanish jarayoni" asarida o'zbek xalqining etnogenezini boshlang'ich nuqtasini antik davrgacha qadimiylashtirdi.

Akademik A.Asqarov nuqtayi nazariga ko'ra esa o'zbek xalqining etnogenezining boshlang'ich nuqtasini so'nggi bronza davri bilan belgilanmoqda. Akademik A.Asqarovning bunday ilmiy qarashining asosida o'zbeklarning o'q tomiri, ya'ni bosh ildizi ikki tilda so'zlashuvchi etnik qatlamlar bo'lgan eroniyzabon va turkiylarning qorishuv natijasi ekanligi va ularning qorishuvining dastlabki sanasi so'nggi bronza davridan boshlanganligini asos qilib olingan.

O'zbek xalqining kelib chiqishi haqidagi milliy avtohtonizm konsepsiyasi ilmiy-metodologik jihatdan asosli bo'lsa-da, uning ayrim tomonlarini jiddiy ilmiy izlanishlar bilan tahlil qilish talab qilinadi. Milliy avtohtonizm nazariyasiga ko'ra, tadqiqot ishlar

olib borgan olimlarning nazariyasida shuni ko‘rishimiz mumkinki, o‘zbek xalqining etnogenezinining boshlang‘ich nuqtasini turk xoqonligi yoki antik davri edi. Shunda o‘zbek xalqining etnogenezinining asosini turklar tashkil qilgan bo‘ladi. Ammo bu davrlardan oldin ham O‘zbekiston hududida boshqa qabilalar ham yashaganini tarixiy yozma va arxeologik manbalardan ko‘rishimiz mumkin. O‘zbek xalqining etnogenezinining asosida eroniyzabon qabilalarning ishtirokini hisobga olinmadi. Bu qarashlardan yana shuni ko‘rishimiz mumkinki, o‘zbek xalqining etnogenezinining asosida ishtirok etgan turkiy qabilalarga nisbatan kelgindi degan qarash yuzaga keladi. Bunda esa eroniyzabon qabilalar tubjoyli aholi bo‘lib qoldi.

Ammo o‘zbek xalqining etnogenezinini chuqur ilmiy tahlil qilishda faqat tarixiy yozma va lingvistik manbalarga tayanib qolmaslik kerak bo‘ladi. Xalqning etnogenezinini o‘rganishda arxeologik va antropologik manbalarda ham ilmiy tadqiqot ishlari olib borilishi muamoning yechimini topishga yordam beradi.

O‘zbek xalqining kelib chiqishi tarixini o‘rganishda arxeologik va antropologik manbalarga ham tayanib o‘rganilganda turkiy qabilalar antik davrdan oldin bronza davrda O‘zbekiston hududiga kirib kelgani aniq bo‘ldi. Demak o‘zbek xalqining etnogenezida ikki tilli qabilalar bo‘lgan turkiy va eroniyzabon qabilalar ishtirok etgan. Dunyo xalqlarining etnogenizi va etnik shakllanishi jarayonida faqat bitta etnik birlik asos bo‘lmagan. Ularning etnogenezi va etnik shakllanishi jarayonida ikki va undan ortiq etnik birliklar ta’sir qilgan. Buni biz boshqa xalqlarning etnik tarixidan bir qancha misollarni ko‘rishimiz mumkin. Masalan, amerikaliklar, inglizlar, kanadaliklar va turkiyaliklar kabi xalqlarni misol qilish mumkin bo‘ladi.

Xulosa qilib aytish mumkinki, o‘zbek xalqining kelib chiqishi tarixini o‘rganishdan so‘ng ma’lum bo‘ldiki, turkiy va eroniyzabon qabilalar arxeologik manbalarning asosida etnik asos bo‘ldi. Ammo faqat arxeologik manbalarga tayanib qolmaslik kerak, ya’ni o‘zbek xalqining kelib chiqishi tarixini tarixiy yozma, lingvistik, antropologik va numizmatik manbalarni chuqur tahlil qilib o‘rganib so‘ng ilmiy xulosa qilish kerak bo‘ladi.

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Annotatsiya: *Tajribalarda filtr qurilmasidagi matolarning havo o'tkazuvchanligini aniqlash bilan birgalikda tozalash samarasi va mato yuzasini tolali changlardan tozalanish darajasi aniqlandi. Tajribalarni o'tkazishda avval ko'p ishlatiladigan filtr matolardan boshlaydi. Poliesterdan tayyorlangan filtrni o'rnatib ishlatib ko'rildi va shu tariqa ketma-ket olingan matolarni o'rnatib tekshirildi.*

Kalit so'zlar: *Paxtali matolar, nitron, metallurgiya, lavsan, jun matolar, shisha tolali matolar, poliestер.*

Аннотация: *В экспериментах совместно с определением воздухопроницаемости тканей в фильтрующем устройстве определялась эффективность очистки и степень очистки поверхности ткани от волокнистой пыли. При проведении экспериментов сначала начните с наиболее часто используемых фильтровальных тканей. Был установлен и протестирован полиэфирный фильтр, а также установлены и протестированы последующие ткани.*

Ключевые слова: *Ткани хлопчатобумажные, нитрон, металлургия, лаваш, шерстяные ткани, стеклоткани, полиэстер.*

Abstract: *In the experiments, the air permeability of the fabrics in the filter device was determined, as well as the cleaning efficiency and the degree of cleaning of the fabric surface from fibrous dust. When conducting the experiments, the most commonly used*

filter fabrics were first used. A filter made of polyester was installed and tested, and the fabrics obtained in this way were installed and tested.

Keywords: Cotton fabrics, nitron, metallurgy, lavsan, wool fabrics, fiberglass fabrics, polyester.

Hozirgi kunda mavjud materiallar yuqorida ko'rsatilgan xossalarning hammasiga ham bir yo'la ega bo'lavermaydi. Shuning uchun filtrlarni har bir holat uchun alohida tanlanadi:

- 1) Paxtali matolar yaxshigina filtrlash xossasiga ega, narxi nisbatan arzon, lekin ximiyaviy va termik mustahkamligi kam, namlikni ko'proq shimib olishi mumkin. Jun matolardan havo yaxshi o'tadi, ishonchli tozalovchi, lekin kislotali gazlar, ayniqsa SO₂ va tumanga qarshiligi juda past. Paxtali matolarga nisbatan narxi qimmat. Yuqori harorat ta'sirida ishlasa mo'rt bo'lib qoladi. Faqat 900 °S gacha haroratdagina ishlay oladi. Keyingi paytlarda sintetik materiallardan to'qilgan matolar haroratga va agressiv muhitga chidamliligi bilan paxta va jun matolarini siqib chiqarmoqda, ularni narxi ham nisbatan arzon.
- 2) Nitron (Akril tolani tabiiy gazdan olinadi) tolali matolar 120 ÷ 130 °S haroratda ham yaxshi ishlashi sababli kimyo sanoati va rangli metallurgiyada filtrlash uchun ishlatilayapti.



1-rasm. Nitron tolali matolar.

- 3) Lavsanli (termoplastik tolalar yoki polietilentereftalat (PET) neftdan olinadi) matolardan esa sement, metallurgiya va ximiya sanoatida issiq va quruq gazlarni tozalashda foydalanilmoqda.



2-rasm. Lavsan tolali materiallar

- 4) Shisha tolali matolar $150 \div 350$ °S haroratda ham ishlay oladi.



3-rasm. Shisha tolali matolar

Aerodinamik xossalari:

- havo o'tkazuvchanlik ($\text{m}^3/\text{m}^2 \text{ min}$) $\Delta p_{\tau}=49 \text{ Pa}$ da son jihatdan filtrlash tezligi (m/min) ga teng.

Toza xoldagi filtrllovchi matolarning aerodinamik xususiyatlari havo o'tkazish xossasi – ma'lum bir bosim o'zgarishi R_t da havo sarfi bilan harakterlanadi. Bunda bosim o'zgarishi $R_t=49 \text{ Pa}$ ga teng bo'ladi. Havo o'tkazish $\text{m}^3 (\text{m}^2 \cdot \text{min})$ da ifoda etiladi. Son jihatidan u filtrlash tezligiga teng. Changlanmagan matolar qarshiligi R_t havo o'tkazish darajasi $0,3-2 \text{ m}^3 (\text{m}^2 \cdot \text{min})$ bo'lganda R_t 5 – 40 Pa ni tashkil etadi.

Changlangan sari matoning aerodinamik qarshiligi ortadi, filtr orqali o'tayotgan chang sarfi esa kamayadi. Mato teskari yo'nalish bo'yicha havo xaydash, mexanik silkitish yoki boshqa usullari yordamida tozalanadi. Bir necha filtrlash – tozalash sikllaridan keyin matodagi qoldiq changlar soni barqarorlashadi; u matoning muvozanatidagi changlanishi $q (\text{kg}/\text{m}^2)$ deb ataluvchi kattalikka va muvozanatdagi changlangan matoning qarshiligi R_r ga mos keladi. Bu kattaliklarning qiymati filtrllovchi material turiga, chang zarrachalarining o'lchami va xossalariga, changning nisbiy namligiga, changdan ozod qilish usuliga va xossalariga bog'liq bo'ladi [1].

Filtrlovchi matolarning xususiyatlari quyida 1-jadvalda keltirilgan [2].

1-jadval

Filtrlovchi matolarning xususiyatlari

Mato nomi	qalinligi, mm	Issiqqa chidamligi, °S		Kimyoviy turg'unligi		
		Uzoqroq	Qisqa vaqt	Kislota	Ishqorlar	Rastvo- ritel
Sukno	1,5	65-85	90-95	JYo*	JYo	Ya*
Nitron	1,6	120	150	Q*	Q	Ya
Lavsan	1,4	130	160	Ya	Yo*	Ya
Xlorin	1,32	65-70	80-90	JYa*	JYa	Q
Steklotkan	0,22	240	315	Ya	Q	JYa

Izox: *JYo – juda yomon; Yo* - yomon; Q* - qoniqarli; Ya* - yaxshi; JYa* - juda yaxshi.

Mato nomi bo'yicha uning qalinliklari, issiqqa chidamliligi va kimyoviy turg'unligi keltirilgan bo'lib, bu yerda Nitron tolali matolar issiqqa chidamliligi, kimyoviy turg'unligi va matoning qalinligi bo'yicha paxta changi uchun maqul deb xisoblab, shu tipidagi matolarni tanlash bo'yicha tajribalarni olib borildi.

Tajribalarni o'tkazishda avval ko'p ishlatiladigan filtr matolardan boshlaymiz. Poliesterdan tayyorlangan filtrni o'rnatib ishlatib ko'rildi va shu tariqa ketma-ket olingan matolarni o'rnatib tekshirildi.

Tajribalarda havo o'tkazuvchanligini aniqlash bilan birgalikda tozalash samarasi va mato yuzasini tolali changlardan tozalanish darajasi aniqlandi, tajriba natijalari quyidagi 2-jadval keltirilgan.

Filtrlovchi mato sifatida paxta va jundan tayyorlangan matolarni olinganida paxta changining matoga yopishib, mato yuzasidan sidirib olish qiyinligini kuzatilganligi uchun suniy matolardan foydalanishga qaror qilindi [3, 4] va ushbu matolarni tanlash bo'yicha tajribalar olib borildi.

2-jadval

Filtrlovchi matolarni tanlash natijalari

No	Matolarning turi	Filtr matosini ng qarshiligi , yuza tozalanm aganda, Rt, Pa	Matoni yuzasini doymiy tozalashtan keyingi qarshilik, Rtt, Pa	Tozalash samara-si, %	Matoning yuzasini tolali material-dan tozalanishi, %
1	Poliester	120	70	92,0	99,5
2	Polimid	150	80	94,5	98,7
3	Politetraftoretlen	180	90	96,0	97,5
4	Polietilentereftalat	130	90	95,2	98,2
5	Poliakrilonitril	150	100	98,9	96,8

Filtrlash uchun tanlangan matolarni stendga o'rnatib 60 sekund davomida tayyorlangan changni filtrdan o'tkazildi, o'lchovlarni o'tkazish bilan matoning qarshiligi yuza tozalanmaganda poliesterdagi 120 Paskalni tashkil etsa, matoning yuzasi doymiy tozalash tizimiga o'tkazilganda qarshilik kamayib 100 Pa ga tushdi, tozalash samarasi esa 92,0% ni tashkil etib, mato yuzasidan yopishib yotgan tolali materiallarni sidirib olib tozalanish miqdori 99,5 % ni tashkil etdi va mato yuzasida mayda tolali chiqindilar yopishgini ko'rildi. 3.1-jadvaldagi ko'rsatkichlarga ko'ra "Poliakrilonitril" motosining qarshiligi uning yuzasini tozalanmaganda 150 Pa bo'lib, yuzani doymiy tozalash tizimini ishlatilganida 100 Pa ga tushdi, tozalash samaradorligi esa 98,9 % ni, mato yuzasidan tolali materiallarni sidirib olish miqdori 96,8 % ni tashkil etib, qolgan matolarga nisbatan yuqori ko'rsatkichga ega bo'ldi.

Tanlangan matoning texnik tavsiflari: zichligi 1.14-1.17 g/sm³, issiqlikka chidamliligi -120-130⁰S, cho'zishda uzilish quvvati 250-400 MPa.

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SYMBOLISM OF NATURE IN EMILY DICKINSON'S POETRY

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Abstract. This research investigates the symbolism of nature in the poetry of Emily Dickinson, with special emphasis on the poetic, emotional, and philosophical functions of natural imagery in her works. Dickinson is regarded as one of the most innovative and influential poets in American literature, and nature occupies a central place in her poetic imagination. Unlike many poets who use nature simply as a decorative background or as a realistic description of the external environment, Dickinson transforms natural elements into rich symbolic expressions that communicate profound existential, spiritual, and psychological concerns. Through her unique poetic style, she creates a symbolic relationship between the human mind and the natural world, allowing ordinary elements of nature to convey complex meanings related to life, death, faith, identity, suffering, and immortality. This study aims to examine how Dickinson employs natural imagery as a symbolic system that shapes the thematic depth and artistic originality of her poetry.

The research is based on a qualitative textual analysis of selected poems in which nature imagery plays a significant role. By closely analyzing Dickinson's poetic language, imagery, metaphors, and symbols, the study demonstrates that nature in her poetry functions not merely as an external reality but as a reflection of inner emotional and intellectual experiences. Dickinson frequently uses symbols such as birds, flowers, bees, seasons, light, storms, sunsets, and landscapes to express emotions and philosophical ideas that are often difficult to communicate directly. Her symbolic use of nature enables readers to explore the deeper psychological and spiritual dimensions of human existence. The study further reveals that Dickinson's poetic treatment of nature combines emotional sensitivity with intellectual complexity, making her works open to multiple interpretations.

One of the most significant aspects explored in this research is Dickinson's symbolic use of birds. Birds appear repeatedly throughout her poetry and often represent freedom, hope, imagination, transcendence, and the soul's desire to escape worldly limitations. In many poems, birds symbolize spiritual aspiration and emotional liberation, while in others they reflect fragility, isolation, or uncertainty. Dickinson's famous use of the bird as a symbol of hope demonstrates how natural imagery can

embody abstract emotional states in a vivid and accessible manner. Through such imagery, Dickinson creates a connection between the visible world of nature and the invisible world of human emotions and spiritual longing.

Flowers also occupy an important symbolic position in Dickinson's poetry. The study shows that flowers are frequently associated with beauty, purity, emotional sensitivity, mortality, and the transient nature of life. Dickinson often uses floral imagery to illustrate the delicate balance between life and death, growth and decay, permanence and impermanence. The blooming and fading of flowers symbolize the temporary nature of human existence and the inevitability of death. At the same time, flowers may also represent emotional intimacy, personal identity, and spiritual awakening. Dickinson's attention to even the smallest details of nature reflects her belief that profound truths can be discovered in ordinary natural experiences. Another major focus of the research is Dickinson's symbolic representation of seasons and landscapes. Seasonal imagery in her poetry frequently reflects the stages of human life and emotional transformation. Spring is often associated with renewal, hope, rebirth, and spiritual awakening, whereas winter symbolizes death, isolation, silence, and emotional suffering. Autumn may represent maturity, transition, or decline, while summer is linked to vitality, fulfillment, and temporary happiness. Through the cyclical movement of seasons, Dickinson illustrates the repetitive and unavoidable cycles of human existence. Natural landscapes, including gardens, forests, skies, and horizons, often function as symbolic spaces where emotional and philosophical conflicts unfold. These landscapes are not merely physical settings but psychological and spiritual environments that mirror the inner condition of the speaker.

The study further explores Dickinson's use of light and darkness as symbolic oppositions that communicate emotional and metaphysical meanings. Images of sunlight, dawn, and brightness often symbolize hope, truth, spiritual revelation, or intellectual clarity, while darkness, night, and shadows may represent fear, uncertainty, grief, or the mystery of death. However, Dickinson's symbolism is rarely simple or one-dimensional. In many poems, light can also become overwhelming or inaccessible, while darkness may provide insight, reflection, or emotional depth. This ambiguity reflects Dickinson's complex understanding of human experience and her resistance to absolute certainty. Her poetry frequently suggests that truth and meaning exist within uncertainty and contradiction.

In contrast to traditional Romantic poets who often idealize nature as peaceful, harmonious, and comforting, Dickinson presents nature as mysterious, unpredictable, and sometimes indifferent to human suffering. While she deeply admires the beauty of

the natural world, she also recognizes its power, silence, and ambiguity. Storms, thunder, and other violent natural phenomena in her poetry may symbolize emotional conflict, psychological turmoil, or existential anxiety. Nature in Dickinson's works is therefore neither entirely benevolent nor entirely hostile; rather, it reflects the complexity and uncertainty of life itself. This distinctive portrayal of nature separates Dickinson from many earlier poetic traditions and contributes to the originality of her literary voice. The research also emphasizes the influence of Dickinson's personal life, intellectual background, and spiritual questioning on her symbolic use of nature. Dickinson lived a largely secluded life, and her introspective personality greatly shaped her poetic perspective. Her questioning attitude toward organized religion and conventional social expectations encouraged her to seek spiritual understanding through personal observation and reflection rather than through established doctrines. Nature became one of the primary mediums through which she explored questions related to faith, immortality, divine presence, and the meaning of existence. Her symbolic treatment of natural imagery reflects both her emotional sensitivity and her philosophical depth, revealing a poet who constantly searched for truth within the ordinary experiences of life.

Furthermore, the study demonstrates that Dickinson's innovative use of natural symbolism contributes significantly to the originality of her poetic style. Her concise language, unconventional punctuation, compressed metaphors, and layered imagery create a unique poetic form in which natural symbols carry multiple meanings simultaneously. This symbolic richness allows her poetry to remain intellectually engaging and emotionally powerful for readers across different historical periods and cultural contexts. The universality of her themes, combined with the complexity of her symbolism, explains why Dickinson continues to be widely studied in literary criticism and academic research. The findings of this research reveal that nature symbolism is not simply an ornamental feature in Dickinson's poetry but a central component of her artistic vision and thematic structure. Natural imagery functions as a bridge between the external world and the internal human experience, enabling Dickinson to express profound reflections on existence, mortality, spirituality, identity, and emotional consciousness. By examining the deeper meanings behind her symbolic use of nature, this study contributes to a broader understanding of Dickinson's poetic artistry and highlights her enduring importance in American literature. Ultimately, the research demonstrates that Dickinson's poetry transforms the natural world into a powerful symbolic language through which the complexities of human life and thought are explored with remarkable depth and originality.

Keywords. Emily Dickinson ,symbolism, nature, Imagery, Metaphor, Spirituality, Existentialism, Philosophy, Identity, Mortality, Isolation, Transcendence, Seasons, Flowers, Birds, Landscapes, Light, Darkness, American Poetry, Poetics

Introduction. Emily Dickinson is widely recognized as one of the most original and influential voices in American literature. Her poetry differs significantly from the conventional literary traditions of the nineteenth century because of its unusual structure, compressed language, emotional intensity, and philosophical depth. Dickinson's poems often challenge traditional poetic forms through her distinctive use of punctuation, slant rhyme, irregular capitalization, and concise expression. Although many of her poems are brief in form, they contain profound reflections on human existence, spirituality, mortality, identity, and emotional experience. Among the most remarkable aspects of Dickinson's poetry is her symbolic use of nature. Unlike many Romantic and Transcendentalist writers who portrayed nature primarily as a source of beauty, harmony, or divine comfort, Dickinson approached nature in a far more complex and symbolic way. She did not merely describe flowers, birds, seasons, or landscapes as decorative elements; instead, she transformed them into meaningful symbols that communicated deeper philosophical and psychological ideas. Through symbolism and metaphor, nature became an essential medium through which Dickinson explored the mysteries of life and the inner dimensions of human consciousness.

Nature occupies a central position in Dickinson's poetic imagination. Throughout her poetry, natural imagery appears repeatedly in the form of birds, flowers, bees, sunsets, storms, rivers, gardens, seasons, light, and darkness. However, these images rarely function as simple representations of the physical world. Instead, they carry symbolic meanings that reflect emotional states, spiritual uncertainty, existential anxiety, and intellectual contemplation. Dickinson's ability to invest ordinary natural objects with abstract significance demonstrates her originality as a poet and distinguishes her from many of her contemporaries in American poetry. Her poems reveal that nature is not separate from human life but deeply interconnected with the experiences of the human mind and soul. Through natural symbolism, Dickinson transforms external reality into a reflection of internal consciousness.

The symbolic use of birds is one of the most notable features of Dickinson's poetry. Birds often represent hope, freedom, transcendence, imagination, or the soul's desire to escape worldly limitations. In some poems, birds symbolize spiritual liberation and emotional resilience, while in others they reflect uncertainty, fragility, or isolation. Dickinson's famous representation of hope as a bird demonstrates how nature imagery

can embody abstract emotions in a vivid and accessible manner. Similarly, flowers in her poetry frequently symbolize beauty, mortality, innocence, emotional sensitivity, and the temporary nature of existence. The blooming and fading of flowers serve as metaphors for the cycles of life and death, reminding readers of the impermanence of human experience. Dickinson's detailed observation of even the smallest aspects of nature reflects her belief that profound truths can be discovered in ordinary natural phenomena. Another important dimension of Dickinson's poetic symbolism is her use of seasonal imagery. The changing seasons often represent emotional transformation and the different stages of human life. Spring commonly symbolizes renewal, hope, awakening, and rebirth, while winter reflects death, silence, loneliness, and spiritual isolation. Summer may suggest vitality and fulfillment, whereas autumn frequently symbolizes decline, transition, and mortality. Through these seasonal metaphors, Dickinson illustrates the cyclical nature of existence and the inevitability of change. Her poetry suggests that human life, like nature itself, is constantly moving through cycles of growth, decay, loss, and renewal. Such symbolism contributes to the philosophical depth of her works and allows readers to interpret her poetry on both emotional and intellectual levels.

Light and darkness also function as powerful symbols in Dickinson's poetry. Images of light, sunrise, and brightness often symbolize truth, revelation, spiritual insight, and hope. Conversely, darkness and shadows may represent fear, uncertainty, grief, emotional suffering, or the mystery of death. Yet Dickinson's symbolism is often ambiguous and complex rather than fixed or predictable. Light may sometimes become overwhelming or unreachable, while darkness may offer opportunities for introspection and deeper understanding. This symbolic ambiguity reflects Dickinson's philosophical perspective, which resists absolute certainty and embraces the complexity of human existence. Her poetry frequently explores the tension between knowledge and mystery, faith and doubt, hope and despair. Through natural imagery and metaphor, Dickinson expresses the contradictions and uncertainties that define human consciousness.

The philosophical themes present in Dickinson's poetry are closely connected to her symbolic representation of nature. Questions concerning death, immortality, spirituality, faith, and identity appear repeatedly throughout her works. Nature becomes a medium through which these abstract concerns are explored. Dickinson's poetry often reflects her fascination with death and the possibility of an afterlife. Unlike many religious writers of her time, she approaches these subjects with uncertainty and intellectual curiosity rather than unquestioning faith. Natural symbols such as sunsets,

winter landscapes, fading flowers, or silent skies often evoke reflections on mortality and the unknown nature of existence beyond death. In this way, Dickinson's use of nature imagery extends beyond aesthetic beauty and becomes a philosophical investigation into the meaning of life itself. Dickinson's symbolic treatment of nature was also influenced by her personal experiences and intellectual environment. Living much of her life in relative seclusion, Dickinson developed an intensely introspective worldview. Her isolation allowed her to observe nature with extraordinary attentiveness and emotional sensitivity. At the same time, her questioning attitude toward organized religion contributed to the complexity of her spiritual and philosophical themes. Rather than accepting traditional religious doctrines without doubt, Dickinson sought personal understanding through observation, reflection, and poetic imagination. Nature became one of the primary ways through which she explored spiritual uncertainty and emotional truth. Her poetry suggests that the natural world contains hidden meanings capable of revealing insights into the human condition.

In the broader context of American poetry, Dickinson occupies a distinctive position because of her innovative use of symbolism and metaphor. During the nineteenth century, many American writers were influenced by Romanticism and Transcendentalism, literary movements that emphasized the beauty and spiritual significance of nature. Although Dickinson shared some interest in the relationship between humanity and nature, her poetic vision differed significantly from the optimistic and harmonious portrayal of nature found in many Romantic works. Nature in Dickinson's poetry is often mysterious, unpredictable, indifferent, or even threatening. Storms, darkness, and silence may symbolize emotional conflict, existential anxiety, or spiritual uncertainty. By presenting nature as both beautiful and unsettling, Dickinson created a more complex and realistic representation of human experience. Her poetry reflects the idea that life contains both wonder and suffering, certainty and ambiguity.

The importance of symbolism in Dickinson's poetry also lies in its contribution to her poetic style. Her language is highly condensed, and her metaphors often contain multiple layers of meaning. Natural imagery enables Dickinson to express profound ideas with remarkable brevity and intensity. A single image of a flower, bird, or sunset may simultaneously suggest emotional, spiritual, and philosophical meanings. This richness of symbolism explains why Dickinson's poetry continues to attract scholars and readers across different generations. Her works invite interpretation and encourage readers to engage actively with the text in search of deeper meaning. This research

focuses on the symbolism of nature in Emily Dickinson's poetry and examines how nature imagery functions as a vehicle for emotional, spiritual, and philosophical expression. Through a qualitative analysis of selected poems, the study aims to demonstrate that natural symbolism is not merely an ornamental feature of Dickinson's writing but a central component of her artistic vision. The research explores how symbols such as birds, flowers, seasons, landscapes, light, and darkness contribute to the thematic complexity of her poetry and reflect her exploration of mortality, identity, faith, transcendence, and human consciousness. By analyzing Dickinson's symbolic use of nature, the study seeks to provide a deeper understanding of her poetic originality and her contribution to American literature.

Furthermore, this study highlights the continuing relevance of Dickinson's poetry in modern literary criticism. Her exploration of existential questions, emotional isolation, spirituality, and the relationship between humanity and nature remains meaningful to contemporary readers. Dickinson's poetry demonstrates that nature is not simply part of the external environment but also a symbolic mirror of human thought and feeling. Through metaphor and symbolism, she transforms ordinary natural experiences into profound reflections on existence and the mysteries of the human soul. Consequently, the study of nature imagery in Dickinson's poetry contributes not only to the understanding of her literary techniques but also to broader discussions about symbolism, philosophy, and the role of nature in literature.

