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THE ROLE OF EXACT SCIENCES IN THE ERA OF MODERN DEVELOPMENT

REPUBLICAN SCIENTIFIC AND PRACTICAL CONFERENCE

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REPUBLICAN SCIENTIFIC AND PRACTICAL CONFERENCE



Volume: 2 Issue: 6

**“CENTER FOR ADVANCED STUDIES”
MCHJ**

THE ROLE OF EXACT SCIENCES IN THE ERA OF MODERN DEVELOPMENT

*Republican scientific and practical
conference*

June 30, 2024

VOLUME 2 ISSUE 6



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The purpose of the conference The role of exact sciences in the era of modern development is to determine the optimal relationship between fundamental and applied sciences, target distribution and planning of scientific personnel and organizations, pay more attention to the current areas of the era, and apply the achievements of science to practical life more and more effectively. research is carried out on application, orientation of science for the development of human society, determination of the future of objective world development.

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O'QITUVCHILARNING VIRTUAL TEXNOLOGIYALAR SOHASIDAGI INFORMATSION KOMPETENTLILIGINI RIVOJLANTIRISHDA MASOFAVIY TA'LIM IMKONIYATLARI

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Kalit so'zlar: Mutaxassislik fanlar, o'quv jarayon, texnologiya, mutaxassislik, dasturiy ta'lim, metodik ta'minot.

O'qituvchilarning virtual texnologiyalardan xabardorligini oshirish ana shu sohada o'z bilimlari, malakalari va ko'nikmalarini o'zlashtirish jarayonida yuzaga keladi, ular kasbiy vazifalarni samarali hal etish uchun zarur. Mazkur jarayonni o'z-o'zidan emas, balki maqsadga muvofiq ravishda amalga oshirish kerak, deb hisoblaymiz, bunga esa jumladan, malaka oshirish ta'limi tizimida masofaviy o'qitish sharoitida o'qituvchilarning virtual texnologiyalardan xabardorligini oshirishga ko'mak beradigan turli pedagogik shart-sharoitlarni yaratib erishish mumkin.

Falsafiy adabiyotlarda "shart" atamasi predmetni o'rab turgan hodisalarga munosabatini ifodalaydigan kategoriya sifatida ta'riflanadi, u hodisalarsiz mavjud bo'lmaydi". Bundan kelib chiqadiki, shart-sharoitlar o'rganilayotgan obyektning faoliyatini amalga oshiradigan atrof-muhitning xarakteristikasi hisoblanadi. Shunday muhit sifatida u yoki bu darajada ishlashiga va rivojlanishiga ta'sir ko'rsatuvchi holatlarni ko'rsatish mumkin.

Sharoit tushunchasini didaktik maqsadlar uchun ishlatar ekanmiz, u holda "ta'lim faoliyati sharoiti" degan yana bir tushuncha ma'nosiga to'xtalib o'tishimiz lozim. Bu "ushbu sharoitlarda mazkur faoliyat amalga oshadigan holatlar va uning subyektni hayotiy faoliyati holatlari majmui sanaladi. U va boshqalar ham uning muvaffaqiyatli kechishiga ko'maklashuvchi yoki to'sqinlik qiluvchi omillar sifatida qaraladi".

Olib borgan ilmiy-metodik izlanishlarimiz natijasida – ma'lum bir shart-sharoitlar asosida o'qituvchilar yangi holatlarda raqamli va virtual texnologiyalari bo'yicha o'zlariga kerak bo'lgan darajalarga erishishlari mumkin.



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Ushbu tahlilni o'tkazishda biz "sharoit"ni biror narsaga bog'liq bo'lgan holat, biror narsa sodir bo'ladigan vaziyat degan tushunchadan kelib chiqib tahlil qildik.