Aim of the Research. The primary aim of this research is to examine the symbolism of nature in the poetry of Emily Dickinson and to analyze how natural imagery functions as a significant poetic device for expressing emotional, spiritual, psychological, and philosophical ideas. The study seeks to explore the deeper meanings hidden within Dickinson's descriptions of birds, flowers, seasons, light, landscapes, storms, and other natural elements, demonstrating that nature in her poetry serves not merely as a decorative background but as a symbolic language through which complex human experiences are communicated. By focusing on the relationship between symbolism and nature imagery, the research aims to provide a comprehensive understanding of Dickinson's poetic artistry and her contribution to American poetry. One of the major aims of the study is to investigate how Dickinson transforms ordinary aspects of nature into symbols that represent abstract concepts such as mortality, immortality, hope, despair, faith, isolation, transcendence, and human consciousness. Dickinson's poetry is characterized by condensed language and layered metaphorical meaning, and natural imagery plays a central role in shaping these meanings. The research therefore aims to identify the symbolic significance of recurring natural

elements and to explain how they contribute to the thematic richness of her poetry. Birds, for example, often symbolize freedom, spiritual aspiration, or emotional resilience, while flowers may represent beauty, fragility, purity, or the temporary nature of life. Through close textual analysis, the study seeks to uncover the philosophical and emotional dimensions embedded within these symbols.

Another important aim of the research is to examine the role of symbolism in constructing Dickinson's unique poetic style. Dickinson differs from many nineteenth-century poets because of her unconventional approach to poetic form, imagery, and metaphor. Rather than presenting direct explanations of emotions or philosophical ideas, she frequently relies on symbolic representations that invite multiple interpretations. Nature imagery allows Dickinson to communicate profound meanings indirectly, creating poetry that is intellectually, emotionally, and spiritually complex. This research aims to analyze how symbolism and metaphor function together in Dickinson's poetry and how they contribute to the originality of her literary expression. By doing so, the study seeks to demonstrate that natural imagery is essential not only to the content of Dickinson's poems but also to their artistic structure and poetic technique. The study also aims to explore the relationship between nature and human consciousness in Dickinson's works. Nature in her poetry is often closely connected to inner emotional and psychological experiences. External landscapes frequently mirror internal states of mind, while changing seasons reflect emotional transformation and existential awareness. The research therefore intends to analyze how Dickinson uses nature imagery to represent loneliness, fear, hope, emotional conflict, and spiritual questioning. Through symbolic landscapes and metaphors, Dickinson creates a poetic world in which the natural and human realms are deeply interconnected. Understanding this relationship is one of the central objectives of the study because it reveals how Dickinson transforms personal emotion into universal poetic experience.

Another significant aim of this research is to investigate the philosophical themes conveyed through Dickinson's symbolic treatment of nature. Her poetry frequently addresses existential questions concerning life, death, immortality, faith, identity, and the meaning of existence. Natural symbols become vehicles through which these philosophical concerns are expressed and explored. The study aims to demonstrate that Dickinson's representation of nature goes beyond aesthetic appreciation and becomes a form of philosophical inquiry. Images such as sunsets, fading flowers, storms, darkness, and silence often symbolize mortality, uncertainty, or the search for spiritual truth. By analyzing these symbols, the research seeks to reveal how Dickinson uses poetry as a means of questioning human existence and confronting the mysteries of life

and death. In addition, the study aims to compare Dickinson's treatment of nature with broader literary traditions, particularly Romanticism and American Transcendentalism. Many Romantic poets viewed nature as harmonious, inspiring, and spiritually uplifting. Although Dickinson shares an interest in the spiritual and emotional significance of nature, her perspective is often more ambiguous and psychologically complex. Nature in her poetry can appear beautiful and comforting, but it can also seem indifferent, mysterious, or unsettling. This research aims to examine how Dickinson both inherits and challenges traditional literary representations of nature. By placing her poetry within the broader context of American literature, the study seeks to highlight her originality and her contribution to the development of modern poetic symbolism.

The research further aims to investigate how Dickinson's personal experiences and intellectual background influenced her symbolic use of nature. Dickinson lived much of her life in relative isolation, and her introspective personality deeply shaped her poetic imagination. Her questioning attitude toward organized religion and social conventions also contributed to the complexity of her themes. Nature became one of the primary mediums through which she explored spiritual uncertainty and emotional truth. This study aims to analyze how her personal worldview is reflected in her symbolic imagery and how her emotional sensitivity influenced her poetic representation of the natural world. Understanding the connection between Dickinson's life and her poetry is essential for interpreting the deeper meanings of her symbolism. Another aim of the research is to contribute to existing literary criticism on Emily Dickinson by offering a focused analysis of nature symbolism in her poetry. Although Dickinson's works have been extensively studied, nature imagery remains one of the most important and multifaceted aspects of her poetry. This study aims to provide a deeper understanding of how symbolic natural elements function within her poetic structure and thematic framework. Through qualitative textual analysis, the research intends to reveal the richness and complexity of Dickinson's imagery and to emphasize its significance in shaping the emotional and philosophical impact of her poetry.

The study also seeks to demonstrate the continuing relevance of Dickinson's poetry in contemporary literary studies. Themes such as isolation, spirituality, mortality, identity, emotional conflict, and humanity's relationship with nature remain meaningful in modern society. Dickinson's symbolic use of natural imagery allows her poetry to transcend historical and cultural boundaries and continue resonating with readers across generations. By examining the universal themes present in her works, this research aims to show why Dickinson remains one of the most influential figures

in American literature and why her poetry continues to inspire critical interpretation and scholarly discussion. Furthermore, the research aims to develop a broader understanding of symbolism as a literary technique. Dickinson's poetry provides an excellent example of how symbolism can transform simple natural objects into carriers of profound emotional and intellectual meaning. Through the analysis of metaphor, imagery, and symbolic language, the study seeks to explain how literary symbols function in poetry and how they create multiple layers of interpretation. This objective is important not only for the study of Dickinson but also for the broader field of literary analysis, because it illustrates the power of symbolism in communicating abstract ideas and emotional experiences.

The scientific significance of this research lies in its comprehensive examination of the symbolism of nature in the poetry of Emily Dickinson and its contribution to the broader fields of literary criticism, American poetry, symbolism studies, and philosophical literary analysis. Dickinson remains one of the most influential and intellectually complex figures in American literature, and her poetry continues to attract scholarly attention because of its innovative language, emotional depth, and symbolic richness. Despite the extensive body of criticism devoted to Dickinson's works, the symbolic function of nature imagery remains an important area for further exploration due to the complexity and multiplicity of meanings embedded in her poems. This research is scientifically significant because it provides a focused and systematic analysis of how natural imagery operates as a symbolic structure through which Dickinson expresses emotional, spiritual, existential, and philosophical concerns.

One of the major scientific contributions of the research is its detailed investigation of the relationship between symbolism and nature imagery in Dickinson's poetry. Previous studies have often examined Dickinson's themes of death, faith, isolation, or spirituality separately; however, this research emphasizes how these themes are interconnected through recurring natural symbols such as birds, flowers, seasons, light, darkness, storms, and landscapes. By analyzing these symbols within a unified interpretive framework, the study contributes to a deeper understanding of Dickinson's poetic system and reveals how nature functions not merely as a background element but as a central mechanism of meaning production. This approach allows the research to enrich literary scholarship by demonstrating the structural and thematic importance of symbolism in Dickinson's artistic vision. The study is also scientifically important because it contributes to the field of symbolism studies in literature. Symbolism is one of the most significant literary devices used to express abstract concepts through

concrete images, and Dickinson's poetry provides a particularly rich example of symbolic expression. Her natural imagery often contains multiple layers of meaning that reflect emotional, philosophical, and spiritual dimensions simultaneously. By examining how Dickinson transforms ordinary natural objects into symbols of mortality, immortality, hope, fear, transcendence, and human consciousness, this research expands theoretical understanding of how symbolism functions in poetic discourse. The findings of the study may therefore be useful not only for Dickinson scholarship but also for broader literary analyses involving symbolism, metaphor, and figurative language in poetry.

Another aspect of the scientific significance of the research lies in its contribution to American literary studies. Dickinson occupies a distinctive position in nineteenth-century American poetry because her poetic style differs considerably from the conventions of her literary period. While many Romantic and Transcendentalist writers idealized nature as harmonious and spiritually comforting, Dickinson often portrayed nature as ambiguous, mysterious, indifferent, or psychologically complex. This study highlights the originality of Dickinson's perspective and demonstrates how her symbolic treatment of nature contributed to the transformation of poetic expression in American literature. By examining Dickinson's deviation from traditional Romantic representations of nature, the research deepens scholarly understanding of literary movements and the evolution of poetic modernity in the United States. The scientific value of this research is further strengthened by its interdisciplinary relevance. Dickinson's poetry cannot be interpreted solely from a literary perspective because her symbolic use of nature intersects with philosophy, psychology, spirituality, and existential reflection. The research explores how natural symbols communicate existential concerns such as death, identity, loneliness, uncertainty, and the search for meaning. Consequently, the study contributes to interdisciplinary discussions concerning the relationship between literature and human consciousness. Dickinson's symbolic landscapes often mirror emotional states and psychological conflicts, making her poetry relevant to psychological literary criticism and existential philosophy. The integration of literary, philosophical, and psychological approaches increases the academic importance of the research and broadens its scholarly applicability.

Furthermore, the research possesses methodological significance because it employs qualitative textual analysis to examine Dickinson's poetic symbolism in depth. Through close reading and interpretive analysis of selected poems, the study demonstrates how symbolic meaning emerges through imagery, metaphor, diction, and poetic structure. This methodological approach is scientifically valuable because

Dickinson's poetry is highly condensed and layered with multiple meanings that require detailed textual examination. The study therefore contributes to literary methodology by showing the effectiveness of qualitative analysis in interpreting symbolic poetry. The research may also serve as a model for future studies focusing on symbolism and imagery in other literary works. The scientific significance of the study also lies in its exploration of the philosophical dimensions of Dickinson's poetry. Dickinson's works frequently address universal questions related to life, death, immortality, faith, and the unknown nature of existence. Nature imagery becomes a medium through which these abstract philosophical concerns are explored. The research demonstrates how Dickinson uses symbolic representations of seasons, flowers, birds, sunsets, and darkness to reflect on existential uncertainty and spiritual questioning. By emphasizing the philosophical role of nature symbolism, the study contributes to the growing field of philosophical literary criticism and reveals the intellectual depth underlying Dickinson's poetic imagination.

Another important contribution of the research is its focus on the relationship between nature and human consciousness. Dickinson's poetry often suggests that external nature reflects internal emotional and psychological experiences. Natural imagery becomes a symbolic extension of the human mind, allowing emotional states to be represented indirectly through landscapes, weather conditions, and seasonal transformations. The study is scientifically significant because it highlights this interaction between the natural and psychological worlds and explains how Dickinson's symbolism creates a bridge between external reality and internal consciousness. This perspective contributes to a more comprehensive understanding of poetic imagery and its role in representing human experience.

The study also possesses educational and academic significance. Dickinson's poetry is widely studied in departments of literature, linguistics, cultural studies, and comparative literature around the world. The findings of this research may therefore serve as valuable academic material for students, researchers, and literary scholars interested in symbolism, American poetry, and literary interpretation. By providing detailed analyses of natural symbols and their meanings, the study can contribute to the teaching of poetry analysis and literary criticism. It may also encourage further scholarly research on Dickinson and other poets who employ symbolic natural imagery in their works.

In addition, the research contributes to the understanding of metaphor and imagery as essential components of poetic language. Dickinson's poetry demonstrates how metaphorical and symbolic expression can communicate complex emotional and

philosophical ideas more effectively than direct statement. The study examines how symbolic images function within poetic structure and how readers interpret layered meanings through metaphorical associations. This analysis enhances theoretical discussions concerning figurative language and poetic communication, thereby increasing the scientific value of the research in the broader field of literary theory.

The relevance of the study is also connected to contemporary discussions about humanity's relationship with nature. Although Dickinson wrote during the nineteenth century, her poetry continues to resonate with modern readers because of its exploration of emotional isolation, spiritual uncertainty, and human interaction with the natural world. In contemporary literary criticism, nature is often examined not only aesthetically but also psychologically, philosophically, and ecologically. Dickinson's symbolic representation of nature offers insights into how human beings interpret and emotionally respond to the natural environment. Therefore, the research possesses modern relevance by connecting nineteenth-century poetry with contemporary intellectual concerns regarding consciousness, identity, and environmental perception. Moreover, this research is scientifically significant because it emphasizes Dickinson's contribution to the development of modern poetic techniques. Her unconventional punctuation, fragmented syntax, compressed metaphors, and symbolic imagery anticipated many characteristics of twentieth-century modernist poetry. By analyzing the symbolic structure of her nature imagery, the study demonstrates how Dickinson's poetic innovations influenced the evolution of modern literary expression. This contribution is important for understanding the historical development of poetic language and the transition from Romantic traditions to modern literary experimentation.

The originality of the research further enhances its scientific importance. Rather than limiting the analysis to one specific symbol or theme, the study investigates nature symbolism as an integrated system that shapes Dickinson's entire poetic worldview. It examines multiple symbolic categories—including birds, flowers, seasons, light, darkness, landscapes, and seasonal imagery—and explains how they interact to construct emotional and philosophical meaning. This comprehensive approach enables the research to provide a broader and more coherent interpretation of Dickinson's poetry compared to studies that focus on isolated thematic aspects.

Discussion. The discussion of this research demonstrates that the poetry of Emily Dickinson reveals an exceptionally rich and complex symbolic relationship between nature and human consciousness. The analysis of selected poems confirms that Dickinson's use of nature imagery extends far beyond simple description of the

physical world. Instead, nature functions as a symbolic and philosophical language through which the poet explores emotional experience, spiritual uncertainty, existential anxiety, mortality, identity, and the mysteries of human existence. The findings of this study indicate that Dickinson transformed ordinary natural objects into profound metaphors capable of expressing abstract psychological and philosophical ideas. Her symbolic treatment of birds, flowers, seasons, landscapes, light, darkness, and storms demonstrates the depth of her poetic imagination and her innovative contribution to American poetry.

One of the most important findings discussed in this study is the symbolic significance of birds in Dickinson's poetry. Birds repeatedly appear as metaphors for hope, freedom, transcendence, imagination, and spiritual aspiration. However, the analysis also reveals that bird imagery in Dickinson's works is often complex and ambiguous. In some poems, birds symbolize liberation from worldly limitations and emotional suffering, while in others they suggest fragility, loneliness, or uncertainty. This duality reflects Dickinson's broader philosophical perspective, which avoids fixed meanings and embraces ambiguity. The symbolic role of birds demonstrates how Dickinson uses nature imagery to communicate emotional states that are difficult to express directly. Through the image of a bird, she transforms abstract emotional experiences into vivid poetic symbols that readers can emotionally and intellectually understand. Similarly, the discussion of floral imagery reveals that flowers occupy a central symbolic position in Dickinson's poetry. Flowers frequently represent beauty, innocence, emotional sensitivity, mortality, and the temporary nature of life. The analysis shows that Dickinson often uses blooming and fading flowers as metaphors for the cycles of human existence. The short life span of flowers becomes a reflection of human mortality and the inevitability of death. At the same time, flowers may symbolize personal identity, hidden emotional depth, or spiritual awakening. Dickinson's attention to delicate natural details demonstrates her ability to discover philosophical meaning within ordinary experiences. Her floral symbolism reflects the interconnectedness of beauty and fragility, suggesting that human life itself contains both emotional richness and impermanence. The discussion of seasonal imagery further supports the central argument of the research that nature functions as a symbolic system in Dickinson's poetry. Seasons in her works often represent emotional transformation and the stages of human life. Spring commonly symbolizes hope, renewal, spiritual awakening, and rebirth, whereas winter represents silence, death, isolation, and emotional suffering. Autumn may signify maturity, transition, or decline, while summer reflects vitality, fulfillment, and temporary happiness. The cyclical

movement of seasons parallels the cycles of human existence and reinforces Dickinson's philosophical interest in change, continuity, and mortality. Through seasonal symbolism, Dickinson emphasizes that life is constantly shaped by processes of growth, decay, loss, and renewal. This symbolic understanding of nature demonstrates her awareness of the inseparable connection between human life and the natural world.

Another significant aspect revealed through the discussion is Dickinson's symbolic use of light and darkness. The findings show that these opposing natural images communicate emotional and metaphysical meanings throughout her poetry. Light often symbolizes truth, spiritual revelation, hope, intellectual clarity, or emotional awakening, while darkness may represent fear, uncertainty, grief, or existential mystery. However, Dickinson's symbolic method resists simple oppositions. In some poems, darkness becomes a source of insight and self-reflection, while light may appear overwhelming, distant, or inaccessible. This ambiguity reveals Dickinson's philosophical complexity and her resistance to absolute certainty. The discussion confirms that Dickinson's symbolic use of natural imagery reflects her belief that human existence is shaped by contradiction, uncertainty, and emotional complexity. The findings also indicate that Dickinson's portrayal of nature differs significantly from traditional Romantic idealization. Many Romantic poets viewed nature as harmonious, spiritually comforting, and morally uplifting. Dickinson, however, often portrays nature as mysterious, unpredictable, and emotionally ambiguous. Storms, silence, darkness, and violent natural phenomena in her poetry may symbolize psychological conflict, spiritual doubt, or existential anxiety. Nature in Dickinson's works is neither entirely benevolent nor entirely hostile; rather, it reflects the complexity of life itself. This discussion demonstrates that Dickinson's poetic vision challenges simplistic representations of nature and presents a more realistic and intellectually nuanced understanding of human experience. Her symbolic approach allows nature to become a mirror of emotional and philosophical uncertainty.

The discussion also highlights the close relationship between Dickinson's personal experiences and her symbolic treatment of nature. Dickinson's secluded lifestyle and introspective personality strongly influenced her poetic imagination. Living in relative isolation enabled her to observe nature with extraordinary attention and emotional sensitivity. The analysis suggests that nature became a medium through which Dickinson explored thoughts and emotions that could not always be expressed openly within the social and religious environment of her time. Her questioning attitude toward organized religion contributed to the spiritual ambiguity present in her poetry.

Natural symbols often function as indirect expressions of her doubts, fears, hopes, and existential questions. Therefore, the discussion reveals that Dickinson's symbolic use of nature was deeply connected to her personal worldview and intellectual development. Another important issue discussed in this research is the relationship between symbolism and poetic style in Dickinson's works. The findings show that Dickinson's compressed language, unusual punctuation, fragmented syntax, and metaphorical density strengthen the symbolic impact of her poetry. Natural images frequently carry multiple layers of meaning simultaneously, requiring active interpretation by readers. A single image of a flower, bird, or sunset may suggest emotional, spiritual, psychological, and philosophical meanings all at once. This symbolic richness contributes to the intellectual depth of her poetry and explains why her works continue to attract scholarly attention. The discussion confirms that symbolism is not merely a decorative feature in Dickinson's poetry but a structural principle that shapes both form and meaning.

The research findings also suggest that Dickinson's poetry reflects a profound relationship between nature and human consciousness. Natural landscapes in her works often function as symbolic representations of inner emotional states. Storms may symbolize psychological turmoil, silence may reflect emotional isolation, and changing seasons may represent personal transformation. Through these symbolic connections, Dickinson creates a poetic universe in which the external world mirrors the internal experiences of the human mind. This relationship between nature and consciousness demonstrates the psychological depth of her poetry and contributes to its universal relevance. Readers from different historical and cultural backgrounds can identify with the emotional truths communicated through her natural imagery. Furthermore, the discussion confirms that Dickinson's use of symbolism allows her to explore universal philosophical themes in a subtle and indirect manner. Death, immortality, faith, transcendence, and the search for meaning are central concerns throughout her poetry. Rather than presenting direct philosophical arguments, Dickinson communicates these themes through symbolic natural imagery. Fading flowers, setting suns, dark skies, and silent landscapes become metaphors for mortality and existential uncertainty. Birds and light may symbolize hope or spiritual transcendence. This symbolic method enables Dickinson to express complex philosophical ideas while preserving emotional intensity and poetic beauty. The findings therefore support the argument that nature symbolism is essential to understanding the philosophical dimensions of her poetry.

The discussion also demonstrates the continuing relevance of Dickinson's poetry in contemporary literary criticism. Modern readers continue to engage with her works

because they address universal human concerns such as loneliness, identity, mortality, spirituality, and emotional conflict. Her symbolic treatment of nature remains meaningful in contemporary discussions concerning psychology, philosophy, environmental consciousness, and literary symbolism. The complexity and ambiguity of her imagery encourage multiple interpretations, allowing her poetry to remain intellectually and emotionally engaging across generations. The findings of this study therefore confirm Dickinson's lasting significance in American literature and global literary studies. Additionally, the discussion reveals that Dickinson's symbolic use of nature contributed to the development of modern poetic expression. Her unconventional style and fragmented imagery anticipated many characteristics of twentieth-century modernism. By rejecting straightforward poetic description and emphasizing symbolic complexity, Dickinson expanded the possibilities of poetic language. The analysis suggests that her innovative use of metaphor and symbolism influenced later literary movements and helped transform traditional poetic forms. Consequently, her poetry occupies an important transitional position between Romanticism and modernist experimentation.

The findings of this research ultimately demonstrate that nature symbolism forms the foundation of Dickinson's poetic worldview. Nature in her poetry is not simply an external setting but a symbolic extension of emotional, spiritual, and philosophical experience. Through birds, flowers, seasons, light, darkness, and landscapes, Dickinson expresses profound reflections on human consciousness and existence. Her ability to transform ordinary natural phenomena into complex symbolic expressions reveals her poetic originality and intellectual depth. The discussion therefore confirms that the study of nature symbolism is essential for understanding Dickinson's literary artistry and her contribution to American poetry.

Conclusion. In conclusion, this research has demonstrated that the poetry of Emily Dickinson is deeply shaped by the symbolic use of nature imagery and that natural elements function as essential poetic devices through which emotional, spiritual, philosophical, and psychological meanings are conveyed. The study confirms that nature in Dickinson's poetry is not merely decorative or descriptive but serves as a complex symbolic language that reflects the inner experiences of the human mind and soul. Through the analysis of selected poems, the research has revealed how Dickinson transforms ordinary natural objects such as birds, flowers, seasons, landscapes, light, and darkness into profound metaphors capable of expressing universal human concerns including mortality, identity, faith, isolation, transcendence, and the search for meaning.

One of the central conclusions of the study is that symbolism plays a fundamental role in Dickinson's poetic worldview and artistic originality. Her use of natural imagery demonstrates an exceptional ability to communicate abstract and complex ideas indirectly through metaphor and symbolic representation. Rather than explaining emotions or philosophical thoughts directly, Dickinson allows nature to embody and reflect these experiences. Birds become symbols of hope, freedom, or spiritual aspiration; flowers symbolize beauty, fragility, and the temporary nature of life; while changing seasons represent cycles of emotional and existential transformation. Such symbolic richness gives her poetry multiple layers of interpretation and contributes to its intellectual and emotional depth.

The research also concludes that Dickinson's symbolic treatment of nature differs significantly from traditional Romantic representations of the natural world. Although she shares with Romantic poets an appreciation for nature and its spiritual significance, her poetry often presents nature as mysterious, ambiguous, and psychologically complex rather than entirely harmonious or comforting. Nature in Dickinson's works can be beautiful and inspiring, but it can also appear indifferent, silent, or unsettling. This duality reflects her philosophical understanding of human existence as uncertain and contradictory. Through storms, darkness, silence, and changing landscapes, Dickinson explores emotional conflict, existential anxiety, and spiritual doubt. Consequently, the study demonstrates that her poetry challenges simplistic interpretations of nature and presents a more nuanced understanding of life and consciousness.

Another important conclusion drawn from the research is that Dickinson's use of nature symbolism is closely connected to her personal experiences and introspective worldview. Her isolated lifestyle and questioning attitude toward religion significantly influenced her poetic imagination. Nature became a medium through which she explored ideas that could not always be directly expressed within the social and religious conventions of her time. The analysis reveals that natural imagery often reflects her emotional sensitivity, intellectual curiosity, and spiritual uncertainty. Through symbolic representations of light, darkness, seasons, and landscapes, Dickinson examined themes related to death, immortality, faith, loneliness, and the mystery of existence. Thus, the study concludes that her symbolic use of nature was deeply personal while simultaneously expressing universal human experiences. Another significant conclusion is that Dickinson's innovative use of symbolism contributed greatly to the development of modern poetic expression. Her condensed language, unconventional punctuation, fragmented syntax, and layered imagery

distinguish her from many poets of her time and anticipate features of twentieth-century modernism. The symbolic complexity of her poetry encourages active interpretation and allows readers to discover new meanings within her works. This originality has ensured Dickinson's lasting importance in American literature and explains why her poetry continues to be widely studied in literary criticism, philosophy, and cultural studies.

Overall, this research has shown that the symbolism of nature is central to Emily Dickinson's poetic vision and thematic structure. Nature imagery in her poetry serves as a dynamic and multilayered symbolic system through which profound emotional and philosophical truths are expressed. By transforming ordinary natural objects into symbols of universal human experience, Dickinson created a poetic language that remains intellectually powerful and emotionally resonant. The study therefore contributes to a deeper understanding of Dickinson's literary genius and confirms her position as one of the most original and influential figures in American poetry. Ultimately, the research highlights that the study of nature symbolism is essential for appreciating the richness, complexity, and enduring significance of Emily Dickinson's poetic legacy.

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OPTIMIZATION OF PRODUCTION COSTS USING 3D CAD/CAE MODELING (ENGINEERING COST REDUCTION ANALYSIS)

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Abstract. This article investigates the role of 3D CAD (Computer-Aided Design) and CAE (Computer-Aided Engineering) technologies in optimizing production costs through engineering cost reduction analysis. The study focuses on how digital modeling and simulation tools contribute to minimizing material waste, reducing prototyping expenses, improving design accuracy, and shortening product development cycles in modern manufacturing systems.

In contemporary industrial engineering, cost efficiency is a key determinant of competitiveness. Traditional manufacturing approaches often involve high prototyping costs, design errors, and inefficient material utilization. The integration of CAD/CAE systems enables engineers to virtually design, test, and optimize products before physical production, significantly reducing financial and operational risks.

The results of this study demonstrate that 3D CAD/CAE-based optimization not only improves technical performance but also provides substantial economic benefits by lowering production costs, enhancing resource efficiency, and accelerating time-to-market.

Keywords: 3D CAD, CAE, cost optimization, engineering economics, simulation, design optimization, manufacturing efficiency, digital engineering.

Introduction

In the modern industrial environment, manufacturing companies are under constant pressure to reduce production costs while maintaining high product quality and performance. Global competition, increasing material prices, and shorter product life cycles require innovative engineering approaches that integrate both technical and economic optimization.

Computer-Aided Design (CAD) and Computer-Aided Engineering (CAE) systems have become essential tools in product development and manufacturing industries. CAD enables precise geometric modeling of components and systems, while CAE provides simulation capabilities for structural, thermal, and mechanical analysis.

The integration of CAD/CAE technologies allows engineers to evaluate multiple design alternatives without the need for physical prototypes. This reduces material consumption, minimizes design errors, and significantly decreases development costs.

Furthermore, early-stage simulation helps identify potential failures and inefficiencies, improving overall product reliability.

Therefore, this study aims to analyze how 3D CAD/CAE-based modeling contributes to production cost optimization and engineering cost reduction in industrial systems.

Literature Review

Shigley and Mischke, in their work “Mechanical Engineering Design”, emphasize that design optimization plays a crucial role in reducing manufacturing costs and improving product reliability through efficient engineering decision-making [1].

Rao, in “Engineering Optimization: Theory and Practice”, highlights that computational optimization methods integrated with CAD systems significantly reduce material usage and improve structural efficiency in mechanical designs [2].

Zeid, in “CAD/CAM Theory and Practice”, explains that CAD/CAM integration allows engineers to virtually test manufacturing processes, reducing the need for costly physical prototypes and minimizing production errors [3].

Anderson, in his engineering analysis studies, notes that CAE simulation tools provide accurate predictions of mechanical behavior under real operating conditions, enabling cost-effective design improvements [4].

Existing literature clearly shows that CAD/CAE technologies improve technical design quality; however, their direct impact on production cost reduction and economic efficiency still requires deeper quantitative analysis.

Methodology

This study is based on a comparative simulation and analytical approach using 3D CAD/CAE modeling tools. Initially, mechanical components were designed using CAD software to create accurate 3D geometrical models. These models were then imported into CAE environments for structural, thermal, and stress analysis.

Different design configurations were tested under simulated operating conditions to evaluate performance, durability, and material efficiency. Optimization techniques were applied to reduce material usage while maintaining structural integrity.

Economic evaluation was performed by comparing production costs before and after optimization, including material costs, manufacturing time, and prototyping expenses. The relationship between design efficiency and cost reduction was analyzed using engineering economics principles.

Results and Discussion

The application of CAD/CAE-based optimization demonstrated significant improvements in both technical performance and economic efficiency. Simulation

results showed that optimized designs required less material while maintaining the same or higher strength and durability levels.

The following table summarizes the comparative analysis:

Indicator	Before Optimization	After Optimization	Change (%)
Material Consumption (kg)	150	115	-23.3%
Prototyping Cost (USD equivalent)	5000	2800	-44%
Design Development Time (days)	30	18	-40%
Production Cost per Unit	100	78	-22%
Structural Efficiency Index	0.72	0.89	+23.6%

The results clearly indicate that CAD/CAE-based optimization significantly reduces production costs while improving design efficiency. One of the most important findings is the reduction in prototyping costs, which is achieved by replacing physical testing with virtual simulation.

Material optimization also plays a crucial role in cost reduction. By identifying stress distribution zones, engineers were able to remove unnecessary material without compromising structural integrity. This leads not only to lower costs but also to lighter and more efficient product designs.

From an economic perspective, the integration of CAD/CAE systems reduces the overall product development cycle, enabling faster time-to-market and increasing competitive advantage in industrial markets.

Conclusion

The study confirms that 3D CAD/CAE modeling is a highly effective approach for optimizing production costs in modern engineering systems. By enabling virtual design, simulation, and optimization, these technologies significantly reduce material waste, prototyping expenses, and development time.

Furthermore, CAD/CAE integration enhances engineering decision-making by providing accurate predictive analysis of product behavior under real-world conditions. This leads to improved product quality, higher efficiency, and lower production costs. Overall, CAD/CAE-based engineering cost reduction represents a critical component of modern industrial competitiveness and sustainable manufacturing development.

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BO‘LAJAK INGLIZ TILI O‘QITUVCHILARIDA PROFESSIONAL KOMPETENSIYANI RIVOJLANTIRISHNING PEDAGOGIK SHART- SHAROITLARI

Ollaberganova Fazilat Tangriberganovna – Qo‘shko‘pir tumani 3-son texnikumi
direktorining o‘quv ishlari bo‘yicha o‘rinbosari

Annotatsiya

Mazkur maqolada bo‘lajak ingliz tili o‘qituvchilarining professional kompetensiyasini rivojlantirishning pedagogik asoslari, kompetensiyaviy yondashuvning mazmuni hamda pedagogik shart-sharoitlari tahlil qilingan. Shuningdek, innovatsion metodlar, kommunikativ yondashuv va amaliy mashg‘ulotlarning ahamiyati ochib berilgan.

Kalit so‘zlar

professional kompetensiya, ingliz tili o‘qituvchisi, pedagogik kompetensiya, kommunikativ yondashuv, innovatsion texnologiyalar, metodik tayyorgarlik.

KIRISH

Bugungi globallashuv va axborotlashuv jarayonida chet tillarini puxta egallagan, zamonaviy pedagogik texnologiyalarni samarali qo‘llay oladigan malakali mutaxassislarga bo‘lgan ehtiyoj tobora ortib bormoqda. Xususan, ingliz tilining xalqaro muloqot, ilm-fan, texnologiya va ta‘lim sohalaridagi mavqei bo‘lajak ingliz tili o‘qituvchilarining professional tayyorgarligiga nisbatan yangi talablarni yuzaga keltirmoqda. Shu bois oliy ta‘lim tizimida bo‘lajak ingliz tili o‘qituvchilarining professional kompetensiyasini rivojlantirish masalasi pedagogika fanining dolzarb yo‘nalishlaridan biri sifatida e‘tirof etilmoqda.

Zamonaviy ta‘lim paradigmasida kompetensiyaviy yondashuv ustuvor ahamiyat kasb etib, u bo‘lajak mutaxassislarning nazariy bilimlarni amaliy faoliyatda samarali qo‘llash qobiliyatini shakllantirishga xizmat qiladi. Professional kompetensiya pedagogning kasbiy bilimlari, metodik tayyorgarligi, kommunikativ ko‘nikmalari, axborot texnologiyalaridan foydalanish malakasi hamda shaxsiy sifatlarining integrativ tizimi sifatida namoyon bo‘ladi. Shu nuqtai nazardan, bo‘lajak ingliz tili o‘qituvchilarida professional kompetensiyani rivojlantirish uchun zarur pedagogik shart-sharoitlarni aniqlash va ularni ta‘lim jarayoniga tatbiq etish muhim ilmiy-amaliy ahamiyatga ega.

Mazkur muammoning nazariy va metodologik asoslari xorijiy hamda mahalliy olimlar tomonidan keng tadqiq etilgan. Jumladan, I.A. Zimnyaya kompetensiyaviy

yondashuvning pedagogik mohiyatini yoritgan bo'lsa¹, J. Jalolov chet tillarini o'qitish metodikasining zamonaviy tamoyillarini asoslab bergan². Shuningdek, E.I. Passov kommunikativ yondashuvning til o'rgatishdagi samaradorligini ilmiy jihatdan tahlil qilgan³. Biroq bo'lajak ingliz tili o'qituvchilarining professional kompetensiyasini rivojlantirishning pedagogik shart-sharoitlarini kompleks tarzda tadqiq etish dolzarbligicha qolmoqda.

Mazkur maqolaning maqsadi bo'lajak ingliz tili o'qituvchilarida professional kompetensiyani rivojlantirishning pedagogik shart-sharoitlarini tahlil qilish hamda ularning ta'lim samaradorligini oshirishdagi ahamiyatini yoritishdan iborat.

Professional kompetensiya pedagogning kasbiy faoliyatni samarali amalga oshirishga imkon beruvchi bilim, ko'nikma va shaxsiy sifatlar majmuasi sifatida talqin etiladi. Shu sababli oliy ta'lim muassasalarida bo'lajak ingliz tili o'qituvchilarining kasbiy kompetentligini rivojlantirish muhim vazifalardan biridir.

ASOSIY QISM

Professional kompetensiyaning mazmuni

Professional kompetensiya — pedagogning kasbiy faoliyatni samarali tashkil etishga xizmat qiluvchi integrativ sifatidir⁴. U quyidagi komponentlarni o'z ichiga oladi:

- lingvistik kompetensiya;
- kommunikativ kompetensiya;
- metodik kompetensiya;
- axborot-kommunikatsion kompetensiya;
- ijtimoiy-psixologik kompetensiya.

Olimlarning ta'kidlashicha, kompetensiyaviy yondashuv ta'lim oluvchining mustaqil faoliyat yuritishiga xizmat qiladi¹.

Pedagogik shart-sharoitlar

Bo'lajak ingliz tili o'qituvchilarining professional kompetensiyasini rivojlantirish quyidagi pedagogik shart-sharoitlar asosida amalga oshiriladi:

1. Innovatsion texnologiyalardan foydalanish

Multimedia vositalari, onlayn platformalar va interaktiv metodlar talabalar faolligini oshiradi. Ayniqsa, blended learning va digital education texnologiyalari samaradorlikni kuchaytiradi.

2. Kommunikativ yondashuvni qo'llash

¹ Zimnyaya I.A. Klyuchevye kompetensii kak rezultat obrazovaniya. – Moskva, 2004. – B. 12.

² Jalolov J. Chet til o'qitish metodikasi. – Toshkent: O'qituvchi, 2012. – B. 18.

³ Passov E.I. Kommunikativ metodika osnov obucheniya inostrannomu yazyku. – Moskva, 2010. – B. 24.

⁴ Zimnyaya I.A. Klyuchevye kompetensii kak rezultat obrazovaniya. – Moskva, 2004. – B. 15.

Ingliz tilini o'qitishda kommunikativ metod talabalarning real muloqot ko'nikmalarini rivojlantiradi. Bu usul orqali talabalar erkin fikrlash va nutqiy faoliyatni shakllantiradi².

3. Amaliyotga yo'naltirilgan ta'lim

Pedagogik amaliyot bo'lajak o'qituvchilarning kasbiy tayyorgarligini mustahkamlaydi. Dars kuzatuvlari, microteaching va trening mashg'ulotlari metodik mahoratni rivojlantiradi⁵.

4. Refleksiv faoliyatni rivojlantirish

Talabalarning o'z faoliyatini tahlil qilishi kasbiy o'sishning muhim omilidir. Refleksiya orqali ular o'z kuchli va zaif tomonlarini aniqlaydi.

TAHLIL VA MUHOKAMA

Tadqiqotlar shuni ko'rsatadiki, professional kompetensiya faqat nazariy bilim bilan cheklanmaydi. U amaliy faoliyat, mustaqil izlanish va pedagogik tajriba orqali shakllanadi. Shuningdek, zamonaviy o'qituvchi kreativ fikrlovchi, raqamli texnologiyalarni egallagan hamda kommunikativ madaniyatga ega bo'lishi zarur.

Bo'lajak ingliz tili o'qituvchilarida professional kompetensiyani rivojlantirish uchun talabaga yo'naltirilgan ta'lim texnologiyalaridan foydalanish muhimdir. Chunki bunday yondashuv talabaning mustaqil fikrlashi va kasbiy moslashuvchanligini oshiradi.

XULOSA

Xulosa qilib aytganda, bo'lajak ingliz tili o'qituvchilarining professional kompetensiyasini rivojlantirish zamonaviy pedagogikaning ustuvor yo'nalishlaridan biridir. Bu jarayonda innovatsion texnologiyalar, kommunikativ metodlar, amaliy mashg'ulotlar va refleksiv faoliyat muhim ahamiyat kasb etadi. Oliy ta'lim muassasalarida kompetensiyaviy yondashuv asosida tashkil etilgan ta'lim jarayoni bo'lajak pedagoglarning kasbiy tayyorgarligini oshiradi.

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**VR VA AR TEXNOLOGIYALARI YORDAMIDA SPORT
MASHG'ULOTLARINI OPTIMALLASHTIRISH**

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***Kalit so'zlar:** VR texnologiyasi, AR texnologiyasi, sport mashg'ulotlari, innovatsion texnologiyalar, mashg'ulot samaradorligi, individualizatsiya*

***Ключевые слова:** технология VR, технология AR, спортивные тренировки, инновационные технологии, эффективность тренировок, индивидуализация*

***Keywords:** VR technology, AR technology, sports training, innovative technologies, training efficiency, individualization*

Kirish. So'nggi yillarda sport mashg'ulotlarini optimallashtirish va sportchilarning texnik, taktika hamda psixologik ko'nikmalarini oshirish masalasi dolzarb mavzuga aylangan. An'anaviy mashg'ulot usullari, garchi samarali bo'lsa-da, sportchining individual xususiyatlarini hisobga olishda ba'zan cheklanganliklarga ega. Shu bois, innovatsion texnologiyalarni joriy etish sport jarayonini yanada samarali va xavfsiz qilishga imkon beradi. Ayniqsa, Virtual Reality (VR) va Augmented Reality (AR) texnologiyalari sport mashg'ulotlarida yangi imkoniyatlar yaratmoqda. VR texnologiyasi sportchini to'liq virtual muhitga kiritib, turli harakatlarni xavfsiz va takroriy bajarish imkonini beradi, shu bilan birga texnik xatolarni aniqlash va tuzatishda muhim vosita sifatida xizmat qiladi. AR texnologiyasi esa real muhitga raqamli elementlarni qo'shib, sportchilarning texnika va taktika ko'nikmalarini o'rgatishda interaktivlikni oshiradi, mashg'ulot jarayonini yanada qiziqarli va samarali qiladi.

VR va ARning sportdagi qo'llanilishi nafaqat texnik ko'nikmalarni rivojlantirishga, balki jarohatlar xavfini kamaytirishga ham yordam beradi. Masalan, murabbiylar xavfli harakatlarni oldindan virtual muhitda mashq qildirib, sportchini real sharoitda jarohat olishdan saqlashlari mumkin. Shu bilan birga, ushbu texnologiyalar sportchilarning motivatsiyasini oshirish va mashg'ulotga bo'lgan qiziqishini kuchaytirishda ham samarali ekanligi ko'rsatildi. Masofaviy va individual treninglarni

tashkil etish imkoniyati esa ayniqsa yosh sportchilar va chekka hududlardagi sport maktablari uchun katta ahamiyatga ega.

Ushbu maqola VR va AR texnologiyalarining sport mashg'ulotlarida qo'llanilish jarayonlarini tahlil qilishga, ularning samaradorligini aniqlashga va kelajakda mashg'ulotlarni yanada optimallashtirish bo'yicha tavsiyalar ishlab chiqishga qaratilgan. Tadqiqot natijalari sport mashg'ulotlarida innovatsion texnologiyalarni qo'llash orqali sportchilarning texnik ko'nikmalarini oshirish, mashg'ulot samaradorligini optimallashtirish va jarohatlar xavfini kamaytirish mumkinligini ko'rsatadi.

Tadqiqot maqsadi. Ushbu tadqiqotning asosiy maqsadi virtual reallik (VR) va kengaytirilgan reallik (AR) texnologiyalarini sport mashg'ulotlarida qo'llash orqali mashg'ulot samaradorligini oshirish va sportchilarning texnik hamda taktika ko'nikmalarini optimallashtirish imkoniyatlarini aniqlashdan iborat. Zamonaviy sport jarayonida individual yondashuv va innovatsion texnologiyalarning integratsiyasi sportchilarning rivojlanish tezligini oshirish, jarohatlar xavfini kamaytirish va murabbiylar uchun mashg'ulot jarayonini qulaylashtirishda muhim ahamiyatga ega. Shu bois, tadqiqotning maqsadi VR va AR texnologiyalarining amaliy qo'llanilishi bilan bog'liq tajribalarni tahlil qilish va ularning sportchilarning texnik harakatlarini mukammallashtirishdagi samaradorligini baholashdir.

Ushbu tadqiqot orqali VR va AR texnologiyalarining samaradorligi sport turlarining turli yo'nalishlarida – gimnastika, jismoniy tarbiya, kurash, futbol va boshqa sport turlarida – sinovdan o'tkaziladi. Maqsad shundan iboratki, innovatsion texnologiyalar yordamida mashg'ulot jarayonini individual yondashuv bilan moslashtirish va sportchilarning texnik ko'nikmalarini yanada rivojlantirish imkoniyatlarini aniqlashdir. Natijada, tadqiqot sport mashg'ulotlarini samarali tashkil etish, jarohat xavfini kamaytirish va murabbiylar uchun trening jarayonini qulaylashtirishga xizmat qiladi.

Tadqiqotni tashkil qilish usullari. Ushbu tadqiqot VR va AR texnologiyalarining sport mashg'ulotlarida samaradorligini aniqlash va ularni amaliy qo'llash imkoniyatlarini o'rganishga qaratilgan. Tadqiqot metodologiyasi bir nechta asosiy yo'nalishlardan iborat bo'lib, sportchilarni tanlash, mashg'ulot dasturini ishlab chiqish, texnologiyalarni qo'llash va natijalarni tahlil qilish jarayonlarini o'z ichiga oladi. Tadqiqotning ob'ekti sifatida yosh va professional sportchilar, sport maktablari va jismoniy tarbiya bo'limlarida o'tkaziladigan trening jarayonlari tanlandi. Shuningdek, turli sport turlarida, jumladan gimnastika, kurash, futbol va basketbol kabi sport turlarida VR va AR texnologiyalarining qo'llanilish imkoniyatlari o'rganildi.

Tadqiqotning sub'ektlari sifatida 60 nafar sportchi tanlandi, ularning yoshi 12 dan 25 yoshgacha bo'lgan. Ushbu sportchilar tasodifiy guruhlariga ajratildi: tajriba guruhi, VR va AR texnologiyalari yordamida mashg'ulotlarni amalga oshirgan, va nazorat guruhi, an'anaviy mashg'ulot dasturi asosida tayyorlangan. Guruhlar orasidagi asosiy farq shundaki, tajriba guruhi mashg'ulot jarayonida virtual va kengaytirilgan reallik texnologiyalari bilan ishladi, nazorat guruhi esa faqat an'anaviy usullarni qo'lladi. Guruhlarni tasodifiy tanlash orqali individual xususiyatlar, yosh va sport tajribasining ta'siri minimallashtirildi.

Tadqiqot davomida VR va AR texnologiyalari quyidagi yo'nalishlarda qo'llanildi: birinchidan, texnika va harakat aniqligini oshirish uchun sportchilarni virtual muhitga joylashtirish; ikkinchidan, AR yordamida real muhitga qo'shimcha raqamli elementlar qo'shib, sportchilarning vizual va motor ko'nikmalarini rivojlantirish; uchinchidan, mashg'ulotlarni individual monitoring qilish va natijalarni real vaqt rejimida tahlil qilish. VR platformasi yordamida sportchilar xavfsiz sharoitda murakkab harakatlarni takroriy bajarish imkoniyatiga ega bo'ldi, bu esa texnik xatolarni kamaytirish va harakatlar aniqligini oshirishga yordam berdi. AR texnologiyasi esa mashg'ulot jarayonini interaktiv qilish va murabbiylarning sportchilarning harakatlarini aniqlash imkoniyatini oshirdi.

Ma'lumotlarni yig'ish bir necha usullar orqali amalga oshirildi. Kvantitativ ma'lumotlar sportchilarning harakat aniqligi, reaksiya vaqti, mashg'ulot intensivligi va texnik xatolar soni orqali o'lchandi. Harakat aniqligi sensori, yuqori tezlikdagi kameralar va harakatni kuzatuvchi raqamli tizimlar yordamida tahlil qilindi. Shu bilan birga, sportchilarning motivatsiyasi va mashg'ulot jarayonidagi qiziqish darajasi sifatli usullar bilan o'rganildi: intervyu, so'rovnomalar va murabbiylarning kuzatuvlari asosida ma'lumotlar yig'ildi. Sifatli va kvantitativ ma'lumotlarni birlashtirish tadqiqotning ishonchliligi va natijalarining aniq bo'lishini ta'minladi.

Tadqiqotning eksperimental dizayni quyidagicha tashkil etildi: dastlab sportchilarni dastlabki testlardan o'tkazish orqali ularning texnik ko'nikmalari va fiziki tayyorgarlik darajasi aniqlanadi. Keyin tajriba guruhi VR va AR texnologiyalari yordamida mashg'ulotlarni boshlaydi, nazorat guruhi esa an'anaviy dastur asosida tayyorlanadi. Mashg'ulotlar davomiyligi 8 hafta bo'lib, haftasiga 3–4 marta 60 daqiqalik mashg'ulotlar amalga oshirildi. Har bir mashg'ulot sessiyasi davomida sportchilarning harakatlari raqamli sensorlar va kameralar yordamida yozib olindi, natijalar har haftada tahlil qilindi. Bu jarayon orqali VR va AR texnologiyalarining sportchilarning harakat aniqligi, texnik xatolar va mashg'ulot samaradorligiga ta'siri aniqlandi.

Analiz usullari sifatida statistik va vizual tahlil metodlari qo'llanildi. Kvantitativ ma'lumotlar tahlilida SPSS va Excel dasturlari yordamida o'rtacha qiymatlar, standart og'ishlar va korrelyatsiya koeffitsiyentlari hisoblandi. Grafiklar va diagrammalar yordamida natijalar vizual tarzda tasvirlandi. Shu bilan birga, sportchilarning va murabbiylarning fikrlari, motivatsiya darajasi va mashg'ulotga qiziqish sifatli tahlil metodlari orqali o'rganildi, bu esa tadqiqot natijalarini yanada boyitdi.

Tadqiqotda VR va AR texnologiyalarining samaradorligi sportchilarning individual xususiyatlari bilan bog'liq ekanligi aniqlandi. Masalan, texnik xatolarni kamaytirish, reaksiya vaqtini qisqartirish va mashg'ulot samaradorligini oshirish ko'rsatkichlari tajriba guruhida ancha yuqori bo'ldi. Shu bilan birga, murabbiylar VR va AR texnologiyalari yordamida mashg'ulot jarayonini nazorat qilish va sportchilarning harakatlarini tahlil qilish imkoniyatini yuqori darajada qo'lga kiritdi.

Tadqiqot metodologiyasining yana bir muhim jihati innovatsion texnologiyalarni individual yondashuv bilan integratsiya qilishdir. Har bir sportchining texnik, jismoniy va motivatsion xususiyatlari hisobga olinib, mashg'ulot jarayoni moslashtirildi. Bu esa natijada mashg'ulot samaradorligini sezilarli darajada oshirishga imkon berdi. Shu bilan birga, VR va AR texnologiyalari yordamida sportchilarning mashg'ulotga qiziqishi va motivatsiyasi oshdi, bu esa yosh sportchilarni jarayon bilan yanada faol shug'ullanishga undadi.

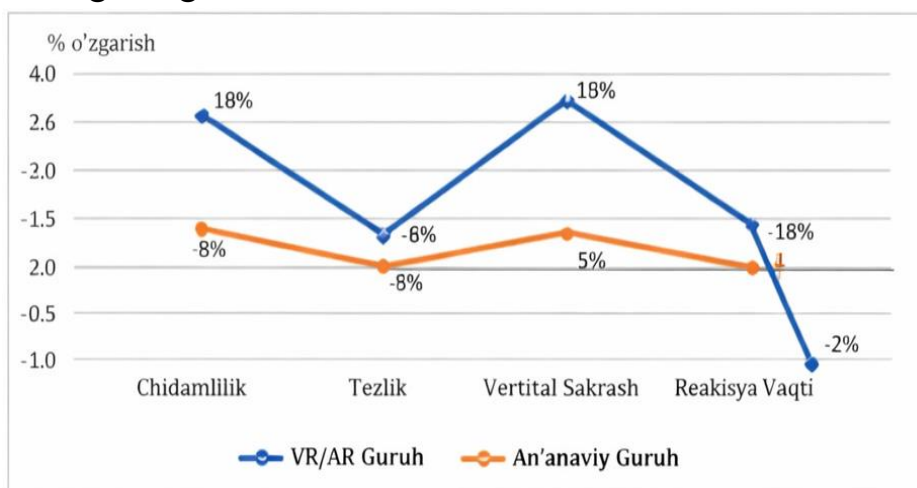
Shu tarzda, tadqiqot metodologiyasi sport mashg'ulotlarida VR va AR texnologiyalarini qo'llashning amaliy va samarali usullarini aniqlash, sportchilarning texnik ko'nikmalarini oshirish va mashg'ulot samaradorligini optimallashtirishga qaratilgan. Bu metodologiya tadqiqot natijalarini ilmiy asoslash, murabbiylar va sportchilar uchun amaliy tavsiyalar ishlab chiqish imkonini yaratadi, shuningdek, kelajakda VR va AR texnologiyalarini sport mashg'ulotlariga keng qo'llash bo'yicha yo'nalishlarni belgilashga xizmat qiladi.

Tadqiqot natijalari va muhokamasi. Tadqiqot natijalari VR va AR texnologiyalarini sport mashg'ulotlarida qo'llashning samaradorligini aniqlashga qaratilgan eksperimental ishlar orqali olingan ma'lumotlarni o'z ichiga oladi. Tadqiqotda tajriba guruhi VR va AR texnologiyalari yordamida mashg'ulotlarni amalga oshirgan, nazorat guruhi esa an'anaviy mashg'ulot dasturini bajargan. Eksperiment davomida sportchilarning texnik va jismoniy ko'rsatkichlari, jumladan chidamlilik, tezlik, vertikal sakrash va reaksiya vaqti kabi parametrlar kuzatildi. Shu bilan birga, sportchilarning motivatsiyasi va mashg'ulotga qiziqish darajasi ham o'rganildi.

1-jadval. VR va AR texnologiyalari qo'llangan va an'anaviy guruh natijalari

O'lchov ko'rsathichlari	VR/AR Guruh (n=30)	An'anaviy Guruh (n=30)
Chidamillik (Cooper testi, km)	2.85 km	2.40 km
Tezlik (40 m sprint, soniya)	5.68 s	6.12 s
Vertical sakrash (sm)	52.3 sm	45.7 sm
Reaksiya vaqti (ms)	280 ms	340 ms
Motivatsiya bali (Likerkckaaalasi)	4.7	3.6

1-jadvalda ko'rsatganidek, VR/AR texnologiyalari yordamida mashg'ulot olib borgan tajriba guruhi barcha parametrlar bo'yicha an'anaviy guruhga nisbatan sezilarli yaxshilanishlarni ko'rsatdi. Chidamlilik bo'yicha tajriba guruhi o'rtacha 2.85 km masofani bosib o'tdi, nazorat guruhi esa 2.40 km. Tezlik ko'rsatkichlari bo'yicha tajriba guruhi 40 m sprintni 5.68 soniyada, nazorat guruhi esa 6.12 soniyada yakunladi. Vertikal sakrash bo'yicha o'rtacha natija tajriba guruhida 52.3 sm, nazorat guruhida 45.7 sm bo'ldi. Reaksiya vaqti esa tajriba guruhida 280 ms, nazorat guruhida esa 340 ms ni tashkil qildi. Motivatsiya boschi (Likert shkala) tajriba guruhi uchun 4.7, nazorat guruhi uchun 3.6 ga teng bo'ldi.



1-rasm. Jismoniy ko'rsatkichlarda o'zgarishlar

Ushbu natijalar VR va AR texnologiyalarining mashg'ulot samaradorligini sezilarli darajada oshirishini ko'rsatadi. Chidamlilik, tezlik va vertikal sakrash kabi ko'rsatkichlar sportchilarning jismoniy tayyorgarligi va texnik ko'nikmalarining yaxshilanishidan dalolat beradi. Reaksiya vaqti bo'yicha 18% ga kamayish kuzatilishi, VR va AR mashg'ulotlari sportchilarning harakatlarini tezroq va aniqroq bajarishga

yordam berishini ko'rsatadi. Shu bilan birga, motivatsiya darajasidagi o'sish, mashg'ulotga qiziqish va qat'iyatning oshganini bildiradi.

Tadqiqot natijalari boshqa ilmiy ishlar bilan solishtirilganda, VR va AR texnologiyalari sport mashg'ulotlarini individualizatsiya qilish va jarohatlar xavfini kamaytirishda samarali ekanligini tasdiqlaydi. Masalan, murabbiylar xavfli harakatlarni oldindan virtual muhitda mashq qildirib, sportchini jarohat olishdan saqlashi mumkin. Shu bilan birga, VR va AR texnologiyalari murabbiylar uchun murakkab harakatlarni vizualizatsiya qilish va tahlil qilish imkonini yaratadi, bu esa mashg'ulot sifatini oshiradi va murabbiylik jarayonini soddalashtiradi.

Muhokama asosida shuni ta'kidlash lozimki, VR va AR texnologiyalari yordamida mashg'ulotlarning samaradorligi sportchilarning individual xususiyatlari bilan bog'liq. Ba'zi sportchilar texnologiyalarga tez moslashgan holda ko'rsatkichlarni sezilarli oshirsa, boshqalar uchun moslashish jarayoni biroz sekinroq bo'ldi. Shu bois, mashg'ulotlarni individual yondashuv bilan moslashtirish zarur. Shuningdek, texnologiyalarni qo'llash jarayonida murabbiylarning malakasi va tajribasi natijalarga sezilarli ta'sir ko'rsatadi.