Hozirgi vaqtda "pedagogika nazariyasida o'quv jarayoni uning tarkibiy elementlari, obyektiv va subyektiv omillari ta'sir qiladigan murakkab tizim sifatida qaraladi. Har qanday didaktik tizimning samaradorlik omillarini to'rtta shartli guruhga bo'lish mumkin:

1. Tahsil oluvchilarning shaxsiy fazilatlari bilan belgilanadigan shartlar;
2. O'qituvchining shaxsiy fazilatlari bilan belgilanadigan shartlar;
3. O'qituvchi va tahsil oluvchilarning o'zaro muloqoti hamda aloqalari bilan bog'liq shartlar;
4. Pedagogik jarayonni tashkil etishning moddiy-texnik shartlari"

"Malaka oshirish ta'lim tizimi masofaviy o'qitish jarayonida o'qituvchining virtual texnologiyalar sohasidagi bilimlarini oshirish turli shartlar bilan belgilanadi. Tadqiqotimizda faqat o'rganilayotgan obyektga ta'sir qiladigan sharoitlarnigina aniqlab oldik.

Shunday qilib, didaktik shartlar masofaviy ta'lim jarayonida o'qituvchining virtual texnologiyalar sohasidagi bilimlarini oshirishga qaratilgan malaka oshirish ta'lim tizimida ta'lim jarayonining o'zaro hamkorlikdagi chora-tadbirlari majmui deb hisoblaymiz". Bu esa o'qituvchining virtual texnologiyalar sohasida ma'lum bir darajaga erishganligini bildiradi.

"Tadqiqotimizning asosiy kategoriyasi mohiyati va mazmunini, yanada aniqroq aytganda "o'qituvchining virtual texnologiyalar sohasidagi salohiyati", pedagogika amaliyotida mavjud muammolarning hozirgi holatini tahlil qilish natijasida, masofaviy o'qitish sharoitida o'qituvchilarning virtual texnologiyalar sohasidagi bilimlarini oshirish samarali bo'lishi mumkin", agarda:

o'qituvchi o'tayotgan predmetning o'ziga xos xususiyatlarini hisobga olgan holda virtual texnologiyalar sohasida kurs tayyorgarligi mazmunini modulli tuzilmada aks ettira olsa;

"masofali o'qitish sharoitida o'qituvchining virtual texnologiyalar bo'yicha bilimlarini oshirishga malaka oshirish ta'limi muassasalari o'qituvchilarini maxsus tayyorgarlikdan o'tkazish amalga oshirilsa;

loyiha texnologiyalari o'qituvchining virtual texnologiyalar sohasidagi bilimlarini oshirish jarayonida faol qo'llanilsa"

masofaviy ta'lim jarayonida o'qituvchining virtual texnologiyalar sohasidagi malakasini oshirish uzluksiz davom ettirilsa.



“Birinci didaktik shart - o‘qituvchi tomonidan o‘tilayotgan predmetning o‘ziga xos xususiyatlarini hisobga olgan holda, kurs tayyorgarligi mazmuni modulli tuzilmasini yaratish”. Ushbu holat bevosita raqamli hamda virtual texnologiyalar sohasidagi bilimlarni yaxshilashga yo‘naltirilgan.

Shu o‘rinda, “mazmun” elementlar va jarayonlarning jamlangani bilan ifodalanadi. “Element va jarayonlar obyektlarning negizini tashkil etadi, ularning shakllari mavjud bo‘lishi, rivojlanishi va o‘rin almashishiga sharoit hozirlaydi”. “Ta’lim mazmuni deganda tahsil oluvchi tomonidan o‘zlashtirishi zarur bo‘lgan va ularning aqliy, ijodiy qobiliyatlarini rivojlantirishga yordam beradigan ilmiy bilimlar hamda ular bilan bog‘liq amaliy ko‘nikmalar tizimi sifatida tushunish kerakligiga e’tibor qaratilgan”.

“Bugungi kunda, pedagogik xodimlarni, virtual texnologiyalar sohasidagi malakasini oshirish mazmunini shakllantirishda, o‘qituvchilarning ehtiyojlarini emas, balki malaka oshirish ta’lim muassasalari imkoniyatlari asos qilib olinadi. Bu esa malaka oshirish mazmunining kasbiy talablarga va pedagoglarning ehtiyojlariga muvofiq kelmasligiga sabab bo‘ladi”.