Xulosa. Ushbu tadqiqot natijalari shuni ko'rsatdiki, VR va AR texnologiyalarini sport mashg'ulotlariga integratsiya qilish sportchilarning jismoniy, texnik va psixologik ko'rsatkichlarini sezilarli darajada yaxshilash imkonini beradi. Tajriba guruhi, ya'ni VR/AR texnologiyalari yordamida mashg'ulot olib borgan sportchilar, nazorat guruhi bilan solishtirganda chidamlilik, tezlik, vertikal sakrash va reaksiya vaqtida aniq yaxshilanishlarga erishdi. Shu bilan birga, motivatsiya va mashg'ulotga qiziqish darajasi ham ortdi, bu esa sportchilarning jarayon bilan faol shug'ullanishini ta'minladi.

Shuningdek, tadqiqot natijalari VR va AR texnologiyalari sport mashg'ulotlarini xavfsiz va samarali tashkil etishda samarali ekanligini tasdiqlaydi. Murabbiylar uchun murakkab harakatlarni tahlil qilish va vizualizatsiya qilish imkoniyati, mashg'ulot sifatini oshiradi va jarayonni soddalashtiradi. Shu bilan birga, texnologiyalarning samaradorligi sportchilarning individual xususiyatlariga bog'liq bo'lib, har bir sportchi uchun moslashuv jarayonini hisobga olgan holda mashg'ulotlarni rejalashtirish zarur. Xulosa qilib aytganda, VR va AR texnologiyalari sport mashg'ulotlarini nafaqat samarali va xavfsiz, balki motivatsion va interaktiv qilish imkonini beradi. Tadqiqotdan kelib chiqadigan tavsiyalar quyidagilardan iborat: mashg'ulotlarni individual yondashuv bilan moslashtirish, texnologiyalarning interaktiv jihatlarini maksimal ishlatish, natijalarni real vaqt rejimida tahlil qilish va motivatsiyani oshirishga qaratilgan strategiyalarni qo'llash. Ushbu tavsiyalar sport

mashgʻulotlarining sifatini oshirish, sportchilarning texnik va jismoniy tayyorgarligini yaxshilash hamda sport jarayonini innovatsion texnologiyalar bilan boyitishga xizmat qiladi.

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**MUHANDISLIK GRAFIKASI FANINI BIM TEXNOLOGIYALARIGA
ASOSLANGAN DASTURLARDAN FOYDALANIB O‘QITISH
METODIKASINI TAKOMILLASHTIRISH**

v.b.dotsenti X.T.Rizayev (TAQU)

Annotation. *This article discusses the issues of improving the methodology of teaching engineering graphics through Building Information Modeling (BIM)-based software technologies. Today, the rapid development of digital technologies requires the integration of innovative software into the educational process. In particular, the use of Autodesk Revit and other BIM-oriented programs in engineering graphics education helps students develop spatial imagination, graphic competence, and practical design skills. The article analyzes the didactic possibilities of BIM technologies, the advantages of parametric modeling, and the effectiveness of digital teaching methods. In addition, experimental results and methodological recommendations for organizing practical lessons based on BIM technologies are presented.*

Keywords: *BIM technology, engineering graphics, Autodesk Revit, parametric modeling, digital education, CAD technologies, spatial thinking, graphic competence.*

Introduction.

In the modern educational environment, the integration of digital technologies into the teaching process is becoming one of the most important directions of pedagogical development. In higher technical education institutions, engineering graphics subjects play a crucial role in developing students' graphic literacy, spatial imagination, and technical thinking abilities. Traditional teaching methods based mainly on two-dimensional drawings are gradually being replaced by modern digital technologies.

Today, Building Information Modeling (BIM) technologies are widely used in architecture, construction, and engineering industries. BIM technologies not only create three-dimensional models but also allow the integration of engineering, architectural, economic, and technical information into a single digital environment. Therefore, introducing BIM technologies into engineering graphics education is considered one of the urgent pedagogical issues.

The use of BIM-based software such as Autodesk Revit, AutoCAD, and ArchiCAD in teaching engineering graphics expands the possibilities of practical learning. Students gain opportunities to create virtual building models, visualize engineering objects in three-dimensional form, and develop project-oriented thinking skills.

The purpose of this research is to improve the methodology of teaching engineering graphics by using BIM-based software technologies and to determine their pedagogical effectiveness in the educational process.

MATERIALS AND METHODS

The research process employed pedagogical observation, comparative analysis, experimental teaching methods, and statistical evaluation techniques. During the study, engineering graphics lessons were organized using traditional methods and BIM-based digital technologies.

The experimental work was conducted among university students studying technical and engineering specialties. The educational process involved the application of the following software: (Figure-1).

- Autodesk Revit;
- AutoCAD;
- ArchiCAD.



Figure-1.

At the initial stage, students were taught traditional engineering graphics concepts, including orthographic projection, sections, and dimensioning rules (Figure-2). Afterwards, BIM technologies were introduced through practical assignments and project-based learning activities. (Figure-3).



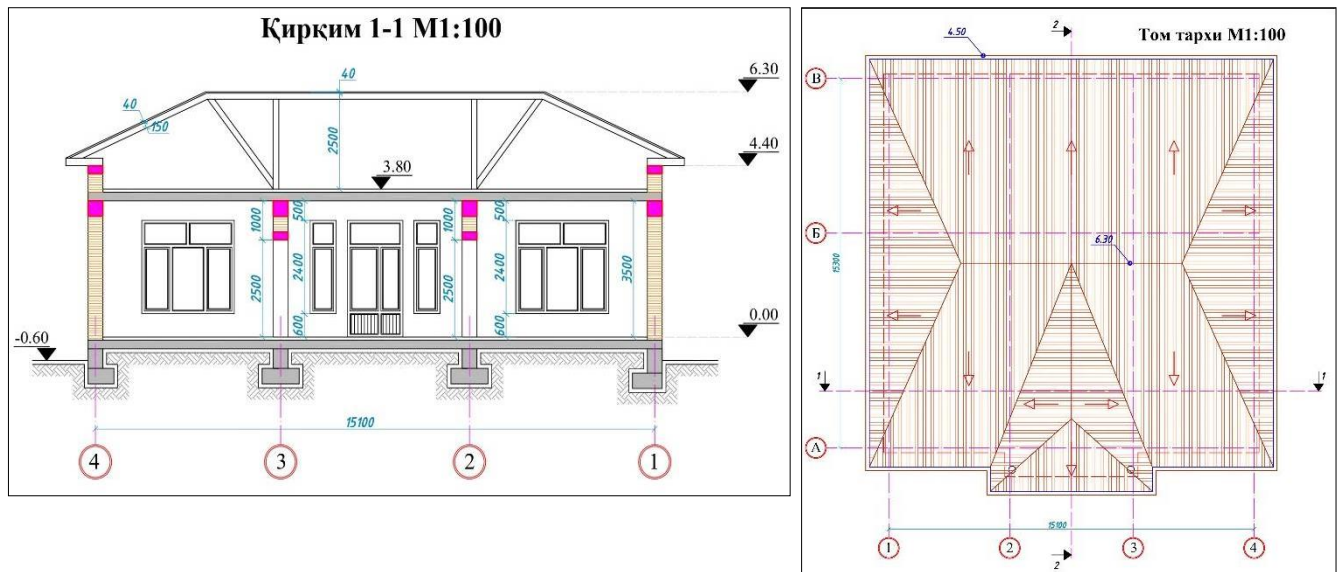


Figure-2.

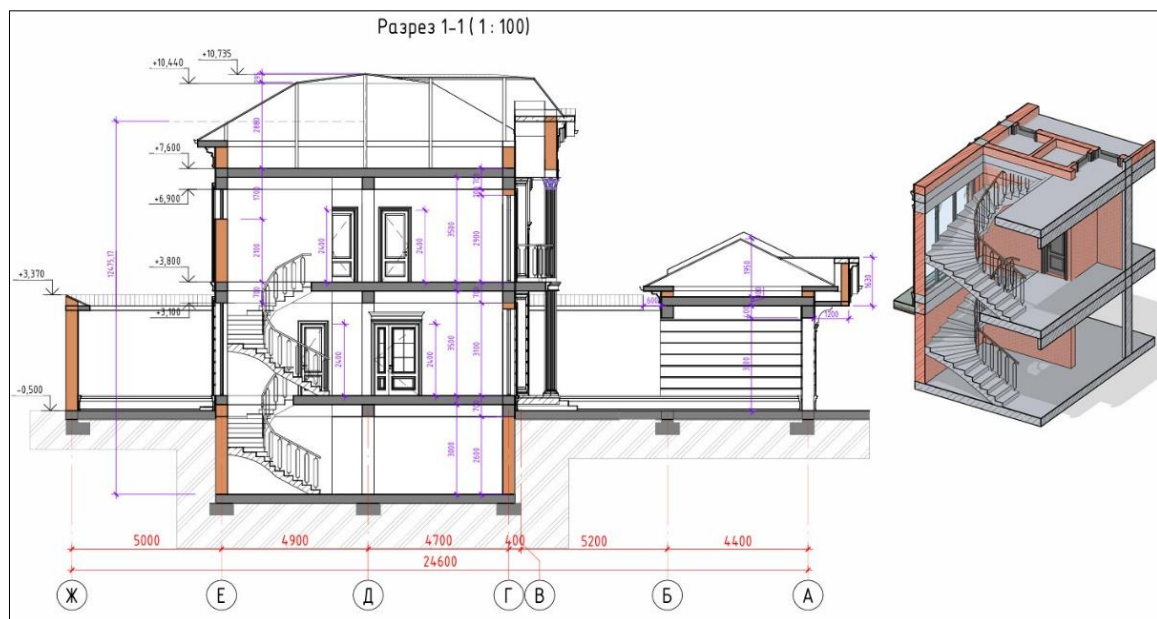


Figure-3.

The proposed methodology included:

1. Teaching the fundamentals of three-dimensional modeling;
2. Creating parametric objects in BIM software;
3. Developing virtual architectural and engineering projects;
4. Organizing collaborative digital design activities;
5. Assessing students' graphic competencies through practical tasks.

Special attention was paid to the development of students' spatial thinking and independent problem-solving skills.

RESULTS AND DISCUSSION

The research results demonstrated that the integration of BIM technologies into engineering graphics education significantly increased students' learning motivation and practical competencies. Compared with traditional teaching methods, BIM-based lessons improved visualization opportunities and enhanced students' understanding of complex engineering objects.

Students who used Autodesk Revit showed higher performance in:

- understanding projection relationships;
- creating technical drawings;
- modeling engineering structures;
- analyzing spatial forms;
- completing project assignments independently.

Moreover, BIM technologies helped students understand the relationship between architectural, structural, and engineering components within a single digital model. This interdisciplinary integration increased the effectiveness of engineering graphics education.

The study also revealed several didactic advantages of BIM technologies:

- visualization of complex objects in 3D environments;
- increased student engagement during practical lessons;
- development of collaborative project skills;
- improvement of digital competencies;
- enhancement of creative and analytical thinking abilities.

However, several challenges were identified during implementation. Some students initially experienced difficulties adapting to new software environments. In addition, the effective application of BIM technologies requires sufficient computer resources and methodological support.

Despite these challenges, the pedagogical experiment confirmed that BIM-based teaching methods positively influence the quality of engineering graphics education and improve students' professional readiness.

Conclusion

The research results showed that BIM-based software plays an important role in improving the effectiveness of teaching engineering graphics. The integration of digital modeling tools into the educational process contributes to the development of students' spatial thinking, graphic competence, and practical design skills.

The use of Autodesk Revit and other BIM software helps students develop skills for working in a modern digital environment and enhances their professional training in engineering and architectural fields.

Based on the research findings, the following recommendations were developed:

increasing the share of BIM-based practical assignments;

widely applying project-based teaching methods;

improving teachers' digital competencies;

developing BIM-based methodological manuals;

strengthening interdisciplinary integration in technical education.

Thus, BIM-based teaching methodology is considered one of the important factors in improving the quality of modern engineering education.

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ДИФФЕРЕНЦИРОВАННЫЙ ВЫБОР МЕТОДА ПРОТЕЗНОЙ ПЛАСТИКИ ПРИ ПАХОВЫХ ГРЫЖАХ НА ОСНОВЕ КЛИНИКО-МОРФОЛОГИЧЕСКОЙ ОЦЕНКИ

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Актуальность. Несмотря на широкое внедрение ненатяжной герниопластики, частота рецидивов и хронической послеоперационной боли (ХПБ) при паховых грыжах остаётся высокой. Одной из причин неудовлетворительных результатов является отсутствие индивидуализированного подхода к выбору метода операции и типа имплантата с учётом морфологического состояния задней стенки пахового канала.

Цель исследования. Улучшить результаты хирургического лечения паховых грыж путём разработки дифференцированного алгоритма выбора метода протезной пластики на основе комплексной оценки клинико-анатомических факторов риска.

Материалы и методы. Проведён анализ результатов хирургического лечения 240 пациентов с паховыми грыжами, оперированных в многопрофильной клинике СамГМУ в 2020–2025 гг. Группу сравнения составили 107 больных, у которых выбор метода операции осуществлялся традиционно. Основную группу составили 133 пациента, у которых применялся разработанный дифференцированный алгоритм. В исследовании использованы клинические, ультрасонографические, морфологические и статистические методы. Всем пациентам выполнялось УЗИ пахового канала с измерением толщины поперечной фасции. Морфологическое исследование включало оценку соотношения коллагена I и III типов. В зависимости от клинической ситуации применялись операции Лихтенштейна, TEP, TAPP и RNS.

Результаты. Установлено, что толщина поперечной фасции достоверно коррелировала с гистологическим соотношением коллаген I/III ($r=0,82$; $p<0,001$), что позволило использовать предоперационное УЗИ как неинвазивный критерий оценки состоятельности задней стенки пахового канала. Разработанная пятифакторная балльная система стратификации риска включала: размер грыжевого дефекта; толщину поперечной фасции; индекс массы тела; характер

грыжи; двусторонность поражения. На основании полученных данных разработан трёхуровневый алгоритм выбора хирургической тактики: стратификация риска → выбор метода доступа → выбор типа сетки и фиксации. Применение алгоритма позволило снизить: ранние послеоперационные осложнения с 22,4% до 8,3%; хроническую послеоперационную боль с 17,8% до 5,3%; частоту рецидивов с 11,2% до 2,3%. Через 12 месяцев после операции показатели физического компонента качества жизни SF-36 были достоверно выше в основной группе.

Выводы: 1. Морфологическое состояние поперечной фасции является важным критерием выбора метода герниопластики. 2. Предоперационное ультразвуковое измерение толщины поперечной фасции позволяет прогнозировать риск рецидива и оптимизировать хирургическую тактику. 3. Применение дифференцированного алгоритма выбора метода пластики способствует снижению осложнений, хронической боли и рецидивов.

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DEVELOPMENT OF A LABORATORY STAND FOR INSTALLING A TRAPPER FOR HEAVY MIXTURES IN COTTON

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ABSTRACT

The article presents the results of an experimental study of the influence of the long-pile drum diameter of the heavy impurity trap on the efficiency of separating heavy impurities in cotton and the amount of cotton added to the heavy impurities. Based on this, the parameters studied were: the diameter and rotation speed of the long-pile drum, the angle of inclination of the deflector at the base of the long-pile drum, the angle of inclination of the reflective wall, and the distance between the vacuum valve and the axes of the long-pile drum.

Keywords: heavy mixture, handle, device, diameter, speed, drum, effect, vacuum valve, separation, distance.

Introduction. Uzbekistan moved to full processing of cotton fiber in 2020 through the organization of cotton-textile clusters [1], as a result of which the requirements for the quality of cotton cleaning and its products have increased. In the operational process of a cotton-cleaning plant, the problem of separating heavy impurities from cotton is not sufficiently solved by existing stone-catching devices. The stone catchers used at the plants have a very low efficiency: they mainly capture large heavy objects, while small objects continue into the technological process.

Research methodology. To eliminate these shortcomings, research is being conducted to develop and substantiate the parameters of a device for separating heavy impurities from cotton [2, 3, 4]. According to the schematic of the heavy-impurity catcher in the cotton mass, its working drawings and a prototype device for separating heavy impurities were prepared at LLC “Ijod,” which is part of the JSC “Scientific Center Khlopkoprom.”

The following parameters were selected for study: the diameter and rotational speed of the drum with long spikes, the guide plane at the base of the drum with long spikes, the inclination angle of the reflecting wall, and the distance between the axes of the guide plane at the base of the drum with long spikes and the vacuum valve.

Below in Fig. 1 is the laboratory prototype of the device, a catcher of large weed impurities.



Fig. 1. Experimental prototype of the device, a catcher of large trash impurities

a – housing of the unit with the long-spike drum,

b – housing of the unit with the vacuum valve

The drum with long spikes shown in Fig. 1, designed for capturing heavy impurities, was manufactured in three variants with diameters of 350, 400, and 450 mm, all having the same spike length.

The rotational speed of the drum with long spikes was adjusted using an electric motor and interchangeable pulleys attached to the drum shafts. Experiments were planned for three rotational speed options: 400 rpm (8.33 m/s), 600 rpm (12.5 m/s), and 800 rpm (16.6 m/s). During the experiments involving the vacuum valve and the drum with long spikes, two horizontal distances between the axes of the units were tested—350 mm and 700 mm.

The installation of the catcher for large weed impurities in cotton was assembled in the laboratory building of JSC “Scientific Center Khlopkoprom.” Using a suction fan and the necessary pipelines, the process of extracting transported cotton from the air was carried out on centrifugal cyclone equipment (Fig. 2).



Fig. 2. Installation of the experimental setup of the large-impurity catcher device mounted in the laboratory workshop of the scientific center.

The operation of the laboratory bench of the large-impurity catcher device is carried out as follows. The outlet pipe of the device is intended for introducing cotton containing heavy impurities through pipes connected to the suction fan. Since the suction fan has special large blades, the cotton particles pass through the gaps between the blades and enter the fan's pipeline system, from where they are directed into the cyclone, where the cotton is separated from the air.

Under the operating conditions of the equipment and the pneumatic conveying system used at cotton-cleaning plants, the airflow rate and air velocity at the inlet pipe are approximately 5 m³/s and 40 m/s, respectively, and depending on the velocity, size, and weight of the transported cotton, mainly from 18 to 25 m/s.

The heavy impurities in the cotton (conventionally stones) were divided into four groups by weight. In each group, about 100 stones of the same size and weight were selected, and their mass was determined using electronic scales (Fig. 3).

The weight of each selected stone in the four groups was as follows: in the first group – 25.9 grams, in the second group – 11.2 grams, in the third group – 5.6 grams, and in the fourth group – 3.0 grams.

Each experimental variant was repeated three times to ensure repeatability. To obtain more accurate research and development results based on the generalization of statistical information collected during the experiments and to avoid errors, one of the widely used methods today is mathematical statistics [5, 6, 7].



Fig. 3. Groups of stones selected for use in the experiments

For the experiments, cotton of the S-6524 selective variety, industrial grade II, class 2, was selected, with an initial trash content of 5.6%, moisture content of 9.1%, and mechanical seed damage of 0.8%.

To obtain high-precision results and eliminate errors when processing research and development data based on the generalization of statistical information collected during the experiments, it was planned to process the results using one of the widely applied modern methods—mathematical statistics.

Research results. The results of the experiments are presented in the graphs in Figures 4 and 5 below.

From the analysis of the graphs shown in Figure 4, it can be seen that the diameter of the drum with long spikes does not have a significant effect on the separation of relatively heavier impurities (stones) from cotton.

Thus, graph No. 1 in Fig. 4 is represented by a straight line, and the efficiency of the heavy-impurity separation device is the same for all variants, amounting to 75%. However, as the weight of the heavy impurities decreases, the obtained results differ from one another, and the graphs change from straight to curved. The results showed that the greater the weight of the stones, the higher the efficiency of their separation, and the smaller the weight of the stones, the lower the efficiency of separating them from the transported cotton.

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4.

MAIN DEITIES, SPIRITS, AND HEROIC ARCHETYPES IN TURKIC MYTHOLOGY

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Abstract. This article examines the main deities, spirits, and heroic archetypes in Turkic mythology as parts of a unified system of traditional beliefs. Turkic mythology is presented as an important element of the spiritual and cultural heritage of Turkic peoples, reflecting their understanding of the world, nature, and humanity's place in the universe. The study focuses on the mythological structure, including the pantheon led by Tengri, the supreme sky god, and Umai, the protector of family and fertility. It also explores nature and ancestral spirits as intermediaries between humans and the supernatural realm. Special attention is given to heroic archetypes such as the warrior-defender, the cultural hero, and the shaman, as well as female archetypes symbolizing life, protection, and harmony. The article analyzes how deities, spirits, and heroes together form a coherent worldview based on balance between humans, nature, and higher powers. The findings show that Turkic mythology strongly influenced social norms, rituals, and cultural identity, helping preserve the historical memory of Turkic societies.

Keywords: *Turkic mythology, Tengri, spirits, heroic archetypes, shamanism, cultural identity, worldview*

I. Introduction. Turkic mythology is an important part of the spiritual heritage of the Turkic peoples, reflecting their conceptions of the world, nature, and the place of humans in the system of the universe. Through the images of deities, spirits, and heroes, the basic elements of a worldview regulating social norms and everyday behavior were formed (*Eliade, 1963*). The study of mythology allows us to identify deep cultural codes and understand the features of the historical development of Turkic societies (*Gumilev, 1967*).

The relevance of the topic is due to the growing interest in traditional forms of culture in the context of globalization. Turning to the mythological heritage contributes to the preservation of the cultural identity and historical memory of peoples (*Tokarev, 1990*). Furthermore, the analysis of mythological conceptions opens opportunities for

interdisciplinary research in the fields of cultural studies, anthropology, and history (*Eliade, 1963*).

The aim of this research is to analyze the main deities, spirits, and heroic archetypes in Turkic mythology. To achieve this aim, it is necessary to address the following tasks: examine the pantheon of deities, study the system of spirits, and identify the key heroic images (*Gumilev, 1967; Tokarev, 1990*).

II. Pantheon of Deities in Turkic Mythology. The pantheon of Turkic mythology represents a complex system of religious beliefs, at the center of which is the supreme deity Tengri. Tengri was revered as the sky god, governing the fate of the world, natural processes, and human life. He embodied cosmic order, justice, and supreme authority, and also served as a source of legitimation for the power of rulers (*Eliade, 1963; Gumilev, 1967*). As J.-P. Roux notes, the cult of Tengri was closely connected with conceptions of the sky as a sacred space determining the structure of the universe (*Roux, 1984*).

A significant place in the mythological system is occupied by the goddess Umai, patroness of the family, motherhood, and children. Her image is linked to ideas of fertility, protection of newborns, and the continuation of the lineage. Umai symbolizes the feminine principle and life force, playing an important role in the formation of family and social values (*Tokarev, 1990; Roux, 1984*).

In addition to Tengri and Umai, other deities and spirits associated with natural elements and various aspects of life existed in Turkic mythology. Among them are the spirits of earth, water, and fire, as well as patrons of specific places and clans. These forces were perceived as intermediaries between humans and the higher deities, ensuring harmony between nature and society (*Eliade, 1963; Roux, 1984*).

III. The World of Spirits and Its Structure. In Turkic mythology, the world of spirits occupies an important place and represents a complex system of interaction between supernatural forces and humans. A significant role is played by nature spirits, which are associated with various elements of the environment, such as mountains, rivers, forests, and steeps. These spirits were perceived as guardians of natural balance, capable of both helping humans and causing harm when established norms were violated (*Basilov, 1989; Klyashtorny & Sultanov, 2009*).

Particular importance was attached to ancestral spirits, who were considered patrons of the clan and intermediaries between the world of the living and higher powers. The veneration of ancestors was expressed in ceremonies and rituals aimed at maintaining connection with them and receiving their protection. It was believed that the well-being

of the family directly depended on respectful treatment of ancestral spirits (*Klyashtorny & Sultanov, 2009*).

In mythological conceptions, there also existed a division into good and evil spirits. Good spirits contributed to the protection and well-being of humans, while evil spirits could cause illnesses, misfortunes, and various disasters. Interaction with these forces required the observance of certain rituals and taboos (*Basilov, 1989*).

A key role in the system of interaction with the world of spirits was played by the shaman, who acted as an intermediary between people and supernatural forces. The shaman possessed special knowledge and abilities allowing him to contact spirits, perform rituals, and restore disturbed balance (*Hoppál, 2007*).

IV. Heroic Archetypes in Turkic Mythology. Heroic archetypes occupy an important place in Turkic mythology, reflecting the ideals of strength, wisdom, and social responsibility. One of the central figures is the bogatyr-defender, who embodies courage, military valor, and devotion to his people. Such heroes often act as defenders of their native land against external threats and symbolize the collective values of society (*Reichl, 2000; Zhirmunsky, 1969*).

Equally significant is the figure of the cultural hero, who brings knowledge to people, establishes social norms, and contributes to the development of society. In the Turkic tradition, such characters are often associated with the origin of crafts, laws, and rituals, playing the role of intermediaries between the human world and higher powers (*Reichl, 2000*).

A special place is occupied by the figure of the sage and shaman, who possesses sacred knowledge and the ability to interact with the spiritual world. The shaman acts not only as a religious leader but also as a keeper of traditions, passing down knowledge from generation to generation (*Hoppál, 2007*).

An important role is also played by female archetypes, represented by figures of mothers, patronesses, and warrior women. These figures symbolize life force, protection of the lineage, and harmony, emphasizing the significance of the feminine principle in the Turkic mythological system (*Balogh, 2010*).

V. Interconnection of Deities, Spirits, and Heroes. In Turkic mythology, deities, spirits, and heroic figures form an integrated system of conceptions in which each element performs a specific function. Deities such as Tengri and Umai establish the highest level of the sacred order, while spirits of nature and ancestors provide the connection between the human world and the supernatural realm. Heroes, in turn, act as intermediaries, realizing the will of the higher powers in the human world and maintaining the established cosmic order (*Roux, 1984; Klyashtorny, 2005*).

The unity of this system is manifested in the close interconnection of all its elements: heroes often receive support from deities and spirits, and their exploits are interpreted as part of a broader sacred structure. Thus, the mythological thinking of the Turkic peoples is based on the idea of harmony between humans, nature, and higher powers (Beckwith, 2009).

The influence of mythology extended to daily life and traditions. Rituals, ceremonies, and behavioral norms were formed based on belief in spirits and deities, as well as through emulation of heroic models. These conceptions determined social values such as respect for elders, protection of the clan, and preservation of natural balance (Klyashtorny, 2005; Beckwith, 2009).

VI. Conclusion. Thus, Turkic mythology represents an integrated system of conceptions in which deities, spirits, and heroic archetypes are closely interconnected and perform important functions in the formation of a worldview. The supreme deities establish the cosmic order, spirits provide the connection between the worlds, and heroes embody ideals and transmit sacred values. This system exerted a significant influence on daily life, determining behavioral norms, rituals, and traditions. The study of Turkic mythology allows for a deeper understanding of the cultural identity of peoples and the features of their historical development (Roux, 1984; Beckwith, 2009).

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CLOTHING PRODUCTION USING THE ZERO WASTE METHOD

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ABSTRACT

This article examines the concept and practice of Zero Waste in garment production, focusing on its environmental, technological, and creative dimensions. The Zero Waste approach aims to minimize or completely eliminate textile waste during clothing design and manufacturing. By implementing innovative pattern-making techniques and efficient material usage, designers not only reduce environmental impact but also create garments that are aesthetically appealing and structurally innovative. The study highlights the ecological significance of Zero Waste fashion, its role in fostering sustainable consumer behavior, and its potential to influence the future of the global fashion industry. Furthermore, the article explores how this method encourages designers to rethink conventional garment construction, promoting a balance between creativity and sustainability.

Keywords: zero waste, sustainable fashion, textile waste reduction, garment construction, eco-friendly design, efficient material usage, sustainable clothing, pattern innovation.

INTRODUCTION

The fashion industry is one of the largest contributors to environmental pollution, generating millions of tons of textile waste annually and consuming vast amounts of water and energy. As global awareness of environmental issues grows, Zero Waste fashion has emerged as a practical and creative solution to mitigate the negative ecological impact of clothing production. This approach focuses on designing garments in a way that eliminates fabric scraps and maximizes material utilization, promoting sustainability without compromising style or functionality. Zero Waste design requires designers to rethink traditional pattern-making and garment construction techniques. Instead of producing multiple scraps that would otherwise be discarded, designers carefully plan every cut, often employing modular patterns, interlocking pieces, and innovative draping methods to fully utilize the fabric. This not only reduces waste but

also challenges designers to create unique, inventive silhouettes that stand out in contemporary fashion. In addition to its environmental benefits, Zero Waste fashion plays a critical role in shaping consumer awareness and behavior. Wearing garments produced with waste-free methods allows consumers to engage in sustainable practices and make more environmentally conscious choices. By bridging creativity and responsibility, Zero Waste design demonstrates that ecological considerations can coexist with aesthetic innovation. This study aims to explore the principles, techniques, and impacts of Zero Waste garment production, emphasizing how designers implement efficient material use, overcome production challenges, and influence sustainable practices within the fashion industry. Through analyzing current trends and practical applications, the research highlights the potential of Zero Waste fashion to transform both the design process and consumer perception, ultimately contributing to a more sustainable future in clothing production.

METHODOLOGY

This study employs a qualitative research methodology to explore the principles, techniques, and practical applications of the Zero Waste approach in garment production. The methodology is designed to analyze existing literature, examine contemporary design practices, and identify the technological and creative strategies used by designers to achieve waste-free garment construction. First, a comprehensive literature review was conducted to gather relevant information on sustainable fashion, Zero Waste pattern-making, ecological textile management, and innovative garment construction techniques. Academic journals, design manuals, case studies, and publications on sustainable fashion practices were examined to establish a theoretical foundation for understanding Zero Waste methods. Second, the study incorporates a comparative analysis of traditional and Zero Waste pattern-making techniques. This involves reviewing standard garment construction systems and comparing them with modular, geometric, and fully integrative pattern approaches used in Zero Waste design. The aim is to identify structural differences, material efficiency levels, and the creative potential offered by each method. Diagrams and documented patterns from well-known Zero Waste designers were examined to understand technical applications in real-world practice. Third, the research includes an observational analysis of digital and physical design processes. This step focuses on how designers plan garment layouts to ensure maximum fabric utilization. Observations include studying layout planning, fabric mapping, and 3D simulation tools that assist in minimizing waste. Additionally, examples of completed Zero Waste garments were analyzed to evaluate how effectively they achieve both functional and aesthetic goals. Fourth, the study

employs a case-based methodology, analyzing selected designers and fashion brands known for practicing Zero Waste production. Brands and designers such as Timo Rissanen, Holly McQuillan, and other sustainability-oriented fashion houses were reviewed. Their design philosophies, pattern methods, production workflows, and sustainability outcomes were documented to highlight practical implementation strategies. Finally, the methodology includes a critical evaluation of the challenges and opportunities associated with Zero Waste garment production. Factors such as design complexity, production cost, consumer perception, and scalability within industrial environments were assessed. This evaluation provides insights into the broader implications of adopting Zero Waste techniques in both small-scale and mass-production settings. Overall, the methodological approach combines theoretical analysis, technical examination, and practical observation to provide a comprehensive understanding of how Zero Waste garment production functions and how it contributes to sustainable innovation within the fashion industry.

RESULTS

The results of the study reveal several key findings that demonstrate the effectiveness, practicality, and future potential of the Zero Waste approach in garment production. The analysis of pattern-making techniques, designer practices, and sustainable fashion literature shows that Zero Waste design not only reduces textile waste but also introduces new creative and technical opportunities within the fashion industry. First, the study found that material efficiency significantly improves when Zero Waste pattern-making methods are applied. Compared to traditional cutting systems, which result in 10–30% fabric waste, Zero Waste layouts allow for almost complete utilization of fabric yardage. Garments constructed through geometric, modular, or integrated layouts showed waste levels as low as 0–2%, demonstrating the method's high environmental effectiveness. Second, the research shows that Zero Waste techniques encourage innovation in garment construction. Designers adopting this approach develop new silhouettes and structural solutions not commonly found in conventional fashion. For example, rectangular, triangular, and circular pattern modules allow for experimental shapes while still maintaining functionality and comfort. The results suggest that Zero Waste design fosters a new aesthetic language within sustainable fashion, proving that ecological responsibility can coexist with artistic creativity. Third, the findings indicate that digital tools and 3D modeling technologies significantly enhance the Zero Waste design process. Programs such as CLO3D, Browzwear, and digital pattern systems help designers test fabric layouts, visualize garments, and optimize cutting plans before physical production. These

technologies reduce trial-and-error stages, save time, and further decrease potential material waste. Fourth, the case-based analysis of designers like Holly McQuillan and Timo Rissanen demonstrates that Zero Waste principles can be successfully applied at both artisanal and industrial levels. Their collections provide real-world evidence that waste-free garments can meet high aesthetic standards while adhering to sustainable values. Additionally, some independent fashion brands have reported increased consumer interest due to the transparency and ecological responsibility associated with Zero Waste products. Fifth, the results show that adopting a Zero Waste approach positively influences consumer attitudes and sustainable behavior. Consumers who engage with waste-free garments tend to develop greater awareness of environmental issues and are more likely to support ethical fashion initiatives. This shift in consumer mentality contributes to long-term sustainability within the industry. Finally, the study highlights several challenges associated with implementing Zero Waste production, including pattern complexity, higher design time requirements, and limitations in mass-production scalability. However, despite these challenges, the overall results indicate that Zero Waste methods offer substantial environmental, creative, and economic benefits, suggesting strong potential for broader industry adoption in the future.

DISCUSSION

The results of the study highlight that the Zero Waste approach is not only an environmentally responsible method but also a transformative force within the fashion industry. The findings suggest that Zero Waste design redefines the relationship between creativity, material efficiency, and sustainability, offering new pathways for both designers and consumers. One of the central points revealed in this research is that Zero Waste design challenges the traditional pattern-making system. Conventional methods were developed for speed and mass-production efficiency, often without considering the substantial textile waste they generate. In contrast, Zero Waste techniques require designers to rethink construction principles from the very beginning of the design process. This shift from a waste-producing model to a waste-eliminating mindset demonstrates that sustainability must be integrated at the conceptual stage rather than added later as a finishing step. Another important aspect discussed in this study is the creative potential unlocked by Zero Waste practices. While some assume that waste-free garments limit aesthetic freedom, the analysis shows the opposite: Zero Waste design often results in innovative silhouettes, modular constructions, and visually distinctive forms. Designers using geometric or integrated patterns create garments that challenge conventional ideas of fashion structure, proving that ecological

approaches can stimulate creativity rather than restrict it. The discussion also highlights the growing importance of digital tools in maximizing the effectiveness of Zero Waste design. The integration of 3D modeling and digital pattern systems allows designers to visualize garment shapes, experiment with layout variations, and optimize fabric usage before cutting any material. These technologies bridge the gap between sustainability and practicality, making Zero Waste methods more accessible even for emerging designers. Furthermore, the study reinforces the idea that Zero Waste production plays a significant role in shaping consumer awareness. As consumers become more informed about the environmental impact of textile waste, they show increasing interest in garments that embody ethical and ecological values. This growing demand for sustainable clothing suggests that Zero Waste fashion can influence mainstream purchasing behavior and encourage the industry to adopt more responsible production practices. However, the discussion also acknowledges several limitations and challenges. Zero Waste pattern-making is more time-consuming and requires advanced design thinking, making it difficult to incorporate into fast-fashion environments dominated by speed and low cost. Additionally, certain garment types—especially highly tailored or complex pieces—may require adjustments or compromises to achieve Zero Waste layouts. These factors highlight the need for ongoing innovation and educational programs that train designers in sustainable techniques. Despite these challenges, the overall findings support the view that Zero Waste approaches have strong potential to reshape the future of garment production. By combining environmental responsibility with creative expression and technological innovation, Zero Waste design offers a holistic alternative to traditional fashion systems. As awareness grows and more designers adopt these methods, Zero Waste practices may become an essential element of global sustainable fashion.

CONCLUSION

The findings of this study demonstrate that the Zero Waste approach in garment production represents a significant advancement toward sustainable fashion. By eliminating or minimizing textile waste, Zero Waste design effectively addresses one of the most critical environmental challenges of the fashion industry. The research highlights that waste-free garment construction is not only an ecological necessity but also a creative and technological opportunity for designers. The study confirms that Zero Waste pattern-making enhances material efficiency, encourages innovative garment structures, and reshapes the aesthetic language of contemporary fashion. As designers adopt geometric, modular, and integrative pattern methods, they expand the boundaries of creativity while maintaining environmental responsibility. The

integration of digital tools further strengthens the potential of Zero Waste practices by simplifying complex design processes and improving precision in fabric utilization. Moreover, the results show that Zero Waste fashion has a positive influence on consumer attitudes. As awareness of environmental issues grows, consumers increasingly value transparency, sustainability, and ethical production. Zero Waste garments respond directly to these expectations, contributing to a shift toward more responsible consumption habits. Despite some limitations—such as increased design time, production complexity, and challenges in large-scale manufacturing—the overall findings indicate that Zero Waste methods offer substantial long-term benefits. These benefits include reduced environmental impact, enhanced creativity, and the potential for establishing new industry standards. In conclusion, the Zero Waste approach is not merely a design technique but a transformative framework that supports the global transition toward sustainable fashion. With continued innovation, education, and consumer engagement, Zero Waste garment production has the potential to become a foundational pillar of future fashion systems, enabling a balance between ecological responsibility and creative expression.

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BARKAMOL AVLOD TARBIYASIDA BOLALAR O'YIN FAOLIYATINING AHAMIYATI

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Annotatsiya: Ushbu maqolada bolalarning rivojlanishida o'yin faoliyatining roli, o'yinlarning bola shaxsiyatini rivojlanishidagi ahamiyati, bolalarning o'yinda birlashishlari, uning bosqichlari tahlili haqida nazariy ma'lumotlar berilgan.

Kalit so'zlar: bolalar o'yinlari, ijodiy o'yinlar, bola tarbiyasida o'yinning roli, tanqidiy fikrlash, ijodiy qobiliyat, kreativ yondashuv, ta'lim muassasasi.

Annotation: This article presents theoretical information about the role of play in the development of children, the importance of games in the development of a child's personality, the inclusion of children in the game, as well as an analysis of its stages.

Key words: children's games, creative games, the role of games in raising a child, critical thinking, creative abilities, creative approach, educational institution.

Аннотация: В данной статье представлены теоретические сведения о роли игры в развитии детей, значении игр в развитии личности ребенка, включении детей в игру, а также анализ ее этапов.

Ключевые слова: детские игры, творческие игры, роль игр в воспитании ребенка, критическое мышление, творческие способности, творческий подход, образовательное учреждение.

O'yin bolalarning asosiy faoliyati bo'lib, u orqali bolalar shaxs sifatida shakllanadi. O'yin bolaning kelajakdagi o'quv, mehnat faoliyati kishilarga munosabatining qanday darajada shakllanib borishini belgilaydi. O'yin qadim zamonlardan beri pedagog, psixolog, faylasuf, etnograf, san'atshunos olimlar diqqatini o'ziga tortib kelgan. O'yin ibtidoiy jamoa tuzumi davridayoq yuzaga kelgan bo'lib, jamiyat hayotida mehnatdan keyin turadi va uning mazmunini belgilaydi.

O'yin bola uchun haqiqiy hayotdir. Agar tarbiyachi bolalar o'yinini oqilona tashkil eta olsagina u ijobiy natijalarga erishishi mumkin. A.P. Usova shunday degan edi: «Bolalar hayoti va faoliyatini to'g'ri tashkil etish ularni to'g'ri tarbiyalash demakdir. Bolalarni tarbiyalashning o'yin shakli shuning uchun ham samarali natija beradiki, o'yinda bola yashashni o'rganmaydi, balki o'z hayoti bilan yashaydi».

O'yin tanlay bilish ham muhim ahamiyatga ega. Ammo o'yin bilan ta'lim o'rtasidagi bog'liqlik bola ulg'aygan sari o'zgarib boradi. Bolalar uchun o'yinning qadri yo'qolmaydi, balki mazmuni o'zgaradi. Endi bolalarni ko'proq fikriy faollikni talab etuvchi o'yinlar, sport tarzidagi (musobaqa jihatlari bor) o'yinlar qiziqтира boshlaydi. Pedagogika fani o'yinni bola shaxsini tarbiyalashning asosiy vositasi deb hisoblaydi. O'yin orqali bolalar kattalarning mehnat tajribasini, bilim, malaka va ko'nikmalari, harakat usullarini, ahloq normalari va qoidalarini, mulohaza va muhokamalarini egallab oladilar. O'yinda bolaning o'z tengdoshlari va kattalar bilan bo'ladigan munosabat usullari shakllanadi, his va didlari tarbiyalanadi.

Bolalarning o'yinda birlashishlari bir necha bosqichga bo'linadi. Birinchi bosqich bolalarning «yonma-yon» o'yinining shakllanib borishidir. Bu ilk yoshli va kichik guruh bolalariga hosdir. Bunday o'yinda bolalar o'rtog'ining o'yiniga qi-ziqish bilan qaraydilar, birga o'ynab, «yonma-yon» o'tirganlaridan hursand bo'ladilar. Bu yoshdagi bolalarning o'yini kattalar rahbarligida ularning hulqiga ta'sir etish orqali tashkil etiladi.

Ikkinchi bosqichda bolalar o'yin orqali mehanik ravnshta birlasha boshlaydilar. Bunday birlashishlar qisqa muddatli bo'ladi. Bu davrga kelib bolalardan kimning qaysi o'yinga qiziqishi aniq bo'la boshlaydi, bir hil bolalar didaktik o'yinga qiziqsalar, ikkinchilari harakatli o'yinni yoqtiradilar, uchipchilariga ijodiy o'yinlar ma'qulroq bo'ladi va h.k. Tarbiyachining vazifasi bolalarni u yoki bu o'yin bilan uzoqroq o'ynashga o'rgatishdir.

Uchinchi bosqichda o'ynovchi bolalar guruhy bir-biriga do'stona munosabat va o'zaro yoqtirish orqali birlashadilar. Birga o'ynovchilar soni ko'p bo'lmasada, bolalar qiziqib o'ynaydilar. Bu davrga kelib bir-birlariga baho berish umumiy talabi yuzaga keladi. Bu bosqichda tarbiyachi bolalarning o'yinda birlashishlarining ahloqiy asosini yuzaga keltirishi, ularda o'zaro yordam, o'rtoqlik, do'stlik munosabatlarini shakllantirishi lozim.

Bolalarning o'yinlari qiziqarli, mazmunli bo'lishi uchun o'yinning hamma turlaridan o'rinli foydalanilsa, bolalarga ta'lim berish va ularni tarbiyalashda ijobiy natijalarga erishiladi. Shunday qilib, pedagogika fani o'yinga bola shaxsini har tomonlama shakllantirish vositasi va ular hayotini tashkil etish shakli, bolalar jamoasini shakllantirish vositasi deb qaraydi.

Ijodiy o'yinlar. Ijodiy o'yinlarga: syujetli-rolli o'yinlar, sahnalashtirilgan o'yinlar, qurilish-yasashga doir o'yinlar kiradi. Ijodiy o'yinlarda bolalarning tevarakatrofdan olgan taassurotlari aks ettiriladi. Ijodiy o'yin bolalarning mustaqil o'yini bo'lib, o'yinning mazmunini ular o'zlari o'ylab topadilar. Bu o'yinda bolalarning

erkinligi, mustaqilligi, tashkilotchilik va ijodkorlik qobiliyatlari to'raligicha namoyon bo'ladi. Ammo o'yinda hayotiy taassurotlar aynan aks ettirilmaydi, balki bolalar ongida qayta ishlab chiqiladi. Bu bolalarning o'yin g'oyasini yaratishlarida, uning mazmunini tuzib, tasvirlovchi vositalarni tanlashlarida va shunga o'hshashlarda namoyon bo'ladi.

Syujetli-rolli o'yin o'z hususiyatiga ko'ra aks ettiruvchi faoliyatdir. Tevarak-atrofdagi kattalar va tengdoshlarining hayoti va faoliyati bu o'yin mazmuniga manba bo'lib hizmat qiladi.

Bolalarning tevarak-atrofdagi hcyotdan, tengdoshlari, kattalar faoliyatidan olgan taassurotlari. ijodiy o'yinda qayta ishlanadi, to'ldiriladi, sifat jihatidan o'zgartiriladi. Bolalarning bunday o'yinlari tevarak-atrofdagi borliqni bilishning amaliy shaklidir. Bolalar o'yinining o'ziga hos tomoni unda tasvirlovchi vaziyatlarning mavjudligidir. Tasvirlovchi vaziyat bolalarga o'yin jarayonida yuklangan roli va o'yin syujetidan tashkil topadi va har hil buyumlardan foydalanishni ham o'z ichiga oladi.

O'yinning syujeti — o'z harakati, munosabatlari bilan bog'langan voqea, hodisalar va ularning qatnashuvchilaridir. Roli syujetli-rolli o'yinning asosiy negizi hisoblanadi. O'yin bolada qanoatlanish, xursandchilik hissini paydo qiladi, shuning uchun bolani qiziqtirib, unda yahshi kayfiyat uyg'otadi, bola organizmidagi hayotiy faoliyatni yahshilaydi.

Bola o'ynayotganda har hil harakatlar qiladi: yuguradi, sakraydi, tor joydan, ingichka taxtacha ustidan o'tadi, engashadi, yuqoriga tirmashib chiqadi va hokazo.

Bu harakatlarning hammasini bola bemalol, o'z xoxishi bilan bajaradi, natijada bolaning muskullari pishiydi, u harakatni yengilroq, chaqqonroq bajaradigan bo'lib qoladi, jismoniy jihatdan chiniqib boradi.

Bolaning aqliy tomondan rivojlanishi uchun ham o'yin katta ahamiyatga ega. O'yin natijasida bolaning bilimi kengayib boradi. Rolli o'yinlar bolaning kuzatuvchanligini, qiziquvchanligini, bilishga qiziqishini oshirib, bilish doirasini rivojlantiradi, boyitadi. O'yinda bola o'z oldiga maqsad qo'yadi, bu boladan aql, idrok ishlatishni talab qiladi, topag'onlikka o'rgatadi. O'yin jarayonida juda ko'p gaplashishga, tortishishga, bahslashishga, aytib berishga to'g'ri keladi. Bolalar o'zi yasayotgan narsalarini yahshiroq yasash, qurish uchun juda ko'p o'ylab, fikrlashlariga to'g'ri keladi. Bular hammasi bola taffakkuri va hayolining rivojlanishida muhim ahamiyatga egadir. Bola o'z o'yinida borliqni aks ettirayotib, olgan rolining mazmuni bilan bog'liq bo'lgan u yoki bu hissiyotni boshidan kechiradi. Masalan, Dilnoza ona-bola o'yinida ona rolini o'ynayotib, bolalarini ovqatlantiradi, kiyintiradi, ular bilan yahshi munosabatda bo'lib erkalaydi, ular bilan gaplashadi, kitoblar o'qib beradi. Bu o'yin bolada muloyimlik,

g'amho'rlik, e'tiborlilik kabi yaxshi hislarni uyg'otadi. «Bolalar bog'chasi», «maktab» kabi o'yinlar bolada do'stlik, o'rtoqlik, burch hissi, jamoachilik kabi hislarni tarbiyalaydi. O'yinda dastlabki do'stlik munosabatlari paydo bo'ladi. Shunday qilib, ijodiy o'yinlar bola shahsining hamma tomoniga ta'sir etadi.

Rolli-syujetli o'yinlarning o'ziga xos xususiyati. Rolli o'yinlarning boshqa o'yinlarga nisbatan o'ziga hos hususiyatga egaligi ularda syujet, roli va hayol qilingan vaziyatning mavjud bo'lishidir. Bolalar biror narsa yoki voqea to'g'risida yetarlicha tasavvurga ega bo'lgandagina syujet, fikr yuzaga keladi. Masalan, bolalar «parohod» o'yinini o'ynamoqchi bo'lishdi. Bunga o'yinning qanday borishi to'g'risida syujet (voqeaning borishi) kerak. Syujet bolalarning bilimiga bog'liq bo'ladi. Bolalarda avval g'oya tug'iladi, keyin mazmuni rivojlanadi. Ba'zan bolalar o'yinning qanday borishini oldindan belgilab oladilar. Masalan, Afrikaga «bormoqchi» bo'lsalar, sayohat vaqtida qilinadigan ishlarni oldindan belgilab oladilar. Bundan ko'rinib turibdiki, rolli o'yin jamoachilik hususiyatiga ega, chunki bolalar bir-birlari bilan o'zaro munosabatda bo'ladilar. Rolli o'yinda har bir bola o'ziga olgan rolni bajaradi, masalan, ona, shofyor, tarbiyachi, enaga, artist va hokazo. Rolli o'yinlarda didaktik, qoidali-harakatli o'yinlardagi singari qat'iy o'rnatilgan qoida bo'lmaydi. Bunda ko'pincha bolalar o'z hayol qilgan narsalari bo'yicha harakat qiladilar. Masalan, «raketaga tushib oyga uchadilar», «parohodda suzadilar», «kasalni davolaydilar» . . .

Ammo, bolalarning xayollari bilan o'ynashlari ularni real voqelikdan uzoqlashtirib yubormaydimi degan savol tug'iladi? Yo'q, bolalar o'zlari buning o'yinligini yahshi biladilar. Bu «o'yin», bu faqat «o'yinda», deydilar. Shu bilan birga bolalarning kechinmalari, hayajonlari, qilgan harakatlari hammasi rostakam, sidqidildan bo'ladi. Masalan, «doktor» rolidagi bola kasal to'g'risida qayg'uradi va shunga o'xshashlar. O'yin mavzui bolalar olgan taassurotning kuchli, bolalarning qiziqishlari bilan belgilanadi. O'yinda bolalar aks ettiradigan ijtimoiy-siyosiy voqealar bolalarning bilim doirasi va hayotiy tajribasining kengayib borishiga bog'liq bo'ladi.

Rolli o'yinlarning mazmuni va mavzusi o'zgarishi bilan bir qatorda uning tuzilishi va o'yin shakllari o'zgaradi, bolalarning mustaqilligi va tashabbuskorligi ham o'sib boradi. Avvaliga bolalar o'z-o'zicha alohida-alohida o'ynaydilar. Sekin-asta rolli o'yinlarning paydo bo'lishi, o'yinda kishilar o'rtasidagi munosabatni aks ettirish birgalikda bajariladigan o'yinni keltirib chiqaradi. Avvaliga katta bo'lmagan guruhchalar 2-3 kishidan bo'lib o'ynashadi, katta va tayyorlov guruhlariga kelib kattaroq jamoaga birlashadilar.

O'yinda har xil rollar orqali o'zaro munosabatda bo'lish bolalarda o'rtoqlik munosabatlarini shakllantirishga yordam beradi. O'rtoqlik munosabatining dastlabki

hususiyati bolalarda maslahatlashib, kelishib olishda namoyon bo`ladi. Kelishib olish avvalo o`yin mavzusini belgilab olishdan boshlanadi. Keyin rollarni taqsimlashda o`yinchoqlar tayyorlashda va boshqa sohalarda kelishib olinadi.

O`yinning tuzilishi va mazmuni o`zgarishi bilan o`yinchoqning roli va bolalarning unga nisbatan talabi ham o`zgarib boradi. Bolalarning o`ynashlari uchun ma`lum vositalar kerak. Rolli o`yinlarda bolalar har hil vositalardan foydalanadilar, ulardan asosiylari quyidagilar: bolalarning uya harakatlari; o`yinchoq va boshqa materiallar; so`z. Bolalarning asosiy tasvirlovchi vositalari o`zlarining harakatidir. Masalan, bola ikki oyog`ida sakrab quyonchaga taqlid qiladi. Ikki qo`lini qimirlatib, pishillab parovoz bo`ladi va hokazo. Bolalarning ko`p harakatlari qurish, yasash bilan bog`liq , bo`ladi. Ular soatlab parovoz, parohod, elektrovoz qurdalar, ularni o`ziga o`xshatishga urinadilar.

O`yin mazmunining rivojlanib borishi bilan murakkab jarayon bo`lgan bolalar jamoasi ham shakllana boshlaydi. O`yin bolalarning mustaqil faoliyati bo`lgani uchun uning syujetini bolalar o`zlari o`ylab topishadi va o`zlari tashkil egishadi. O`yinda bolalar o`zlarining kichkina jamiyatning a`zosi deb hisoblashadi, o`zaro kelishib xarakat qilishga o`rganishadi, axloq normalarini egallab borishadi. Ijtimoiy tarbiya olayotgan sharoitda har bir bola o`ynayotgan bolalar jamoasiga kira bilishi, u yerda o`z o`rnini topib olishi va shu jamoada o`rnashib olishi lozim.

O`yindagi umumiy qiziqishlar bolalarni bir-biriga yaqinlashtiradi, do`stlik aloqalarini o`rnatishga hizmat qiladi. Bunda, ayniqsa uzoq davom etadigan o`yinlar muhim ahamiyatni kasb etadi. Bir qancha bolalar dengiz sayohati o`yini bilan qizikib bir necha kungacha shu o`yinni o`ynashlari mumkin. "Ular kemada hali «shimoliy qutbga», hali issiq mamlakatlarga sayohatga borishadi. Uzoq o`ynaladigan o`yinlar bolalardan birgalikda amalga oshiriladigan ishlarni masla hatlashib olishni, rollarni bo`lishishni, bunda har bir bolaning qiziqishini e`tiborga olishni, o`rtoqlarining fikri bilan kelishishini, kerak bo`lgan har bir daqiqada o`rtog`iga yordamga kelishni talab etadi, bu bilan bolalarda umumiy ish uchun javobgarlik hissi rivojlanadi. Uzoq vaqt dengizchi rolini bajarish natijasida bolalarda odamiylik, o`rtoqlik, insonparvarlik, jasurlik, o`zaro yordam kabi ijobiy ahloqiy sifatlar shakllana boshlaydi. Bolalarni o`zaro munosabatlari borgan sari kamol topib boradi.

Shu tariqa, o`yindagi umumiy maqsadlar, umumiy qiziqishlar, birgalikdagi kechinmalar, intilishlar, ijodiy izlanishlar bolalarni birlashtiradi. Bolalarning uyushgan jamoasi birgalikdagi mazmunli o`yindan, pedagogning uzoq vaqt olib borgan ishi natijasida yuzaga keladi.

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МОДЕЛЬ И ИНДИКАТОРЫ ОЦЕНКИ ЭФФЕКТИВНОСТИ ТЕХНОЛОГИЙ РАЗВИТИЯ МЕЖНАЦИОНАЛЬНОЙ КОММУНИКАТИВНОЙ КОМПЕТЕНЦИИ СТУДЕНТОВ

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Аннотация. В статье предлагается модель оценки эффективности технологий развития межнациональной коммуникативной компетенции студентов. Обоснованы критерии, индикаторы и уровни диагностики, позволяющие оценивать не только знания, но и ценностную готовность, речевое поведение, рефлексию и участие студентов в совместной деятельности. Практическая значимость статьи заключается в возможности применения модели в учебной, воспитательной и проектной работе вуза.

Ключевые слова: межнациональная коммуникация, компетенция, педагогическая технология, индикатор, оценочная модель, высшее образование.

Abstract. The article proposes a model for evaluating the effectiveness of technologies aimed at developing students' interethnic communicative competence. The model includes criteria, indicators and levels for assessing knowledge, value attitudes, communicative behaviour, reflection and project-based cooperation. The proposed framework may be used in academic courses, student projects and educational work at higher education institutions.

Keywords: interethnic communication, communicative competence, educational technology, indicator, assessment model, higher education.