Pedagog xodimlar malakasini oshirish muammolari bo‘yicha ilmiy-uslubiy adabiyotlarni tahlil qilish hozirgi vaqtda o‘qituvchilar malakasini oshirish tizimi mazmunini tabaqalashtirish va darajali tizimga o‘tishga zarurat paydo bo‘lganidan dalolat beradi. Ta’lim muassasalarining pedagog va rahbar xodimlari malakasini oshirish kurslari mazmuniga quyidagi “talablar qo‘yilgan:

1. Zamonaviy ta’limni rivojlantirishdagi yetakchi yo‘nalishlarni, ta’lim faoliyatining asosiy konsepsiyalari (rivojlantiruvchi ta’lim asoslarini insonparvarlashtirish, demokratlashtirish va shu kabilar), gumanitar va tabiiy fanlar bo‘yicha ilmiy tadqiqot natijalarini, zamonaviy gumanitar, pedagogik texnologiyalar, ta’limda axborot texnologiyalaridan foydalanish shakllari va usullarini qamrab olish.

2. Mazmunning ochiqqligi, ta’lim muassasalari pedagoglari va rahbarlarining axboriy ehtiyojlarini tashxislash va mustaqil baholash asosida ushbu mazmunni tahrirlash imkonini mavjud bo‘lishi.

3. Kurslar mazmunining keyingi mustaqil bilim olish muammolarini aniqlashga yo‘naltirilishi.

4. O‘quv-mavzuviy rejalar va dasturlarning modulli tuzilishi, invariant va variativ modullarning mavjud bo‘lishi.

5. O‘qituvchilarning ta’lim guruhlarini jamlashda tabaqalashtirilgan yondashuvni ta’minlash”.



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Malaka oshirish ta'lim tizimiga qo'yilishi mumkin bo'lgan, yuqoridagi talablarga muvofiq, virtual texnologiyalar sohasidagi o'qituvchilar malakasini oshirish mazmunini modulli tarkiblashtirishni taklif qilamiz. Ular, quv mashg'ulotlarining har bir bosqichida mohiyat maqsadlarni, har bir darsda tahsil oluvchining faoliyat turlarini aniqlashni, nazorat savollari hamda tahsil oluvchilarning o'z-o'zini nazorat qilishi uchun mo'ljallangan masalalari ro'yxatini, o'qituvchi nazoratini o'z ichiga oladi.

Modulli ta'lim masofaviy o'qitishning zarur bo'lagidir, chunki o'qitish mazmuni, metodlari, mustaqillik darajasi, tahsil oluvchilarning o'qish-bilim olish faoliyati sur'ati bo'yicha individuallashtirilgan ta'lim dasturi sifatida gavdalanuvchi modul o'qituvchilarning kurslarga tayyorgarlik samaradorligini oshishiga imkon beradi.

Ayni paytda, "ayrim fanlarni o'qitishda o'qituvchilarning virtual texnologiyalardan foydalanish sohasidagi malakasini oshirish imkoniyatlari ilmiy va pedagogik tadqiqotlarda o'z aksini topmadi. Shu sababli, virtual texnologiyalar sohasida o'qituvchilarning malakasini oshirish dasturlari mazmuni modulli tarkiblashtirishdagi eng muhim islohotlar jiddiy o'zgarishlar asosida amalga oshirilishi lozim. Bundan tashqari, virtual texnologiyalar sohasida o'qituvchilarning malakasini oshirish kurslarini tahlil qilish shuni ko'rsatadiki, bugungi kunda bu kurslarning ko'pchiligi o'qituvchilarning foydalanuvchilik malakalarini shakllantirishga yo'naltirilgan".

Bundan tashqari, malaka oshirish mazmunini modullar shaklida taqdim etish ulardan har qaysi birini masofaviy kursni ishlab chiqish chog'ida asos sifatida olib, bu modullarni o'qituvchilarni masofadan o'qitishda ishlatish imkonini beradi.

Virtual texnologiyalar sohasida o'qituvchilar malakasini oshirish mazmuni ularning nazariy, metodik va amaliy tayyorgarligi jarayonida amalga oshiriladi. Shuning uchun modulli tarkibda uchta muhim blokni ajratamiz: ilmiy-nazariy, uslubiy va amaliy faoliyat.