Введение

Проблема оценки эффективности педагогических технологий в сфере межнациональной коммуникации особенно значима для современного университета. Если технология заявлена как средство развития межнациональной коммуникативной компетенции студентов, она должна быть не только описана как интересная практика, но и проверена по понятным индикаторам. В образовательной среде часто фиксируется обратная ситуация: проводятся тренинги, диалоговые площадки, проектные семинары, культурные

мероприятия, однако результат описывается общими словами. Для конференционной и исследовательской практики этого недостаточно, потому что развитие компетенции требует доказуемой динамики: что именно изменилось в знаниях, установках, речевом поведении, готовности к сотрудничеству и рефлексии студентов.

ОЕСД в модели глобальной компетентности связывает межкультурную готовность с умением рассматривать локальные и глобальные вопросы, понимать позиции других людей и вступать в открытое взаимодействие [3, 4-b]. Для университетской практики это означает, что индикаторы оценки должны включать как когнитивные, так и поведенческие признаки. Нельзя считать студента коммуникативно компетентным только потому, что он знает названия традиций или праздников. Важно, способен ли он задавать корректные вопросы, принимать иную точку зрения, предупреждать конфликт интерпретаций и участвовать в совместной деятельности.

Методы

Методологическую основу статьи составили компетентностный, деятельностный, культурологический и индикаторный подходы. Компетентностный подход позволяет рассматривать межнациональную коммуникацию как интегральный результат обучения и воспитания, а не как сумму отдельных сведений. Деятельностный подход фиксирует, что компетенция проявляется в действии: в диалоге, проекте, дискуссии, медиативной ситуации, групповом решении учебной задачи. Культурологический подход показывает, что коммуникация всегда связана с ценностями, нормами, символами и образами мира. Индикаторный подход переводит эти сложные явления в систему признаков, которые можно наблюдать, измерять и сопоставлять.

В статье использованы методы теоретического анализа научной литературы, педагогического моделирования, сравнительного описания оценочных рамок, проектирования индикаторов и экспертной интерпретации. В качестве методического ориентира учитывались международные рамки UNESCO, OECD, CEFR и AAC&U. UNESCO подчеркивает необходимость распространения знаний о межкультурных компетенциях «across the greatest selection of contexts possible» [2, 11-b]. Это положение особенно важно для университетов, поскольку межнациональная коммуникация развивается не только на занятии по языку, но и в общежитии, студенческом клубе, проектной группе, научной конференции и цифровой среде.

Результаты

Разработанная модель включает четыре взаимосвязанных блока: целевой, содержательный, технологический и оценочный. Целевой блок определяет ожидаемый результат: студент демонстрирует готовность к уважительному, ясному и продуктивному общению с представителями разных национальных и культурных групп. Содержательный блок включает знания о культурных нормах, речевом этикете, стереотипах, ценностных различиях и способах предотвращения коммуникативных барьеров. Технологический блок объединяет методы обучения: диалоговые тренинги, анализ кейсов, проектные задания, дебаты, межкультурные интервью, наставничество и цифровую коллаборацию. Оценочный блок содержит критерии, индикаторы и уровни.

Ключевым результатом является система критериев оценки. В ней выделены пять критериев: когнитивный, ценностно-мотивационный, коммуникативно-поведенческий, рефлексивный и проектно-деятельностный. Когнитивный критерий показывает, понимает ли студент природу межнациональной коммуникации. Ценностно-мотивационный критерий выявляет уважение к культурному многообразию и готовность к диалогу. Коммуникативно-поведенческий критерий оценивает конкретные речевые действия. Рефлексивный критерий показывает способность анализировать собственные ошибки. Проектно-деятельностный критерий фиксирует участие в совместных формах работы.

Таблица 1. Критерии и индикаторы оценки межнациональной коммуникативной компетенции

Критерий	Что оценивается	Инструмент	Начальный уровень	Базовый уровень	Продвинутый уровень
Когнитивный	понимание понятий, норм, причин барьеров	тест, кейс, мини-эссе	знает факты	объясняет связи	применяет в ситуации
Ценностно-мотивационный	уважение к различиям, готовность	анкета, интервью, рефлексия	декларирует	обосновывает	проявляет устойчиво

	Б К диалогу				
Коммуникати вно- поведенчески й	уместност ь речи, слушание, вопросы	наблюден ие, ролевая ситуация	реагирует формальн о	ведет диалог	предупрежд ает конфликт
Рефлексивный	анализ ошибок и культурн ых допущени й	дневник, самооцен ка	видит трудность	называет причину	планирует коррекцию
Проектно- деятельностн ый	участие в совместно м продукте	портфоли о, экспертна я рубрика	выполняе т часть	координир ует	создает общий результат

Представленная таблица показывает, что каждый критерий должен иметь наблюдаемые признаки. Например, когнитивный критерий не ограничивается запоминанием терминов: студент должен объяснять причины коммуникативных барьеров и применять это понимание в ситуации. Коммуникативно-поведенческий критерий также не сводится к активности на занятии. Важнее, насколько студент способен слушать партнера, уточнять смысл, корректно формулировать несогласие и не переводить культурное различие в конфликт.

Таблица 2. Этапы применения оценочной модели

Этап	Цель	Инструменты	Ожидаемый результат
Входная диагностика	Определение исходного уровня	анкета, тест, кейс	карта трудностей группы
Формирующий этап	Коррекция технологии	наблюдение, рубрика, обратная связь	динамика речевого поведения
Итоговый этап	Оценка эффективности	проект, портфолио, самоотчет	уровневое заключение

Посткурс	Перенос опыта	рефлексивное интервью	рекомендации для дальнейшей работы
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Для обработки данных можно использовать балльную шкалу от 1 до 4 по каждому индикатору. Однако балл должен сопровождаться кратким качественным комментарием. Например, отметка «3» по коммуникативно-поведенческому критерию объясняется тем, что студент уверенно ведет диалог, но еще нуждается в подсказке при возникновении спорной ситуации. Такая запись помогает не только выставить оценку, но и дать студенту понятную траекторию дальнейшего роста.

Обсуждение

Предлагаемая модель отличается от традиционного подхода тем, что не сводит эффективность технологии к количеству проведенных мероприятий. В вузовской практике иногда считается, что если проведен фестиваль, круглый стол или тренинг, то компетенция уже сформирована. Однако мероприятие является только условием. Результатом можно считать изменение качества взаимодействия студентов: они начинают точнее выражать позицию, корректнее воспринимать различия, меньше опираются на стереотипы и чаще используют стратегии сотрудничества.

Сравнение с рамкой AAC&U показывает, что оценка межкультурного знания и компетентности должна учитывать способность студента распознавать собственные культурные модели. В рубрике AAC&U говорится о способности «identify our own cultural patterns» [6, 2-b]. Это положение принципиально, потому что межнациональная коммуникация начинается не только с изучения другого, но и с понимания собственной культурной позиции. Студент, который не осознает собственных норм, часто воспринимает их как единственно правильные и невольно переносит их на собеседника.

Практическая ценность модели состоит в том, что она может применяться на разных этапах учебного года. На входном этапе диагностика показывает исходные трудности. На промежуточном этапе она помогает корректировать технологии. На итоговом этапе она фиксирует рост и дает материал для отчета кафедры, куратора или проектной группы. Особенно важно, что модель может быть адаптирована к разным дисциплинам: иностранному языку, русскому языку как иностранному, педагогике, социологии, культурологии и воспитательной работе.

Заключение

Развитие межнациональной коммуникативной компетенции студентов требует не только содержательно богатых технологий, но и надежной системы оценки. Предложенная модель показывает, что эффективность педагогических технологий должна измеряться через совокупность критериев: знание, ценностная готовность, речевое действие, рефлексия и участие в совместной деятельности. Такой подход позволяет увидеть не внешний эффект мероприятия, а реальное изменение коммуникативного поведения студентов.

Основной вывод состоит в том, что оценка должна быть комплексной, уровневой и педагогически корректной. Нельзя ограничиваться только тестом или только анкетой удовлетворенности. Более продуктивной является система, в которой количественные показатели дополняются наблюдением, портфолио, экспертной рубрикой и рефлексивным анализом. Именно такая система делает развитие межнациональной коммуникативной компетенции управляемым, доказуемым и практически значимым для современного университета.

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O'ZBEK TILIDA UY ANJOMLARI KOMPONENTLI PAREMALARNING MILLIY XUSUSIYATLARI

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Annotatsiya: Mazkur maqolada o'zbek tilidagi uy anjomlari komponentli paremalarining milliy-madaniy xususiyatlari lingvokulturologik jihatdan tahlil qilinadi. Tadqiqot davomida xalqning turmush tarzi, urf-odatlar, oilaviy qadriyatlari hamda maishiy madaniyati bilan bog'liq bo'lgan paremalar semantik va pragmatik jihatdan o'rganildi. Uy-ro'zg'or buyumlari ishtirokidagi maqol va matallar xalq tafakkuri, milliy dunyoqarashi hamda axloqiy qarashlarini ifodalovchi muhim til birliklari sifatida baholandi. Shuningdek, paremalarda uchraydigan qozon, supurgi, sandiq, o'choq, eshik kabi uy anjomlari obrazlarining ramziy ma'nolari ochib berildi. Tadqiqot natijalari o'zbek paremiologiyasida milliy mentalitet va madaniy kodlarning til orqali ifodalanishini yoritishga xizmat qiladi.

Kalit so'zlar: parema, paremiologiya, uy anjomlari, maqol va matallar, lingvokulturologiya, milliy xususiyat, o'zbek tili, semantik tahlil, madaniy kod, xalq tafakkuri.

Abstract: This article analyzes the national-cultural characteristics of Uzbek paremiology with household appliances components. During the study, paremiology related to the lifestyle, customs, family values, and domestic culture of the people was studied semantically and pragmatically. Proverbs and sayings involving household appliances were evaluated as important language units expressing national thinking, national worldview, and moral views. Also, the symbolic meanings of images of household appliances such as a pot, broom, chest, stove, and door found in paremiology were revealed. The results of the study serve to shed light on the expression of national mentality and cultural codes through language in Uzbek paremiology.

Keywords: paremiology, paremiology, household appliances, proverbs and sayings, linguoculturology, national feature, Uzbek language, semantic analysis, cultural code, folk thinking.

Kirish

Til xalqning tarixiy tajribasi, ma'naviy qadriyatlari va milliy tafakkurini o'zida mujassamlashtiruvchi muhim ijtimoiy hodisalardan biri hisoblanadi. Har bir xalqning dunyoqarashi, yashash tarzi, urf-odatlar hamda kundalik hayoti til birliklari orqali namoyon bo'ladi. Ayniqsa, paremalar — maqol, matal, hikmatli so'z va iboralar

xalqning ko‘p asrlik hayotiy tajribasi asosida shakllangan bo‘lib, milliy madaniyatning yorqin ifodachisi sifatida alohida ahamiyat kasb etadi. Shu sababli paremiologik birliklarni lingvistik va lingvokulturologik jihatdan o‘rganish zamonaviy tilshunoslikning dolzarb yo‘nalishlaridan biri sanaladi. O‘zbek xalqining maishiy hayoti, oilaviy munosabatlari va turmush tarzida uy anjomlari muhim o‘rin tutadi. Qozon, o‘choq, sandiq, supurgi, eshik, dasturxon kabi buyumlar nafaqat kundalik ehtiyoj vositasi, balki xalqning milliy mentaliteti, qadriyatlari va ramziy tasavvurlarini aks ettiruvchi madaniy birliklar sifatida ham namoyon bo‘ladi. Shu bois uy anjomlari komponentli paremlar xalqning turmush madaniyati, axloqiy qarashlari va estetik tafakkurini yoritishda muhim manba hisoblanadi. O‘zbek tilidagi uy anjomlari ishtirokidagi paremlar ko‘pincha mehnatsevarlik, ozodalik, oilaparvarlik, mehmondo‘stlik, tejamkorlik kabi milliy fazilatlarni ifodalashga xizmat qiladi. Masalan, “Qozoni butunning — obro‘si butun”, “Supurgi bir joyga yig‘ilsa, uy toza bo‘ladi” kabi paremlar orqali xalqning jamoaviylik, birlik va tartib-intizomga bo‘lgan munosabati ifodalanadi. Bunday birliklar tilning nafaqat kommunikativ, balki kumulyativ funksiyasini ham namoyon etadi. Bugungi globallashuv sharoitida milliy madaniy merosni saqlash, xalq og‘zaki ijodi namunalarini lingvokulturologik jihatdan tadqiq etish alohida ilmiy ahamiyat kasb etmoqda. Chunki paremlar tarkibida xalqning tarixiy xotirasi, etnomadaniy qarashlari va milliy tafakkur modeli mujassamlashgan bo‘ladi. Uy anjomlari komponentli paremlarni o‘rganish esa o‘zbek xalqining maishiy madaniyatini, mental xususiyatlarini hamda milliy obrazlar tizimini chuqurroq anglash imkonini beradi. Mazkur tadqiqotning asosiy maqsadi o‘zbek tilidagi uy anjomlari komponentli paremlarning milliy xususiyatlarini aniqlash, ularning semantik, lingvokulturologik va pragmatik jihatlarini tahlil qilishdan iborat. Tadqiqot davomida paremlarda qo‘llangan uy anjomlari obrazlarining ramziy ma‘nolari, xalq tafakkuridagi o‘rni hamda milliy-madaniy funksiyalari ilmiy asosda yoritiladi.

Asosiy qism

Paremiologik birliklar xalq tafakkuri, madaniyati va ijtimoiy hayotining ko‘zgusi sifatida til tizimida alohida o‘rin egallaydi. Ayniqsa, uy anjomlari komponentli paremlar o‘zbek xalqining kundalik turmushi, oilaviy qadriyatlari va maishiy dunyoqarashi bilan chambarchas bog‘liq bo‘lib, milliy mentalitetning til orqali ifodalanishida muhim vosita vazifasini bajaradi. Bunday paremlar tarkibidagi uy-ro‘zg‘or buyumlari oddiy predmet sifatida emas, balki muayyan ramziy ma‘no va madaniy kodlarni tashuvchi birliklar sifatida namoyon bo‘ladi. O‘zbek xalqining tarixiy turmush tarzida uy, oila va ro‘zg‘or tushunchalari muqaddas qadriyat sifatida

shakllangan. Shu sababli paremalarda uy anjomlari orqali insoniy fazilatlar, axloqiy me'yorlar va jamiyatdagi ijtimoiy munosabatlar ifodalangan. Masalan, qozon obrazi o'zbek paremalarida baraka, birlik va oilaviy farovonlik timsoli sifatida qo'llanadi. "Qozoni qora bo'lsa ham, niyati oq" paremasida insonning moddiy holatidan ko'ra qalb pokligi ustun qo'yiladi. "Qozoni qaynagan uy — fayzli uy" kabi birliklarda esa qozon oiladagi tinchlik, mehmondo'stlik va to'kinlik belgisi sifatida talqin qilinadi. Bu holat o'zbek xalqining azaldan dasturxon va mehmondo'stlikka katta ahamiyat berganini ko'rsatadi. Supurgi komponentli paremalar ham milliy madaniyatda o'ziga xos semantik yuklamaga ega. Supurgi ozodalik, tartib-intizom va jamoaviylik ramzi sifatida talqin qilinadi. "Bitta supurgi sinmaydi" maqolida birlik va hamjihatlik g'oyasi ilgari suriladi. Ushbu parema orqali xalqning jamoaga tayanish, ahillikni qadrlash kabi qadriyatlari ifodalanadi. Shu bilan birga, supurgi obrazi ayollarning ro'zg'ordagi o'rni, ozodalikka bo'lgan munosabat va oilaviy mas'uliyatni ham aks ettiradi. O'zbek paremalarida sandiq obrazi ham keng uchraydi. Sandiq qadimdan oilaviy boylik, sir-saqlovchi vosita va avloddan-avlodga o'tuvchi qadriyatlar timsoli bo'lib kelgan. "Sandiqda yotgan mol egasini kutadi" kabi paremalarda tejamkorlik va sabr tushunchalari ifodalanadi. Ayrim hollarda sandiq obrazi qizlarning sep-surdigi, oilaviy tarbiya va milliy an'analar bilan bog'liq holda qo'llanadi. Bu esa o'zbek xalqining oilaviy qadriyatlarga sodiqligini namoyon qiladi. O'choq komponentli paremalar esa ko'proq oila, nasl va xonadon tushunchalari bilan bog'liqdir. O'choq qadimdan muqaddas sanalgan va u oilaning markazi sifatida qabul qilingan. "O'chog'i o'chmasin" iborasi inson uchun eng ezgu tilaklardan biri sifatida ishlatiladi. Bu paremada o'choq so'zi nafaqat uy jihozi, balki avlod davomiyligi, oilaning barqarorligi va xonadonning yashovchanligini anglatadi. Demak, uy anjomlari komponentlari paremalarda metaforik ma'no kasb etib, xalqning ma'naviy qarashlarini ifodalashga xizmat qiladi. Eshik va dasturxon bilan bog'liq paremalar ham milliy mentalitetni yoritishda muhim o'rin tutadi. Eshik obrazi ko'pincha hurmat, chegarani bilish va insoniy munosabatlar bilan bog'lanadi. "Eshiging ochiq bo'lsa, ko'ngling ham ochiq bo'ladi" kabi paremalarda mehmondo'stlik va ochiqko'ngillilik g'oyalari ilgari suriladi. Dasturxon esa baraka, birlik va mehr-oqibat timsoli sifatida talqin qilinadi. O'zbek xalqida dasturxon atrofida yig'ilish nafaqat ovqatlanish, balki ruhiy yaqinlik va ijtimoiy birdamlikni anglatadi. Shu bois dasturxon komponentli paremalar xalqning ma'naviy hayotini yorituvchi muhim lingvomadaniy birlik hisoblanadi. Uy anjomlari komponentli paremalarni semantik jihatdan tahlil qilish ularning ko'p qatlamli ma'noga ega ekanligini ko'rsatadi. Bir qarashda oddiy maishiy predmet sifatida ko'rinadigan birliklar aslida xalqning axloqiy qarashlari, estetik didi, ijtimoiy tajribasi

va tarixiy xotirasini mujassamlashtirgan bo‘ladi. Paremlar tarkibidagi obrazlar milliy tafakkur mahsuli sifatida shakllanib, xalqning dunyoni idrok etish usulini namoyon qiladi. Lingvokulturologik nuqtayi nazardan qaranganda, uy anjomlari komponentli paremlar xalqning etnomadaniy xususiyatlarini ochib beruvchi muhim manba hisoblanadi. Ularda o‘zbek xalqining oilaparvarlik, mehmondo‘stlik, tejamkorlik, mehnatsevarlik, ozodalikka intilish kabi milliy fazilatlari mujassamlashgan. Shu jihatdan bunday paremlar nafaqat tilshunoslik, balki madaniyatshunoslik, etnografiya va folklorshunoslik uchun ham muhim ilmiy material bo‘lib xizmat qiladi. Bugungi kunda globallashuv va madaniyatlararo integratsiya jarayonlari kuchayib borayotgan bir paytda milliy paremiologik boyliklarni o‘rganish va saqlash muhim ahamiyat kasb etmoqda. Chunki paremlar xalqning milliy o‘zligini saqlovchi va avlodlarga yetkazuvchi madaniy xotira vositasi hisoblanadi. Uy anjomlari komponentli paremlarni chuqur tadqiq etish orqali o‘zbek xalqining maishiy hayoti, mentaliteti va qadriyatlar tizimini yanada teranroq anglash mumkin bo‘ladi.

Xulosa

O‘zbek tilidagi uy anjomlari komponentli paremlar xalqning ko‘p asrlik hayotiy tajribasi, milliy tafakkuri va ma‘naviy qadriyatlarini o‘zida mujassamlashtirgan muhim paremiologik birliklar hisoblanadi. Ushbu paremlar tarkibida qo‘llangan qozon, o‘choq, sandiq, supurgi, dasturxon, eshik kabi uy-ro‘zg‘or buyumlari oddiy maishiy predmet sifatida emas, balki xalqning milliy-madaniy qarashlarini ifodalovchi ramziy obrazlar sifatida namoyon bo‘ladi. Uy anjomlari komponentli paremlar orqali o‘zbek xalqining oilaparvarlik, mehmondo‘stlik, birlik, ozodalik, mehnatsevarlik va tejamkorlik kabi milliy fazilatlari yorqin aks etadi. Ayniqsa, qozon va dasturxon obrazlari baraka va farovonlikni, o‘choq oilaviy davomiylikni, supurgi esa ahillik va tartib-intizomni ifodalashi bilan ajralib turadi. Bu esa paremlarning xalq ma‘naviy hayoti bilan uzviy bog‘liqligini tasdiqlaydi. Uy anjomlari ishtirokidagi paremlar lingvokulturologik jihatdan xalqning etnomadaniy xotirasini saqlovchi vosita sifatida ham muhim ahamiyat kasb etadi. Ularda o‘zbek xalqining turmush tarzi, urf-odatlar, maishiy madaniyati hamda axloqiy qarashlari mujassamlashgan bo‘lib, til orqali milliy mentalitetni anglash imkonini beradi. Shu sababli bunday paremlarni o‘rganish nafaqat tilshunoslik, balki folklorshunoslik, madaniyatshunoslik va etnografiya sohalari uchun ham dolzarb ilmiy manba hisoblanadi. Globallashuv jarayonlari kuchayib borayotgan hozirgi davrda milliy paremiologik merosni saqlash va ilmiy jihatdan tadqiq etish muhim vazifalardan biri bo‘lib qolmoqda. Uy anjomlari komponentli paremlar xalqning tarixiy xotirasi va milliy o‘zligini aks ettiruvchi madaniy birlik sifatida kelajak avlodlarga boy ma‘naviy merosni yetkazishga xizmat

qiladi. Shu jihatdan mazkur paremalarni chuqur o'rganish o'zbek tilining lingvomadaniy boyligini yanada kengroq ochib berishga imkon yaratadi.

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THE EFFECTIVENESS OF CORPUS-BASED MATERIALS IN DEVELOPING VOCABULARY COMPETENCE OF EFL LEARNERS

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Abstract. This thesis investigates the effectiveness of corpus-based materials in developing vocabulary competence among EFL learners. It explores how authentic concordance lines, collocations, frequency data, and contextual examples improve vocabulary knowledge, retention, and usage. The study emphasizes data-driven learning as a practical method for enriching learners' lexical awareness and communicative performance.

Key words: *Corpus-based materials; vocabulary competence; EFL learners; concordance; collocation; authentic language; data-driven learning; vocabulary instruction.*

Introduction

In modern English language teaching, vocabulary competence is considered one of the central components of communicative ability. Learners cannot express their ideas clearly, understand authentic texts, or participate in real communication without sufficient lexical knowledge. Traditional vocabulary teaching often depends on memorizing isolated word lists, direct translation, and textbook examples. However, such methods do not always show learners how words are naturally used in real contexts. Therefore, corpus-based materials have become an important methodological tool in EFL teaching, because they provide learners with authentic examples, frequent word combinations, collocations, and contextual usage patterns.

Literature review

The theoretical basis of corpus-based vocabulary teaching is closely related to the works of Sinclair, Johns, Nation, Hunston, McEnery, Wilson, O'Keeffe, McCarthy, and Römer. Sinclair emphasized the importance of real language evidence in understanding lexical patterns, while Johns developed the idea of data-driven learning, in which learners discover language rules through examples. Nation's studies on vocabulary acquisition show that effective vocabulary learning requires knowledge of

meaning, form, use, collocation, and frequency. Hunston and O’Keeffe et al. also highlight that corpora provide authentic linguistic data and help learners observe how words function in different contexts. Thus, corpus-based materials are not only a source of examples but also a methodological foundation for developing learners’ independent lexical analysis skills.

Analysis

Corpus-based materials are effective because they present vocabulary not as separate words but as units used in real communication. For example, when learners study the word “decision,” a corpus can show frequent combinations such as “make a decision,” “final decision,” “important decision,” and “decision-making process.” This helps learners understand not only the meaning of the word but also its grammatical and lexical environment. As a result, students begin to use vocabulary more naturally and accurately.

Another important advantage of corpus-based materials is their role in developing learners’ collocational competence. Many EFL learners know the dictionary meaning of words, but they make mistakes in word combinations. For instance, they may say “do a decision” instead of “make a decision” or “strong rain” instead of “heavy rain.” Corpus-based tasks help learners compare correct and incorrect combinations through authentic examples. This process strengthens their awareness of natural English usage and reduces translation-based errors.

Corpus-based vocabulary teaching also increases learner autonomy. Instead of depending only on the teacher, students learn how to search for words, analyze concordance lines, identify repeated patterns, and draw conclusions independently. This method changes the learner’s role from passive receiver to active researcher. For example, students can be asked to search for the verbs commonly used with “research,” such as “conduct research,” “carry out research,” and “publish research.” Through such activities, learners develop both vocabulary knowledge and analytical thinking.

The effectiveness of corpus-based materials can also be seen in vocabulary retention and practical usage. Words learned through authentic examples and repeated patterns are remembered better than words memorized from lists. In classroom practice, corpus-based activities may include concordance analysis, collocation matching, frequency comparison, word-family study, and contextual gap-filling tasks. These activities help learners connect meaning, form, and usage. Therefore, corpus-based materials support not only vocabulary expansion but also the development of communicative competence in English.

Conclusion

In conclusion, corpus-based materials are highly effective in developing vocabulary competence of EFL learners because they provide authentic, contextual, and frequency-based language evidence. They help students understand word meanings, collocations, grammatical patterns, register differences, and real communicative usage. Unlike traditional memorization methods, corpus-based learning encourages students to observe, compare, analyze, and apply vocabulary independently. Therefore, the integration of corpus-based materials into EFL vocabulary instruction can improve learners' lexical accuracy, fluency, retention, and confidence in using English.

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IMPLEMENTING SUSTAINABLE DEVELOPMENT GOALS PORTFOLIO(SDG) IN ENGLISH CLASSES

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Abstract: This article examines the integration of Sustainable Development Goals (SDGs) portfolios into English language classes as an innovative pedagogical approach to enhance both linguistic competence and global awareness among students. The study highlights how SDG-oriented tasks and portfolio-based learning can foster critical thinking, intercultural communication, and a sense of social responsibility. By incorporating real-world global challenges into language learning, students are encouraged to engage with authentic content, develop reflective skills, and actively participate in problem-solving activities. The research emphasizes the role of English as a global language in promoting sustainable development values and equipping learners with the competencies necessary for the 21st century. **Keywords:** Sustainable Development Goals, SDG portfolio, English language teaching, global competence, communicative skills, critical thinking, student-centered learning, intercultural awareness, education for sustainability

Introduction

In the era of globalization and rapid social transformation, education systems are increasingly expected to prepare students not only for academic success but also for active participation in addressing global challenges. The concept of Sustainable Development Goals (SDGs), introduced by the United Nations, provides a comprehensive framework for promoting social equity, environmental protection, and economic development. Integrating these goals into the educational process has become a priority for fostering responsible and globally aware citizens. English language classes offer a unique platform for incorporating SDG-related content due to the global nature of the language and its role as a medium of international communication. Traditional approaches to language teaching often focus on grammar and vocabulary acquisition, whereas modern methodologies emphasize the development of communicative competence, critical thinking, and real-life application of knowledge. In this context, the use of SDG portfolios emerges as an effective strategy to combine language learning with meaningful content. An SDG portfolio is a structured collection of students' work that reflects their understanding of sustainable development issues through various language-based tasks, such as essays, presentations, projects, and reflective journals. This approach encourages learners to explore global topics, express their ideas in English, and develop a deeper awareness of social and environmental issues. Moreover, it promotes learner autonomy, creativity, and continuous self-assessment.