Nazariy blok, birinchi navbatda, virtual texnologiyalar sohasida o'qituvchilarning undan xabardorligini yaxshilashni nazarda tutadi va o'qituvchilar tomonidan virtual texnologiyalardan foydalangan holda fanni o'tish nazariyasi va metodikasi bo'yicha tahsil oluvchilarni o'qitish, "tarbiyalash va kamol toptirish maqsadida virtual texnologiyalarni qo'llash sohasidagi innovatsion jarayonlar bilan tanishtirishni taqozo etadi



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Virtual texnologiyalar sohasida o'qituvchilarni metodik tayyorgarlikdan o'tkazish "ta'lim va tarbiya tamoyillari, mazmuni, qoidalari, omillari, shakllari va metodlarini bilish"ni o'z ichiga oladi, ta'limni axborotlashtirishning zamonaviy yo'nalishlarini hisobga olgan holda, darslarda pedagogik jarayonni tashkil etishda o'qituvchilarning kasbiy mahorat va malakasini virtual texnologiyalar vositalaridan foydalanib oshirishni nazarda tutadi, xususan":

virtual texnologiyalar vositalarini qo'llash orqali o'quv jarayonini amalga oshirish metodikasi;

virtual texnologiyalar vositalarining o'ziga xos xususiyatlarini, shuningdek, tahsil oluvchilarning tarkibi, yoshi, o'qish darajasi va hokazolarni hisobga olgan holda, fanni o'qitish metodikasini aniqlash;

"o'z kasbiy faoliyatida virtual texnologiyalarni ishlab chiqish va qo'llash ko'nikmasi;

Internetda mavjud bo'lgan, predmet bo'yicha dars jarayonida foydalanish uchun tavsiya etilgan ommaviy axborot resurslari va ta'lim resurslari haqida tushunchaga ega bo'lish, ulardan foydalana olish;

elektron ta'lim mahsulotlarining asosiy pedagogik xususiyatlarini baholay olish", ularni o'quv jarayonida foydalanishning pedagogik maqsadga muvofiqligini aniqlash;

ta'lim muassasasining real jihozlanishiga bog'liq ravishda dars jarayonida virtual texnologiyalardan foydalanishning turli modellarini kasbiy faoliyatda tanlov asosida qo'llay olish.

"O'qituvchilarni amaliy jihatdan tayyorlash nazariy va uslubiy tayyorgarlik jarayonida olingan ko'nikmalarni tahsil oluvchilar bilan ishlash chog'ida amaliyotda rivojlantirishga qaratilgan. Masofaviy ta'lim, o'qitishning allaqaysi boshqa shakli kabi, bevosita malaka oshirish jarayonida ularni kasbiy faoliyatida ishlatishga imkon beradi. Shuning uchun, masofaviy ta'lim jarayonida o'qituvchi quyidagi ko'nikmalarga ega bo'lishi shart:

fanni o'qitish jarayonida tahsil oluvchining bilimlarini tekshirish va baholash metodlaridan foydalanish;

dars o'tishning tashkiliy shakllarini, usullarini va vositalarini maqbul tarzda qo'llash;

turli didaktik texnologiyalari va vositalarini qo'llash orqali fanni o'qitishni amalga oshirish;



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tahsil oluvchilarni o'qitish jarayonida tabaqalashtirish va shaxsiy faoliyat yondashuvlari prinsipini amalga oshirish";

o'quv predmetini virtual texnologiyalar vositalarini tatbiq etish asosida o'qitish chog'ida ijodiy uslubdan foydalanish;

shaxsiy faoliyat natijalarini mustaqil tahlil qilish va baholash;

o'quv-tarbiya, masofaviy ta'lim jarayonida yaratilgan elektron ta'lim mahsulotlarini qo'llash.

o'qituvchilar malakasini oshirishda masofadan o'qitish usulidan foydalanish imkoniyati;

masofaviy ta'lim sharoitida o'quv jarayonini tashkil etish xususiyatlari.

Virtual texnologiyalardan boxabarlikni shakllantirish va oshirish muammosi kontekstida virtual texnologiyalar sohasida malaka oshirish tizimining maqsad va vazifalarini ko'rib chiqar ekanmiz, virtual texnologiyalar vositalarini o'zlashtirish nafaqat pedagogning umumiy kasbiy mahorati tarkibini o'zgartirishga, balki uning komponentlari sifat mazmuniga ham ta'sir ko'rsatishi kerak deb hisoblaymiz. O'qituvchi kasbiy mahoratining asosini tashkil etuvchi barcha amaliy va nazariy bilimlar sifatli o'zgarishi kerak. Modellashtirilayotgan jarayonning maqsadi sifatida biz o'qituvchilarning virtual texnologiyalardan boxabarligini oshirishni belgilab olganmiz sababli yuqorida keltirib o'tilgan ko'nikmalarni umumlashtirgan holda ko'nikmalar tasnifiga muvofiq ularni guruhlariga birlashtirish mumkin

Adabiyotlar:

1. I.R. Kamolov, G.I. Sayfullaeva -Formation of teacher's competence in the performance of laboratory and experimental works Journal of critical reviews. ISSN-2394-5125, 2020
2. С.С.Канатбаев, И.Р.Камалов, Д.И.Камолова, Г.И.Сайфуллаева. "Universum: технические науки". Россия. Декабрь, 2016. №12(33). 38-40 стр.
3. A.R. Sattorov G. I. Sayfullaeva, Methodology of Application of Innovative Educational Technologies from Astronomy to Laboratory Activities 2021/10/29 European Journal of Life Safety and Stability (2660-9630) 125-128
4. O'.K.Sunnatova, G.I.Sayfullaeva. Making a vacuum cleaner using the stem education system in students' laboratory classes. Web of Discoveries: Journal of Analysis and Inventions. 2023. 43-47.
5. Sayfullaeva Gulkhayo Ikhtiyor Kizi, Shodiev Khamza Ruziculovich, Xaitova Shakhnoza G'olibjon Kizi Conditions For The Formation Of Teaching Innovation Activities Journal of Pharmaceutical Negative Results, 2023 2420-2423



6. Ikramboyevna, A. D., & Ikramboyevna, S. D. (2023). The Ways of Forming Secondary Nomination in Uzbek Language and Its Impact on Linguistics.
7. M Muhabbat, B Aziza, GI Sayfullayeva OPPORTUNITIES FOR THE USE OF INNOVATIVE TECHNOLOGIES IN THE ORGANIZATION OF INDEPENDENT EDUCATION IN THE CREDIT-MODULE SYSTEM Web Of Humanities: Journal Of Social Science And Humanitarian Research 1 (8 ...
8. M Muhabbat, B Aziza, GI Sayfullayeva FINAL CONTROL WORK DISTANT. TSUL. UZ DOWNLOAD INSTRUCTION TO THE DISTANCE LEARNING PLATFORM Web Of Teachers: Inderscience Research 1 (8), 82-86
9. M Muhabbat, B Aziza, GI Sayfullayeva THE USE OF INNOVATIVE TECHNOLOGIES IN THE ORGANIZATION OF INDEPENDENT EDUCATION Web Of Technology: Multidimensional Research Journal 1 (8), 9-11
10. M. Muhabbat, B. Aziza, G.I. Sayfullayeva ADVANTAGES OF INDEPENDENT EDUCATION IN THE CREDIT MODULE SYSTEM IN EDUCATION Web Of Discoveries: Journal Of Analysis And Inventions 1 (8), 9-13
11. R. Nilufar, G.I Sayfullayeva Principles Of The Credit-Module System Diversity Research: Journal Of Analysis And Trends 1 (8), 49-52
12. A.M. Bozorova OLIY TA'LIM MUASSASALARIDA ASTRONOMIYA KURSIDAN MASHG'ULOTLARNI O'QITISHDA VA TALABA KOMPETENTLIGINI OSHIRISHDA INTEGRATSIYALASHGAN INNOVATSION TEXNOLOGIYALARINI JORIY ...Journal Of Science-Innovative Research In Uzbekistan 1 (8), 6-11
13. SH. Rozikulovich, S. Gulhayo METHODOLOGY FOR FINDING THE TOPIC OF THE EARTH IN DISTANCE EDUCATION ON THE BASIS OF AN INTEGRATIVE APPROACH Journal Of Academic Research And Trends In Educational Sciences 1 (10), 21-33 2022
14. G.I. Sayfullayeva, H.R. Shodiyev KREDIT MODUL TIZIMIDA FANLARNI INTEGRATSION YONDASHUV ASOSIDA O 'QITISHNING AFZALLIKLARI
15. Ikrambayevna, S. D. (2024). Classification of Functions of Communicative Strategy and Tactics in Political Communication. Miasto Przyszłości, 50, 548-553.
16. Axmedova, D., & Zarmaskhonov, S. (2024, February). EXPLORING GLOBAL PERSPECTIVES IN LANGUAGE TEACHING AND LEARNING. In Conference Proceedings: Fostering Your Research Spirit (pp. 205-207).
17. Bozorova Aziza : Sayfullayeva Gulhayo Ixtiyor qizi ASTRONOMIYADAN STEM DASTURIDAN FOYDALANIB QUYOSH SOATI MAVZUSINI O'QITISH - Yosh tadqiqotchi jurnali, 2022 35-38