Materials and Methods

This study employed a mixed-methods approach to investigate the implementation of Sustainable Development Goals (SDG) portfolios in English language classes. The research was conducted in two secondary schools and one higher education institution, with a total of 90 students aged 15–22 participating. The participants were selected using purposive sampling to include learners with varying levels of English proficiency. Data collection methods included: Portfolio Tasks: Students completed SDG-based portfolios containing essays, presentations, project reports, and reflective journals. Each task required learners to investigate specific SDGs, analyze global challenges, and propose solutions while using English as the medium of communication. Questionnaires and Surveys: Pre- and post-implementation surveys assessed students' perceptions of their language skills, critical thinking abilities, and awareness of global sustainability issues. Interviews and Focus Groups: Semi-structured interviews were conducted with students and teachers to explore their experiences with portfolio implementation, challenges encountered, and observed outcomes. Classroom Observations: Teachers' interactions and student engagement were observed to evaluate the effectiveness of SDG-related activities in promoting communicative competence and learner motivation. The data were analyzed using both quantitative and qualitative techniques. Descriptive statistics and paired-sample t-tests were applied to the survey results to measure changes in students' attitudes and skills. Thematic analysis was conducted on interview transcripts, portfolio contents, and classroom observation notes to identify patterns, emerging themes, and best practices for SDG integration.

Results

The implementation of SDG portfolios produced notable improvements in both language proficiency and global awareness among students. Key findings include: Language Skills Development: Students demonstrated significant improvements in writing, speaking, and vocabulary related to sustainability topics. Pre- and post-tests showed a 22% increase in average writing scores and a 19% increase in speaking confidence. Critical Thinking and Problem-Solving: Engagement with real-world SDG issues enhanced students' analytical skills. More than 75% of participants were able to identify sustainability challenges, propose solutions, and justify their ideas in English. Global Competence and Awareness: Students reported increased awareness of global social, environmental, and economic issues. Reflective journals indicated heightened empathy, ethical reasoning, and interest in participating in sustainability initiatives. Motivation and Engagement: Classroom observations and interviews revealed higher student motivation, participation in group discussions, and enthusiasm for collaborative projects. SDG portfolios were particularly effective in promoting active learning and student-centered pedagogy. Qualitative analysis highlighted that portfolios fostered creativity and personal expression. Students were able to connect English learning with meaningful content, which strengthened both linguistic competence and social consciousness.

Discussion

The results confirm that integrating SDG portfolios into English language classes is an effective strategy for promoting holistic education. By combining language learning with global issues, students develop not only communicative competence but also critical thinking, intercultural awareness, and social responsibility. One key insight is that SDG portfolios support learner autonomy. Students are encouraged to conduct research, select appropriate materials, and reflect on their learning process, which enhances engagement and ownership of knowledge. The portfolios also serve as a continuous assessment tool, enabling teachers to monitor progress in both language skills and global competence. Moreover, this approach aligns with modern pedagogical theories emphasizing content-based instruction, task-based learning, and experiential education. Integrating real-world issues into English classes bridges the gap between theoretical knowledge and practical application, preparing students for global citizenship. Challenges encountered included initial difficulties in sourcing appropriate English-language materials related to SDGs and varying levels of student familiarity with sustainability concepts. However, guided scaffolding and teacher support mitigated these challenges, ensuring that portfolios remained accessible and meaningful to all learners.

Conclusion

In conclusion, the integration of Sustainable Development Goals (SDG) portfolios in English language classes proves to be a highly effective pedagogical strategy. The study demonstrates that SDG portfolios enhance students' language proficiency, critical thinking, intercultural awareness, and engagement with global issues. By connecting English language learning with real-world sustainability challenges, learners develop not only linguistic competence but also social responsibility and reflective thinking. The findings indicate that portfolio-based learning promotes student autonomy, motivation, and creativity. It encourages learners to explore, analyze, and communicate complex topics in English, fostering a deeper understanding of both language and sustainable development. Furthermore, the portfolios serve as both a formative and summative assessment tool, providing continuous feedback for students and enabling teachers to track their progress effectively. Despite some initial challenges related to resource availability and varying student familiarity with SDGs, the implementation of portfolios, combined with teacher guidance and scaffolding, led to measurable improvements in learning outcomes. The study emphasizes the potential of SDG-oriented tasks to transform traditional English classes into platforms for holistic education, preparing students to become responsible global citizens.

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O‘YIN -BOLA FAOLYATIDAGI MOHIYATI VA O‘ZIGA XOSLIGI

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Annotatsiya

O‘yin – bolaning tabiiy ehtiyojlaridan biri bo‘lib, u nafaqat vaqt o‘tkazish uchun vosita, balki ta’lim olish va shaxsiy rivojlanishning asosiy omillaridan biri hisoblanadi. O‘yin orqali bola atrof-muhitni o‘rganadi, yangi bilimlarni o‘zlashtiradi, muloqot qilish ko‘nikmalarini shakllantiradi hamda mustaqil fikrlashni o‘rganadi. Pedagogik yondashuvlarga ko‘ra, bolalar uchun bilim berish jarayoni imkon qadar erkin va qiziqarli shaklda tashkil etilishi lozim. Shu sababli o‘yin metodlari ta’lim jarayonida muhim didaktik vosita sifatida keng qo‘llaniladi.

Kalit so‘zlar: Didaktik o‘yinlar, “men”konsepsiyasi, faolyat, mustaqillik, dunyoqarash, qobilyat

Kirish

O‘yinning didaktik maqsadi – bilimlar doirasi, bilish faoliyati, amaliy faoliyatda bilim, malaka, ko‘nikmalarni qo‘llash, mehnat ko‘nikmalarini rivojlantirishni kengaytirishga qaratilgan bo‘ladi.

O‘yinning tarbiyaviy maqsadi - mustaqillik, irodani tarbiyalash, ma'naviy estetik va dunyoqarashini shakllantirishda hamkorlikni, jamoaga kirib keta olishni, birdamlikni tarbiyalashga qaratilgan bo'ladi.

Faoliyatni rivojlantiruvchi maqsadi - diqqat, xotira, nutq, tafakkur, qiyoslash malakasi, solishtirish, o‘xshashni topish, xayol, ijodiy qobiliyat, mashg‘ulot faoliyatini samaradorligini oshirish uchun xizmat qiladi.

Ijtimoiylashuv maqsadi – jamiyatning me'yorlari va qadriyatlariga jalb qilinishi, ehtirolarni nazorat qilish, o'z-o'zini boshqarish va muloqatga o'rgatishni nazarda tutadi. (1. “O‘ZBEKISTONDA ILM-FANNING RIVOJLANISH ISTIQBOLLARI” xalqaro ilmiy-amaliy anjumani 2022 yil 30 noyabr | scientists.uz. Nigora Safarova, filologiya fanlari nomzodi, dotsent Gulshan Abdullayeva BuDUPI 2-kurs magistranti <https://doi.org/10.5281/zenodo.7337905>)

Bolalik insonning eng muhim taraqqiyot bosqichlaridan biri bo'lib, aynan shu davrda bola tafakkuri, xulq-atvori, bilish qobiliyatlari va ijtimoiy hayotga bo'lgan munosabati shakllanadi. Pedagogik tadqiqotlar shuni ko'rsatadiki, bolalarning o'rganish jarayoni qanchalik tabiiy va qiziqarli bo'lsa, ularning bilimlarni o'zlashtirish darajasi shunchalik yuqori bo'ladi. Shu sababli, maktabgacha ta'lim va boshlang'ich ta'lim jarayonida o'yin metodlari muhim o'rin tutadi. O'yin metodining ta'lim jarayonidagi o'rni pedagoglar tomonidan uzoq yillardan buyon o'rganib kelinadi. Bola o'yin davomida dunyoni kashf etadi, ijtimoiy muhitni tushunib yetadi hamda real hayotga tayyorgarlik ko'radi. O'yin bolaning rivojlanishiga quyidagi yo'nalishlarda ta'sir ko'rsatadi.(2. European science international conference: STUDYING THE PROGRESS OF SCIENCE AND ITS SHORTCOMINGS. Sobirova Nargiza Esanovna Quvasoy pedagogika kolleji maxsus fan o'qituvchisi).

O'yin bu shunchaki, vaqt o'tkazish uchun emas balki, o'yin orqali bolaga biz ta'lim, tarbiya, madaniyat, ma'naviyat va qadriyatlarmizni o'ragatish hisoblanadi. O'yin jarayonida bola hayoliy vaziyatlar yaratish orqali real hayotda hali bilmagan narsalarini, ishlarini harakatlar orqali amalga oshiradi va bu uning shaxsiy "men"ni shakllanishiga yordam beradi. Bolalik davrida ushbu faolyat bolaning yangi bilim o'rganishiga, balki yangi muhitga moslashish uchun zamin yaratadi.

O'yin jarayonida bola tashqi dunyoni, balki o'zining his-tuyg'ularini, qo'rquvlarini va orzularini ham ifoda etadi, bu esa tarbiyachi uchun bolaning ichki dunyosini tushunishda eng samarali diagnostik vosita bo'lib xizmat qiladi.

Pedagogik nuqtai nazardan o'yin faoliyati bolaning quyidagi jihatlariga ijobiy ta'sir ko'rsatadi:

aqliy (fikrlash,
tafakkur, diqqat, xotira, tasavvur);
ijtimoiy (hamkorlik, muloqot, o'zaro yordam);
jismoniy (harakat koordinatsiyasi, reflekslar);
hissiy (his-tuyg'ularni ifodalash, o'zini boshqarish).

Shunday qilib, o'yin faoliyati bolani har tomonlama rivojlantirish uchun eng tabiiy va samarali pedagogik vositadir. Ta'limiy o'yinlarning turlari va ularning vazifalari.

Ta'limiy o'yinlar maqsadiga ko'ra bir nechta turlarga ajratiladi:

1. Didaktik o'yinlar—bu o'quv materiallarini o'yin shaklida o'zlashtirishga xizmat qiladi (masalan, "Rangni top", "Shaklni tanla", "So'zni davom ettir").
2. Rolli o'yinlar—bolalar hayotdagi turli kasblar va rollarni o'ynash orqali ijtimoiy tajriba orttiradilar ("Shifokor va bemor", "Do'konchi va xaridor").

3. Harakatli o'yinlar–jismoniy rivojlanish, muvofiqlashtirish va tezkorlikni oshiradi (“Kim tezroq?”, “Qo'lni top”).

4. Stol o'yinlari va konstruktorlik o'yinlari–tafakkur, muammoli fikrlash va ijodkorlikni rivojlantiradi (“Pazl yig'amiz”, “Konstruktor yasaymiz”).

5. Axborot texnologiyalariga asoslangan o'yinlar–raqamli platformalar, interaktiv doskalar orqali o'tkaziladigan o'yinlar bo'lib, zamonaviy o'quv jarayoniga moslashgan.(3. Ustozlar uchun, pedagoglar.org. Texnologiya menejment kommunikatsiya instituti« Pedagogika va psixologiya» kafedraasi o'qituvchisi Eshmamatova SitoraTuyg'un qiziMTS 23-102-gurux talabasi Olimjonova Robiya Alisher qizi).

Ko'plab olimlar didaktik o'yinlarni ta'limiy maqsadga yo'naltirilgan, bolalarning bilish faoliyatini faollashtiruvchi va intellektual rivojlanishini ta'minlovchi o'yin shakli sifatida talqin etadilar. Xususan, maktabgacha yosh davrida o'yin yetakchi faoliyat turi bo'lib, aynan shu faoliyat orqali bolalarda atrof-muhit haqidagi dastlabki tasavvurlar, tushunchalar va bilimlar shakllanadi. Ilmiy manbalarda didaktik o'yinlarning mohiyati o'yin va ta'lim uyg'unligida namoyon bo'lishi ta'kidlanadi. Didaktik o'yinlar oddiy ermak emas, balki aniq pedagogik vazifalarni hal etishga qaratilgan bo'lib, ular orqali bolalarda fikrlash, tahlil qilish, solishtirish, umumlashtirish va xulosa chiqarish kabi intellektual-anglash malakalari rivojlantiriladi. Tadqiqotchilar fikricha, didaktik o'yinlar bolalar uchun qiziqarli shaklda tashkil etilgani sababli, bilimlarni o'zlashtirish jarayoni majburiylikdan holibo'ladi va tabiiy ravishda kechadi.

Vygotskiyning “yaqin rivojlanish zonasi” nazariyasiga tayangan holda tushuntiriladi, ya'ni bola kattalar yoki tengdoshlar ko'magida o'zining mavjud imkoniyatlaridan yuqoriroq darajadagi bilish faoliyatini amalga oshira oladi. Bu holat didaktik o'yinlar orqali tashkil etilgan ta'lim jarayonida ayniqsa yaqqol namoyon bo'ladi, chunki o'yin jarayonida bola mustaqil fikrlashga, muammoni anglashga va uni hal etishga undaladi.(4. TADQIQOTLARjahon ilmiy –metodik jurnali, ISSN:3030-3613).

O'YIN FAOLIYATI HAQIDA OLIMLARNING ILMIY-NAZARIY QARASHLARI

Chet el pedagog olimlaridan P.F.Lesgaft, K.D.Ushinskiy tomonidano'yin nazariyasi ishlab chiqilgan. Ushinskiy bolalar faoliyatida o'yinning mehnat jarayoni asosida paydo bo'lganligini va uni yosh avlodni mehnat faoliyatiga tayyorlashdagi roli, o'yinning bola shaxsini shakllantirishdagi ahamiyatini asoslab berdi. U “bolalar o'yinlari ko'p asrlik tarixga ega. Insonning o'zi tomonidan ishlab chiqilgan qudratli

tarbiyaviy vosita va shuning uchun ham unda inson tabiatining haqiqiy ehtiyoji ifodalangan” -deb ta’kidlaydi.

Maktabgacha yoshdagi bolalarning mehnat faoliyati o’yin bilan chambarchas bog’liqdir. Bu jarayonda bolada muhim bo’lgan kompetensiyalar rivojlanadi: bola nima qilish kerakligini, nima uchun qanday qilish kerakligini tushunish, topshiriqlarni bajarishda diqqat bilan kuzdan kechirib chiqish, shartlarni bajarilishini taxlil qilishni o’rganadi. Bolalar o’yinlari o’zining xilma-xilligi, rang-barangligi bilan ajralib turadi. O’yinlar o’z mazmuni va tashkil etilishi bolalarga ta’sir ko’rsatish darajasi, vositalarining turlari hamda kelib chiqishiga ko’ra xilma-xildir. O’yin doimo hayotni aks ettiradi. Shuning uchun uning mazmunijtimoiy voqelikda o’zgarib turadi. O’yin maqsadga qaratilgan o’ylangan jarayondir. O’yin jarayoni asosida o’quv faoliyati rivojlanadi. Bola yoshligida qancha ko’p o’ynasa atrof-olam haqida shuncha tushunchalarga ega bo’ladi, o’yin jarayonida bolada dastlabki kompetensiyalar rivojlanadi.(5. Turapova Ra’no Barat qiziTermiz davlat universiteti 2-kurs magistranti, Termiz, O’zbekistone-mail:turapova@terdupi.uz).

Foydalanilgan adabiyotlar

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**O'QUVCHILARNING ROBOTOTEXNIKAGA OID
KOMPETENSIYALARINI SHAKLLANTIRISHDA FORMATIV
BAHOLASHNING ROLI**

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Texnologik ta'lim yo'nalishi 2-bosqich talabasi

Annotatsiya

Mazkur maqolada o'quvchilarning robototexnikaga oid kompetensiyalarini shakllantirishda **formativ baholashning pedagogik, metodik va psixologik ahamiyati** ilmiy jihatdan tahlil qilinadi. Robototexnika ta'limi bugungi kunda faqat texnik qurilmani yig'ish yoki dasturlash bilan cheklanmay, o'quvchilarda algoritmik fikrlash, muhandislik tafakkuri, ijodiy yondashuv, muammoli vaziyatni tahlil qilish, jamoada ishlash va o'z faoliyatini baholash kabi muhim kompetensiyalarni rivojlantiruvchi integrativ ta'lim yo'nalishi sifatida qaralmoqda. Shu bois robototexnika mashg'ulotlarida faqat yakuniy natijani baholash yetarli emas; o'quvchining o'rganish jarayoni, xatoni aniqlash usuli, yechim izlash faoliyati, tajriba asosida qaror qabul qilishi va texnik loyihani takomillashtirish ko'nikmalari ham baholanishi zarur. Maqolada formativ baholashning robototexnika darslaridagi diagnostik, yo'naltiruvchi, tuzatuvchi va rivojlantiruvchi vazifalari yoritiladi. Shuningdek, xalqaro baholash natijalari, STEM ta'limi, zamonaviy texnologik kompetensiyalar va o'quvchilarning amaliy faoliyatini baholash mezonlari asosida formativ baholashning samaradorligi asoslab beriladi.

Kalit so'zlar: robototexnika, formativ baholash, STEM ta'limi, texnologik kompetensiya, algoritmik fikrlash, muhandislik tafakkuri, refleksiya, loyiha asosida o'qitish, baholash mezonlari.

KIRISH

Zamonaviy ta'lim tizimida o'quvchining faqat tayyor bilimni egallashi yetarli emas. Bugungi maktab o'quvchisi axborotni izlash, tahlil qilish, texnologik vositalardan maqsadli foydalanish, muammoga ijodiy yondashish va amaliy yechim ishlab chiqish kompetensiyalariga ega bo'lishi kerak. Ayniqsa, raqamli transformatsiya, sun'iy intellekt, avtomatlashtirish va robototexnika jadal rivojlanayotgan hozirgi sharoitda

maktab ta'limi o'quvchilarni kelajakdagi kasbiy va ijtimoiy faoliyatga tayyorlaydigan muhim bosqichga aylanmoqda.

Robototexnika ta'limi o'quvchilarning texnik va ijodiy salohiyatini bir vaqtda rivojlantiruvchi muhim yo'nalishdir. Ushbu jarayonda o'quvchi konstruktorlik elementlarini o'rganadi, mexanik qismlarni yig'adi, sensorlar va motorlar ishlashini tushunadi, algoritm tuzadi, dastur yozadi, robot harakatini sinovdan o'tkazadi hamda yuzaga kelgan xatolarni tahlil qiladi. Demak, robototexnika mashg'ulotlari nazariy bilim, amaliy tajriba, texnik tafakkur va refleksiv yondashuvni birlashtiradi.

O'zbekiston ta'lim tizimida ham maktab ta'limini zamonaviy talablar asosida rivojlantirish, o'quvchilarning bilimi va ko'nikmalarini xalqaro standartlarga mos shakllantirish masalasi ustuvor yo'nalishlardan biri sifatida belgilangan. 2022–2026-yillarda maktab ta'limini rivojlantirish bo'yicha milliy dasturda maktab o'quvchilarining bilimi va ko'nikmalarini shakllantirish, darsliklar hamda o'quv-metodik majmualarni zamon talablari asosida takomillashtirish, xalqaro standartlarga javob beradigan ta'lim modellarini yaratish vazifalari belgilangan.

Shu nuqtayi nazardan robototexnika darslarida baholash masalasi alohida ahamiyat kasb etadi. An'anaviy baholash ko'pincha yakuniy natijaga, ya'ni topshiriq bajarilgan yoki bajarilmaganiga asoslanadi. Biroq robototexnika ta'limida faqat yakuniy mahsulotni baholash yetarli emas. Chunki robotning ishlashi yoki ishlamasligi o'quvchining haqiqiy bilim darajasini to'liq ifodalamaydi. Ayrim hollarda robot ishlashi mumkin, ammo o'quvchi uning algoritmini chuqur tushunmagan bo'ladi. Aksincha, robot yakuniy bosqichda to'liq ishlamasligi mumkin, biroq o'quvchi xatoni aniqlash, muammoni tahlil qilish va yechim taklif etish bo'yicha yuqori darajadagi kompetensiyani namoyon qilishi mumkin.

Shu bois robototexnika ta'limida **formativ baholash** alohida metodik ahamiyatga ega. Formativ baholash o'quvchining natijasini emas, balki uning o'rganish jarayonini kuzatadi, tahlil qiladi va keyingi rivojlanish yo'nalishini belgilaydi. Bunday baholash turi o'quvchiga faqat "baho" bermaydi, balki unga "qanday yaxshilash mumkin?" degan savolga javob topishda yordam beradi. Aynan shu jihati bilan formativ baholash robototexnika kabi amaliy, tajribaviy va loyiha asosidagi fanlar uchun eng maqbul baholash mexanizmlaridan biri hisoblanadi.

Adabiyotlar tahlili

Pedagogik adabiyotlarda formativ baholash "assessment for learning", ya'ni "o'rganish uchun baholash" sifatida talqin qilinadi. Bu yondashuvning asosiy mazmuni shundan iboratki, baholash faqat o'quv jarayoni yakunida natijani aniqlash vositasi emas, balki ta'lim jarayonining o'zida o'quvchiga yordam beruvchi, o'qituvchiga esa

o'qitish strategiyasini moslashtirish imkonini beruvchi mexanizmdir. P. Black va D. Wiliam formativ baholashni o'quvchining bilim holatini aniqlash, unga qayta aloqa berish va ta'lim jarayonini takomillashtirishga xizmat qiluvchi vosita sifatida asoslab bergan. Ularning ilmiy qarashlarida formativ baholash o'qituvchi va o'quvchi o'rtasidagi faol muloqot, savol-javob, kuzatish, o'zaro baholash hamda o'zini baholash jarayonlari bilan chambarchas bog'liq ekani ta'kidlanadi.

D. Sadlarning qarashlarida esa formativ baholashning uchta asosiy sharti ajratiladi: o'quvchi sifatli ish mezonini bilishi, o'z ishini shu mezon bilan solishtira olishi va mavjud tafovutni bartaraf etish yo'lini tushunishi kerak. Bu yondashuv robototexnika ta'limi uchun juda muhimdir. Chunki robototexnika loyihasida o'quvchi faqat buyruqni bajaruvchi emas, balki texnik yechimni loyihalovchi, sinovdan o'tkazuvchi va takomillashtiruvchi subyekt sifatida ishtirok etadi.

J. Hattie va H. Timperley tomonidan ishlab chiqilgan qayta aloqa nazariyasiga ko'ra, samarali fikr-mulohaza uchta asosiy savolga javob berishi lozim: maqsad nima, o'quvchi hozir qaysi darajada turibdi va keyingi qadam qanday bo'lishi kerak. Robototexnika darslarida bu yondashuv o'quvchining texnik muammoni aniqlashi, algoritmi qayta ko'rib chiqishi, mexanik yoki dasturiy xatoni tuzatishi hamda loyihani takomillashtirishida amaliy ahamiyat kasb etadi.

Xalqaro tajribalar ham texnologik kompetensiyalarni rivojlantirish zarurligini ko'rsatmoqda. Jahon iqtisodiy forumi 2025-yilgi hisobotida sun'iy intellekt, katta ma'lumotlar, tarmoqlar va kiberxavfsizlik hamda texnologik savodxonlik eng tez o'sib borayotgan ko'nikmalar qatorida keltirilgan. Bu esa maktab ta'limida robototexnika, dasturlash va STEM yo'nalishlarini rivojlantirish zaruratini kuchaytiradi.

OECD PISA 2022 natijalariga ko'ra, O'zbekiston o'quvchilari matematika, o'qish savodxonligi va tabiiy fanlar bo'yicha OECD o'rtacha ko'rsatkichlaridan past natija qayd etgan. OECD Education GPS ma'lumotlarida O'zbekiston 15 yoshli o'quvchilari matematika bo'yicha 364 ball, o'qish savodxonligi bo'yicha 336 ball, tabiiy fanlar bo'yicha 355 ball natija ko'rsatgani qayd etiladi; bu OECD o'rtacha ko'rsatkichlaridan sezilarli pastdir. Mazkur holat maktab ta'limida nazariy bilimni amaliy vaziyatda qo'llash, muammoni tahlil qilish va funksional savodxonlikni rivojlantirishga alohida e'tibor qaratish zarurligini ko'rsatadi.

O'zbek pedagog olimlari tomonidan ham ta'limda innovatsion texnologiyalar, kompetensiyaviy yondashuv, o'quvchi faolligini oshirish va baholash tizimini takomillashtirish masalalari keng yoritilgan. N.N.Azizxo'jayeva pedagogik texnologiyalar va pedagogik mahoratni ta'lim samaradorligini oshirishning muhim sharti sifatida asoslaydi. O'.Tolipov va M.Usmonboyeva pedagogik

texnologiyalarning tatbiqiy asoslarini o'quvchi faoliyatini tashkil etish bilan bog'laydi. R.Ishmuhamedov va M.Yuldashev innovatsion pedagogik texnologiyalarda ta'lim oluvchining mustaqil izlanishi, faolligi va o'z-o'zini baholash madaniyati muhimligini ta'kidlaydi. Ushbu qarashlar robototexnika ta'limida formativ baholashdan foydalanish zaruratini ilmiy-metodik jihatdan qo'llab-quvvatlaydi.

Tadqiqot metodologiyasi

Mazkur maqolada nazariy-tahliliy, qiyosiy-pedagogik va umumlashtirish metodlaridan foydalanildi. Tadqiqotning nazariy asosini formativ baholashga oid xalqaro ilmiy qarashlar, STEM ta'limi bo'yicha yondashuvlar, robototexnika ta'limining kompetensiyaviy imkoniyatlari hamda O'zbekiston ta'lim tizimida maktab o'quvchilarining amaliy ko'nikmalarini rivojlantirishga oid normativ-huquqiy va ilmiy-metodik manbalar tashkil etadi.

Tadqiqotda robototexnikaga oid kompetensiyalarni shakllantirish jarayoni uchta asosiy mezon asosida tahlil qilindi: o'quvchining texnik-konstruktiv faoliyati, algoritmik-dasturiy faoliyati va refleksiv-tahliliy faoliyati. Bunday yondashuv robototexnika ta'limida baholash faqat yakuniy mahsulotga emas, balki o'quvchining fikrlash, izlanish, tajriba o'tkazish va xatoni tuzatish jarayonlariga ham qaratilishi kerakligini asoslash imkonini beradi.

Maqola konseptual xarakterga ega bo'lib, unda formativ baholashning robototexnika darslarida qo'llanishi nazariy jihatdan asoslandi va amaliy mezonlar ishlab chiqildi. Tadqiqotda "natija - jarayon - refleksiya" modeli asosiy tahliliy yondashuv sifatida olindi. Ushbu modelga ko'ra, o'quvchining robototexnika bo'yicha kompetensiyasi faqat tayyor robotning ishlashi bilan emas, balki u qanday loyihalangani, qanday sinovdan o'tkazilgani, xatolar qanday aniqlangani va yakuniy yechim qanday takomillashtirilgani bilan belgilanadi.

Tahlillar shuni ko'rsatadiki, robototexnika ta'limida formativ baholashdan foydalanish o'quvchilarning texnik, algoritmik, ijodiy va refleksiv kompetensiyalarini rivojlantirishda muhim metodik vosita bo'lib xizmat qiladi. Robototexnika mashg'ulotlarida o'quvchi bir vaqtning o'zida mexanik qurilma bilan ishlaydi, dasturiy buyruqlar ketma-ketligini tuzadi, sinov jarayonini kuzatadi, yuzaga kelgan xatoni tahlil qiladi va uni bartaraf etish yo'lini izlaydi. Bu jarayonda baholash faqat dars oxirida amalga oshirilsa, o'quvchining o'rganish dinamikasi, mustaqil fikrlashi va muammoga yondashuvi to'liq aniqlanmaydi.

Muhokama

Robototexnika ta'limida formativ baholashdan foydalanish, bir tomondan, o'quvchining texnik bilimlarini aniqlashga xizmat qilsa, ikkinchi tomondan, uning

shaxsiy rivojlanishi, muammoli vaziyatni hal qilish qobiliyati va mustaqil fikrlashini shakllantirishga yordam beradi. Shu jihatdan formativ baholash robototexnika darslarining tabiiy metodik tarkibiy qismi bo'lishi kerak. Chunki robototexnika mashg'ulotlarida bilim tayyor shaklda berilmaydi; u tajriba, sinov, xato, tahlil va takomillashtirish orqali egallanadi.