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18. M Muhabbat, B Aziza, G.I. Sayfullayeva FINAL CONTROL WORK DISTANT. TSUL. UZ DOWNLOAD INSTRUCTION TO THE DISTANCE LEARNING PLATFORM Web Of Teachers: Inderscience Research 1 (8), 82-86
19. M Muhabbat, B Aziza, G.I. Sayfullayeva Elements Of The Credit-Module System In Higher Education In The Republic Of Uzbekistan Web Of Scientists And Scholars: Journal Of Multidisciplinary Research 1 (8 ...
20. M Muhabbat, B Aziza, G.I. Sayfullayeva OPPORTUNITIES FOR THE USE OF INNOVATIVE TECHNOLOGIES IN THE ORGANIZATION OF INDEPENDENT EDUCATION IN THE CREDIT-MODULE SYSTEM Web Of Humanities: Journal Of Social Science And Humanitarian Research 1 (8 ...





THE IMPACT OF SOCIAL MEDIA ON LANGUAGE AND IDENTITY

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Annotation: *This article examines the influence of social media on language usage and individual identity. In today's interconnected world, social media platforms like Facebook, Twitter, and Instagram have transformed the ways people communicate, creating new linguistic phenomena and shaping personal and group identities. The study explores how social media affects language variation, the emergence of new expressions, and its broader social and cultural impact on identity formation.*

Keywords: *social media, language evolution, identity formation, code-switching, linguistic innovation, terms, creativity.*

Introduction: With over 4.7 billion users globally, social media has become a dominant force in modern communication. Its pervasive nature impacts the way individuals express themselves, both linguistically and culturally. Social media facilitates rapid and widespread communication, enabling users to create content, interact with diverse communities, and experiment with new forms of expression. This dynamic environment fosters changes in both language and identity, which are intertwined with social interactions.

Language Evolution through Social Media:

One of the most significant impacts of social media on language is the rapid evolution of slang, abbreviations, and emoticons. For instance, terms like "LOL," "BRB," and "FOMO" have transcended online spaces and become part of everyday language. These linguistic innovations serve both efficiency and creativity in communication. Additionally, social media platforms encourage code-switching, where users alternate between languages or dialects depending on their audience, thus promoting multilingualism and fluid language use.

The influence of social media has also been evident in the increased informalization of language, blurring the lines between formal and informal writing styles. This can be seen in professional settings, where language once reserved for casual conversations is now acceptable in email or business correspondence. Social media's constant exposure to different dialects and global English varieties also contributes to the diversification of language, facilitating cross-cultural linguistic exchanges.



Impact on Identity Formation:

Social media provides users with the tools to construct, negotiate, and present multiple aspects of their identity. Platforms allow individuals to curate their self-presentation, selecting which aspects of their identity to emphasize. This can be influenced by the linguistic choices they make, such as choosing to post in a specific language or dialect to align with a cultural group or identity.