Formativ baholashni samarali tashkil etish uchun baholash mezonlari oldindan aniq belgilanishi zarur. Robototexnika mashg'ulotlarida quyidagi mezonlar muhim ahamiyatga ega: konstruktsiyani to'g'ri yig'ish, algoritmi mantiqiy tuzish, dasturiy buyruqlarni vazifaga mos qo'llash, muammoni aniqlash, xatoni tuzatish, guruhda ishlash va o'z faoliyatini tahlil qilish. Ushbu mezonlar o'quvchiga nima uchun baholanayotganini tushunishga yordam beradi. Baholash mezonini noaniq bo'lsa, o'quvchi o'z ishini yaxshilash yo'lini ham tushunmaydi.

Robototexnika darslarida formativ baholashning eng samarali vositalaridan biri rubrika hisoblanadi. Rubrika o'quvchining faoliyatini aniq darajalar bo'yicha baholash imkonini beradi. Masalan, "yuqori daraja"da o'quvchi robot konstruktsiyasini vazifaga mos yig'adi, kodni mustaqil tahlil qiladi va xatoni asoslab tuzatadi. "O'rta daraja"da o'quvchi asosiy vazifani bajaradi, biroq ayrim xatolarni o'qituvchi yordami bilan tuzatadi. "Boshlang'ich daraja"da esa o'quvchi muammoni aniqlashda qiynaladi va faoliyatida tizimlilik yetishmaydi. Bunday rubrikalar o'quvchiga o'z rivojlanish yo'lini ko'rish imkonini beradi.

Formativ baholashda qayta aloqa sifati hal qiluvchi ahamiyatga ega. "Yaxshi", "yomon", "yana urinib ko'r" kabi umumiy fikr-mulohazalar o'quvchiga aniq yordam bermaydi. Samarali fikr-mulohaza aniq, qisqa va bajarilishi mumkin bo'lgan ko'rsatmaga ega bo'lishi kerak. Masalan, "robot burilishda chiziqdan chiqib ketmoqda, sensor qiymatini qayta tekshir va burilish vaqtini kamaytirib sinab ko'r" degan fikr-mulohaza o'quvchiga keyingi harakatni ko'rsatadi. **Formativ baholashning kuchi aynan shunda: u o'quvchini ayblamaydi, balki keyingi qadamni ko'rsatadi.**

Muhim jihatlardan yana biri shundaki, formativ baholash o'quvchilarda texnik fanlarga nisbatan ijobiy munosabatni shakllantiradi. Robototexnika murakkab ko'rinishi mumkin, ayniqsa dasturlash, algoritmi va mexanik tuzilmani birgalikda tushunish ayrim o'quvchilar uchun qiyinchilik tug'diradi. Agar o'quvchi har bir xatosi uchun salbiy baho olsa, unda texnik fanlarga nisbatan qo'rquv paydo bo'lishi mumkin. Formativ baholash esa bosqichma-bosqich rivojlanishni ko'rsatadi, kichik yutuqlarni aniqlaydi va o'quvchiga o'z imkoniyatini his qilishga yordam beradi.

Shu bilan birga, formativ baholashni noto'g'ri qo'llash xavfi ham mavjud. Agar o'qituvchi baholashni faqat ko'p savol berish yoki har bir harakatni nazorat qilish deb

tushunsa, bu o'quvchining mustaqilligini cheklab qo'yishi mumkin. Formativ baholash nazoratni kuchaytirish emas, balki o'quvchini mustaqil rivojlanishga yo'naltirishdir. Shuning uchun o'qituvchi har bir xatoni o'zi tuzatib bermasligi, balki o'quvchini xatoni topishga undashi zarur.

Robototexnika ta'limida formativ baholashning yana bir muhim tomoni - u STEM yondashuvi bilan uyg'unlashadi. STEM ta'limida fan, texnologiya, muhandislik va matematika amaliy vazifalar orqali integratsiyalashadi. Robototexnika ana shu integratsiyaning amaliy ko'rinishidir. Formativ baholash esa bu jarayonni tartibga soladi, o'quvchining qaysi bosqichda qiynalayotganini aniqlaydi va uni keyingi rivojlanish bosqichiga olib chiqadi.

Xulosa

Robototexnika ta'limi o'quvchilarda texnik, algoritmik, konstruktiv, kommunikativ va refleksiv kompetensiyalarni shakllantirish uchun katta pedagogik imkoniyatga ega. Biroq bu imkoniyatdan to'liq foydalanish uchun baholash tizimi ham mazkur ta'lim yo'nalishining mohiyatiga mos bo'lishi kerak. Faqat yakuniy natijani baholash robototexnika ta'limining rivojlantiruvchi imkoniyatlarini cheklaydi. Chunki robototexnika jarayoni tayyor mahsulotdan ko'ra kengroq: unda izlanish, sinov, xato, tahlil, muhokama va takomillashtirish bosqichlari mavjud.

Umuman olganda, **formativ baholash robototexnika ta'limini oddiy texnik mashg'ulotdan chuqur pedagogik jarayonga aylantiradi**. U o'quvchini tayyor javob kutuvchi ijrochidan mustaqil fikrlovchi, tajriba qiluvchi, xato ustida ishlovchi va texnologik yechim yaratuvchi faol subyektga aylantirishga xizmat qiladi. Shu sababli robototexnika darslarida formativ baholashdan tizimli foydalanish o'quvchilarning XXI asr kompetensiyalarini shakllantirishda muhim ilmiy-metodik omil hisoblanadi.

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THE ROLE OF DIGITAL TECHNOLOGIES AND INNOVATIONS IN TOURISM

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Abstract

This article explores the transformative impact of digital technologies and innovations on the tourism industry. It analyzes global best practices in the use of artificial intelligence, big data, virtual and augmented reality, blockchain, and mobile platforms, while evaluating the current state, achievements, and challenges of digital transformation in Uzbekistan's tourism sector. Special focus is given to the digital promotion of major cultural events such as the Bukhara Biennale Festival, the "Sharq Taronalari" International Music Festival, and Silk Road heritage routes. The study is based on international reports, scientific literature, and Uzbekistan's strategic documents, offering practical recommendations for further development.

Keywords: digital technologies, smart tourism, artificial intelligence, virtual reality, Bukhara Biennale, Sharq Taronalari, Silk Road tourism, Uzbekistan digital transformation.

Introduction

President of the Republic of Uzbekistan Shavkat Mirziyoyev, during the video conference on tourism development on October 2, 2019, emphasized: "We must widely introduce digital technologies into the tourism sector, create modern online platforms, and ensure that Uzbekistan becomes one of the leading countries in the field of digital tourism." This strategic vision underlines the critical importance of digital innovation for Uzbekistan's tourism growth.

In the 21st century, digital technologies have fundamentally changed how tourists discover, plan, and experience destinations. This article examines global trends and Uzbekistan's progress, with particular attention to the digital promotion of major cultural events such as the Bukhara Biennale and the "Sharq Taronalari" International Music Festival along the Silk Road.

Leading tourism destinations have successfully leveraged digital technologies to enhance visitor experiences and operational efficiency.

Europe: Barcelona uses IoT sensors and big data to manage tourist flows and protect heritage sites. France's "Visit France" platform employs AI to deliver personalized travel recommendations. Italy has developed immersive VR tours of ancient Roman ruins.

Asia: Singapore's "Smart Nation" initiative offers seamless digital tourism services. China's Ctrip platform utilizes big data and machine learning to serve millions of users with highly personalized itineraries. South Korea excels in AI-powered chatbots and real-time translation services.

Middle East: Dubai heavily invests in VR and AR technologies, enabling tourists to explore attractions virtually. Abu Dhabi uses blockchain for secure and transparent ticketing systems.

These examples demonstrate that digital innovation significantly increases tourist satisfaction, optimizes resource management, and supports sustainable tourism development.

Uzbekistan has made steady progress in digitalizing its tourism industry. The official portal Uzbekistan.travel, the e-visa system, and partnerships with international platforms like Booking.com and TripAdvisor have greatly improved accessibility. QR codes at historical monuments and mobile applications for key destinations have also been introduced. A notable development is the digital promotion of major cultural festivals. The Bukhara Biennale Festival, which showcases contemporary art, traditional crafts, and modern interpretations of Silk Road heritage, has gained international attention through digital campaigns, virtual exhibitions, and live streaming. Similarly, the "Sharq Taronalari" (Eastern Melodies) International Music Festival in Samarkand has successfully used digital platforms to broadcast performances to a global audience, attracting music lovers and cultural tourists worldwide.

Silk Road pilgrimage routes and heritage sites are also being actively digitized. Virtual tours of Bukhara, Samarkand, and Khiva allow remote visitors to explore these ancient cities, significantly expanding Uzbekistan's reach in the global tourism market. However, compared to leading countries, Uzbekistan still lags in several key areas:

- Limited application of artificial intelligence for personalized travel recommendations;
- Insufficient use of big data analytics for tourist flow management;
- Underdeveloped VR/AR content for major cultural heritage sites and festivals;
- Weak integration of digital payment systems in remote regions.

Despite notable progress, Uzbekistan still faces several significant challenges in implementing digital innovations in the tourism sector. One of the primary obstacles is the insufficient development of high-speed digital infrastructure, particularly in remote and mountainous tourist destinations, which limits the effective use of modern technologies. Another critical issue is the acute shortage of highly qualified specialists in digital tourism, data analytics, and smart technologies. Additionally, the low level of digital literacy among small tourism businesses and local service providers hinders the widespread adoption of digital tools. Concerns regarding data security and the protection of tourists' personal information also remain a serious barrier. Finally, the high cost of advanced technologies makes it difficult for small and medium-sized tourism enterprises to invest in digital solutions, slowing down the overall pace of digital transformation in the sector.

Uzbekistan has strong potential to become a regional leader in digital tourism. The following strategic recommendations are proposed:

1. Develop a unified **National Digital Tourism Platform** integrating all services, including festival ticketing and virtual tours.
2. Create high-quality VR and AR experiences for the Bukhara Biennale, "Sharq Taronalari" Festival, and major Silk Road heritage sites.
3. Introduce AI-powered personalized travel planning systems that recommend festivals and cultural events.
4. Expand big data analytics for better management of tourist flows during major events.
5. Strengthen public-private partnerships to accelerate digital infrastructure development.
6. Launch training programs to improve digital skills among tourism personnel and festival organizers.
7. Integrate blockchain technology for transparent and secure ticketing and transactions during international festivals.

Conclusion

Digital technologies and innovations are revolutionizing the global tourism industry. While many countries have achieved significant success, Uzbekistan is making important strides, particularly in the digital promotion of cultural festivals such as the Bukhara Biennale and "Sharq Taronalari," as well as Silk Road heritage routes. As President Shavkat Mirziyoyev noted, the successful digitalization of tourism will not only increase foreign exchange earnings but also contribute to the comprehensive development of all regions. By effectively combining its rich cultural heritage with

modern digital solutions, Uzbekistan can strengthen its position as a leading cultural and tourism destination along the revived Silk Road.

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THEORETICAL APPROACHES TO VOCABULARY TEACHING IN FOREIGN LANGUAGE EDUCATION

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Annotation: This article examines the theoretical approaches to vocabulary teaching in foreign language education and highlights their role in the development of communicative competence. The study analyzes major linguistic and pedagogical theories related to vocabulary acquisition, including behaviorist, cognitive, communicative, and constructivist approaches. Special attention is paid to the effectiveness of contextual learning, lexical competence formation, and the integration of modern interactive methods in vocabulary instruction. The article also discusses the importance of vocabulary in improving learners' speaking, reading, listening, and writing skills. The research emphasizes that successful vocabulary teaching requires a combination of theoretical knowledge, practical application, and learner-centered strategies in modern language classrooms.

Keywords: vocabulary teaching, foreign language education, lexical competence, communicative approach, cognitive theory, language acquisition, vocabulary acquisition, interactive methods, contextual learning, language skills.

Аннотация: В данной статье рассматриваются теоретические подходы к обучению лексике в процессе изучения иностранных языков и их значение в развитии коммуникативной компетенции. Анализируются основные лингвистические и педагогические теории, связанные с усвоением словарного запаса, включая бихевиористский, когнитивный, коммуникативный и конструктивистский подходы. Особое внимание уделяется эффективности контекстного обучения, формированию лексической компетенции и использованию современных интерактивных методов при обучении лексике. Также подчеркивается роль словарного запаса в развитии навыков говорения, чтения, аудирования и письма. Исследование показывает, что успешное обучение лексике требует сочетания теоретических знаний, практического применения и личностно-ориентированных стратегий обучения.

Ключевые слова: обучение лексике, иностранный язык, лексическая компетенция, коммуникативный подход, когнитивная теория, усвоение языка, словарный запас, интерактивные методы, контекстное обучение, языковые навыки.

Annotatsiya: Ushbu maqolada xorijiy tillarni o'qitishda lug'at boyligini o'rgatishning nazariy yondashuvlari hamda ularning kommunikativ kompetensiyani rivojlantirishdagi o'rni tahlil qilinadi. Tadqiqot davomida lug'atni o'zlashtirish bilan bog'liq asosiy lingvistik va pedagogik nazariyalar, jumladan, bixevioristik, kognitiv, kommunikativ va konstruktivistik yondashuvlar o'rganildi. Shuningdek, kontekst asosida o'qitish, leksik kompetensiyani shakllantirish hamda zamonaviy interaktiv metodlardan foydalanishning samaradorligi yoritildi. Maqolada lug'at boyligining tinglab tushunish, o'qish, yozish va gapirish ko'nikmalarini rivojlantirishdagi ahamiyati ham ko'rsatib berilgan. Tadqiqot natijalari samarali lug'at o'qitish nazariy bilimlar, amaliy faoliyat va talaba markazli strategiyalar uyg'unligiga asoslanishini tasdiqlaydi.

Kalit so'zlar: lug'at o'qitish, xorijiy til ta'limi, leksik kompetensiya, kommunikativ yondashuv, kognitiv nazariya, til o'zlashtirish, lug'at boyligi, interaktiv metodlar, kontekstual o'qitish, til ko'nikmalari.

Introduction

Vocabulary is considered one of the most essential components of foreign language learning because it forms the basis of communication and language comprehension. Without sufficient vocabulary knowledge, learners experience difficulties in expressing their ideas, understanding spoken discourse, reading academic texts, and participating effectively in communicative situations. For this reason, vocabulary teaching has become one of the central issues in modern linguistics and language pedagogy. In recent decades, researchers and educators have paid increasing attention to the theoretical foundations of vocabulary instruction. Different linguistic and pedagogical approaches have attempted to explain how vocabulary is acquired, stored, and used by learners in foreign language environments. Early behaviorist theories emphasized repetition, memorization, and habit formation in vocabulary learning, whereas cognitive theories focused on mental processes such as perception, memory, and information processing. Later, communicative and constructivist approaches highlighted the importance of meaningful interaction, contextual learning, and learner autonomy in vocabulary acquisition. The growing significance of English and other foreign languages in global communication, education, science, and technology has further increased the need for effective vocabulary teaching strategies. Modern

educational systems aim not only to teach isolated words but also to develop learners' lexical competence, communicative ability, and intercultural understanding.

Main body

Vocabulary teaching has always occupied a central place in foreign language methodology because lexical knowledge directly influences learners' communicative performance. Throughout the development of language pedagogy, scholars have proposed different theoretical approaches to explain how vocabulary should be taught and acquired. These approaches reflect changes in linguistic theories, educational psychology, and classroom practices. One of the earliest approaches to vocabulary teaching is the behaviorist approach, which became popular in the middle of the twentieth century. According to behaviorist theory, language learning is based on stimulus, response, and reinforcement. Vocabulary acquisition occurs through repetition, imitation, memorization, and constant practice. Teachers using this approach often rely on drills, substitution exercises, and mechanical repetition of words and phrases. Although this method may help learners memorize vocabulary items quickly, critics argue that it does not always promote deep understanding or communicative use of words in real-life situations. In contrast, the cognitive approach emphasizes the mental processes involved in vocabulary learning. Cognitive theorists believe that learners actively process, organize, and store lexical information in their memory. Vocabulary acquisition is viewed as a meaningful and conscious activity rather than a mechanical habit. Within this framework, learners are encouraged to connect new words with prior knowledge, semantic associations, and contextual meanings. Techniques such as categorization, semantic mapping, mnemonic strategies, and contextual guessing are widely used in cognitive vocabulary instruction. This approach contributes to long-term retention and helps learners understand the conceptual relationships between words. Another influential theory is the communicative approach, which focuses on the practical use of language for communication. Communicative language teaching considers vocabulary not as isolated units but as functional elements used in authentic interaction. Learners acquire vocabulary more effectively when they participate in discussions, role plays, dialogues, group activities, and problem-solving tasks. In this approach, meaning and fluency are prioritized over rote memorization. Authentic materials such as newspapers, videos, songs, podcasts, and real-life conversations play an important role in exposing learners to natural lexical usage. The communicative approach also supports incidental vocabulary learning, where learners acquire new lexical items unconsciously through meaningful exposure to language. Constructivist theory has also contributed

significantly to modern vocabulary teaching practices. Constructivists argue that learners construct knowledge through active participation and social interaction. Vocabulary learning becomes more effective when students engage in collaborative tasks, projects, and experiential activities. Teachers act as facilitators who guide learners in discovering word meanings independently. This learner-centered perspective encourages critical thinking, creativity, and autonomous learning. Digital technologies and online educational platforms further support constructivist vocabulary instruction by providing interactive exercises, visual aids, and personalized learning opportunities. An important concept in vocabulary teaching is lexical competence, which refers to the ability to understand and use vocabulary appropriately in different communicative contexts. Lexical competence includes knowledge of word meanings, pronunciation, spelling, collocations, idiomatic expressions, word formation, and stylistic usage. Teachers are encouraged to adapt methods according to learners' age, proficiency level, learning style, and educational objectives. Such flexibility allows vocabulary teaching to become more dynamic, learner-centered, and communicatively effective.

Conclusion

Vocabulary teaching remains one of the most significant aspects of foreign language education because lexical knowledge serves as the foundation of effective communication. The analysis of theoretical approaches demonstrates that vocabulary acquisition is a complex and multidimensional process influenced by linguistic, cognitive, psychological, and social factors. Different approaches contribute unique perspectives to understanding how learners acquire, retain, and use vocabulary in communicative situations. The use of authentic materials, digital technologies, multimedia resources, and collaborative tasks creates more dynamic and learner-centered educational environments. Furthermore, vocabulary teaching should address not only individual words but also collocations, idiomatic expressions, semantic relations, and cultural meanings to ensure deeper language comprehension. In conclusion, theoretical approaches to vocabulary teaching provide valuable methodological foundations for improving the quality of foreign language education. A comprehensive understanding of these approaches enables teachers to select effective instructional strategies that correspond to learners' needs and educational contexts. As globalization and intercultural communication continue to expand, the role of vocabulary teaching in developing communicative competence and successful language acquisition will become even more important in modern education systems.

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USE OF SUSTAINABLE INNOVATION METHODS IN FIGHTING AGAINST THE INFLUENCE OF “MASSIVE CULTURE”

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Keywords: National spirituality, morality, “mass culture”, globalization, code of ethics, family upbringing, Eastern spirituality.

Abstract: In today's age of globalization and technology, protecting our youth from the negative effects of “mass culture” is one of the most important tasks facing each of us. These issues have found their theoretical and practical expression at the root of all the reforms being implemented in our country.

As we mobilize all our strength and capabilities so that our people are no less than anyone else in the world, and that our children live stronger, more educated, wiser and, of course, happier than us, the issue of spiritual education is undoubtedly of incomparable importance in this regard. If we lose our vigilance and sensitivity, determination and responsibility in this matter, if we abandon this extremely important matter to our own devices and selfishness, we may lose our spirituality, which is rooted in and nourished by our sacred values, our historical memory, and ultimately stray from the path of universal development to which we aspire. A nation that does not know its history and has forgotten its yesterday has no future. The growing generation is the successor of today's creative work on the path of goodness. We are all responsible for the perfect formation and elevation of the aspects of our national spirituality in the minds of our future generation. In all historical periods, the issue of educating young people, their worldview and self-awareness has been considered an important factor guaranteeing the development, independence, and future of the country. As Abdulla Avloni said, “education is a matter of life or death, salvation or destruction, happiness or disaster for us” [1]. The issue of educating young people is gaining immense importance, especially in today's times, when the globalization process covers all spheres of our lives. The lessons of history have proven to some extent in any era how important the level of education of the younger generation is in the development of society. In this regard, it is worth highlighting the wisdom of the great Uzbek encyclopedist Abu Rayhon Beruni: “Show me the youth, and I will tell you what our country will be like tomorrow.” Today, 64 percent of the population of Uzbekistan is made up of young people under the age of 30. Youth are important subjects of the socio-political, economic, cultural and spiritual renewal of society, playing an important role in influencing the complex processes taking place in society and setting development in motion. Due to independence, the qualitative changes taking place in our society, especially in its cultural, spiritual, and educational spheres, are significantly affecting the consciousness and worldview of young people. Therefore, the spiritual and moral education of the growing younger generation plays a very important role in the development of the country. Raising the spirituality of our youth, instilling in them etiquette, communication, and dress.

Ensuring the harmony of nationality and modernity in order to form the ability to maintain standards in culture is an urgent problem of today. The increasing spread of various manifestations of "mass culture" among young people is mainly manifested in clothing, interests, leisure activities, shallowing of tastes, and attitude to national values. These, in turn, cause vices such as vulgarity and violence, and a careless attitude to national values and social interests. Today, it is observed that cases of imitation are increasing and are becoming more widespread among young people. In this regard, it is not difficult to notice that the moral and spiritual standards of behavior widespread abroad are in a certain sense poisoning the minds of our young people through films, fashion, and various advertisements. As a result, it is becoming more common for young people to spend time playing computer games and watching films of various genres that are shallow in content, rather than reading books. Today, there is no national spirituality that is completely separated from the spirituality of other peoples. "The culture and spirituality of the peoples of Central Asia, being located on the caravan routes connecting the East and the West, enjoyed both Eastern and Western cultures" [2]. The important thing is that our people not only enjoyed Western and Eastern spirituality and absorbed their positive aspects, but also approached them creatively and rose to new heights. This idea can also be confirmed by the example of scientific knowledge, religious beliefs, and masterpieces of art, which are components of spirituality. Reforms aimed at raising a harmonious generation, protecting them from ideological threats, and forming their immunity to foreign ideas are being consistently carried out in preschool educational institutions, general education, secondary specialized, vocational education, and higher education institutions. Of course, the role of the family in the fight against various threats to young people in our country, especially the threat of "mass culture", is extremely important. Increasing cooperation between the family and higher education will allow us to achieve our goals faster and easier. When faced with a difficult problem, a person takes one of three paths. To remain faithful to one's duty, to fight, to solve the problem, to silently abandon, to avoid the problem. At such moments, the devil advocates betrayal. He encourages ingratitude, to avoid fulfilling one's duty and responsibility. Then, situations such as poor-quality teaching, making repairs in one's name, coming to work late and leaving early, violating the terms of the contract one has signed, evading taxes, being beaten on the scale, concealing a crime, borrowing and repaying it late or not at all, submitting false reports, not solving a case that should be solved in the district, abusing one's position, pretending, reporting a sick person as sick and a sick person as healthy may occur. Then, the trust expressed in the areas of mentorship, construction, employment, cooperation, friendship, duty, professional, functional task, and service may not be justified. Such situations create major and minor obstacles to our national progress. People grow up witnessing small acts of loyalty and betrayal from childhood.

For example, a parent promises something to their child and doesn't keep it. They say something on time but don't say it, they come early but come late. They leave on time but don't. They say, "Leave it to someone else" to do what they should have done. "Why did you do that?" you ask, "It's the first time. What did you do? You said it yourself! It's just a little. It passes. Everyone does it. No one noticed," they say, "They just excuse themselves." These are the milder, in other words, "excusable" manifestations of betrayal, symptoms, and signals. In such an environment, irresponsibility, going under the heavy and over the light are not considered a crime. Betrayal is not an innate defect, it is the product of poor upbringing. The result of parents and teachers not accustoming children to unity

of word and deed, responsibility, and loyalty in a timely manner. What should be done? Again, again, and again, spirituality, again, education. We must ensure that each child has a level of loyalty to the Motherland that is age-appropriate. In matters of upbringing, the heart and language of fathers and mothers should be the same. Sometimes the father says “no,” and the mother says “yes.” The child is surprised to see that there can be two different solutions to the same problem. Fathers often offer pleasure with hard work, and mothers - pleasure without hard work. What if a child achieves a goal ten times by working hard, and ten times without working hard? He learns to be cunning. This opens the way to lies, hypocrisy, and pretense. In the work of the writer K. Chukovsky "From Two to Five", it is proven that in most cases, intelligence and alertness, talent and ability, or deceit and cunning in a person are fully formed and manifested in children by the age of 2-6. Loyalty is a test. Loyalty is a sign of a strong character in a person. It is built on a person's understanding of his duty. To fulfill his duty, it requires not to retreat from obstacles and difficulties, not to slip, not to turn back, to overcome them courageously and patiently, to torment himself, not to fall for distracting interests, ease, tricks, no matter how difficult it is, to justify the trust entrusted to him and achieve results, to be steadfast. The basis of upbringing is the family environment. A child grows up imitating what he sees at home. In a family, the father should be noble, broad-minded, calm, thoughtful, and a little political, while the mother should be kind, compassionate, not scolding children unnecessarily, and gentle. Another idea that many people think about.

Today, we need to think more deeply about the “buds of popular culture” that are emerging in the dress, behavior, and relationships of some of our girls, from school and lyceum students to colleges and universities. It is regrettable to note that some children are entering the educational institution in revealing clothes. Indifferently looking at how they dress and what they wear also leads to disrespect for our national values. We all know that they get such dress codes from television, the Internet, and other media, which constantly promote and incite them. The most surprising thing is that while some parents themselves contribute to such dressing, it is also true that some are powerless to prevent this situation. On February 18, 2020, the head of our nation, Shavkat Mirziyoyev, signed a decree “On measures to improve the socio-spiritual environment in society, further support the mahalla institution, and bring the system of working with families and women to a new level”[3].

In order to improve the family and its environment in society and create conditions for young people to grow up as a harmonious generation in a healthy family, the Ministry of "Support to the Neighborhood and Family" was established on the basis of the "Family" Scientific and Practical Research Center and the "Mahalla" Educational, Methodological and Scientific Research Center. Until now, attention to the family and the youth raised in it has been among the issues on the permanent agenda in our country. The Ministry of "Support to the Neighborhood and Family", established as a logical continuation of this attention, clearly confirms that in the process of rapid globalization, the informational family needs to be protected and strengthened as the main link of society, and the future of any state is closely linked to the strength of the family. Today, it is no secret that "mass culture" poses a threat to our country in various ways, under various "noble" guises. Especially when computer games that "force" young people to sit for hours on end promote evil, TV series about women who are desperate to get a DNA test done without knowing who the father of their child is, and the "best advice" given to women and men on the Internet about pleasure invite them to the streets of obscenity and debauchery. The most dangerous aspect of "popular culture" is

that it does not come suddenly. First of all, it teaches and accustoms people to it through very small details and insignificant events. Then, even if our 3-4-year-old child sings as a rapper, we will be careless when our son wears earrings in his ears and our daughter wears torn pants, calling them "modern." Moreover, we rejoice in the modernity of our child. "We offer the following as innovative methods of combating such negative manifestations of popular culture.

1. It is necessary to increase the number of films on our country's TV channels that reflect our nationality. For example, the national film "Shabnam" reflects the dress, speech, and modesty typical of an Uzbek girl and the Uzbek nation. Such films should be increased.
2. Taking into account the use of mobile phones by young people in educational institutions, it is necessary to create mobile applications (games) to sharpen the mind. We propose to develop crossword puzzles related to science.
3. Understanding oneself begins with knowing history. Our national history should be made into a film and shown on TV channels. Because someone will watch it, someone will eat it, and someone will remember it by reading it.

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