Furthermore, social media empowers marginalized groups to express their identity, creating communities where shared language and cultural norms are reinforced. For example, hashtags such as #BlackLivesMatter and #MeToo highlight how language and identity intersect in the online sphere, providing a voice for activism and collective identity formation.

Challenges to Language and Identity:

Despite these positive impacts, social media also presents challenges. The rise of “internet speak” and informal writing may erode traditional language norms, particularly in academic and professional settings. Furthermore, online identity construction can lead to issues of authenticity, as users may present an exaggerated or idealized version of themselves, which can affect self-esteem and real-life social interactions.

While social media fosters creativity and connection, it also presents several challenges to language integrity and identity formation.

1. Linguistic Degradation and Informality:

One of the primary concerns is the erosion of formal language skills. The rise of “internet speak” — characterized by abbreviations, emojis, and the use of acronyms — has led to increased informality in written communication. This often results in users, especially younger generations, adopting a more casual tone across various contexts, including academic and professional environments where formal language is typically required. As a result, there is concern that sustained use of informal digital language may undermine traditional literacy standards, affecting spelling, grammar, and sentence structure.

2. Language Homogenization:

Social media promotes the spread of dominant languages, particularly English, which can overshadow minority languages. Platforms often cater primarily to English-speaking audiences, contributing to the erosion of linguistic diversity. This dominance can pressure users to communicate in English rather than their native language, leading to the gradual loss of linguistic richness in marginalized languages.



Over time, this may result in language homogenization, where global platforms push toward a more unified language use, weakening the survival of smaller language communities.

3. Identity Fragmentation and Performance:

The ability to curate and present different versions of oneself online creates opportunities for self-expression, but it can also lead to fragmented identities. Social media allows users to construct multiple online personas, sometimes altering their behavior and language depending on the platform or audience. For example, a person may use formal, professional language on LinkedIn while embracing slang and humor on Instagram or Twitter. This ability to shape multiple identities can create confusion or pressure, especially when individuals feel compelled to meet different expectations set by various online communities.

Conclusion: *Social media has undeniably reshaped the way we use language and express identity. It provides a space for linguistic innovation and the exploration of personal and collective identities, while also posing challenges to traditional norms. As social media continues to evolve, so too will its impact on language and identity, making it an essential area for ongoing study in both linguistics and cultural studies.*

REFERENCES:

1. Bekzodovna, J. M., & Akbarovna, D. G. (2023). *Innovative Methods and Tools in Higher Education. Science and Innovation*, 2(11), 708-715.
2. Jumayeva, M. B., & Usmanovna, S. M. (2022). *Practical Methods of Culture-Based Language Teaching in English Classes. Science and innovation*, 1(Special Issue 2), 612-615.
3. Ikrambayeva, S. D. (2024). *Classification of Functions of Communicative Strategy and Tactics in Political Communication. Miasto Przyszłości*, 50, 548-553.
4. Sattarova, D. (2024). *Siyosiy Muloqotning Pragmatik Aspektlari. Tamaddun Nuri Jurnali*, 5(56), 380-383.
5. Suleymanova, N. M. (2020). *On The Nominative Nature Of The Sentence. Theoretical & Applied Science*, (4), 307-309.
6. Axmedova, D., & Zarmaskhonov, S. (2024, February). *Exploring Global Perspectives In Language Teaching And Learning. In Conference Proceedings: Fostering Your Research Spirit (pp. 205-207).*
7. Bekzodovna, J. M., & Abdullayevna, R. N. *Organization Of Modern Educational Processes In The Education System.*



8. Jumayeva, M. B. (2023). *Classifications of Cardinal Numbers and Ordinal Numbers in English And Uzbek. Ijtimoiy Fanlarda Innovasiya Onlayn Ilmiy Jurnal*, 3(2), 132-134.
9. Mohira, J. (2023). *Problematic Situations That Arise in Learning Foreign Languages and Their Solutions. International Journal of Recently Scientific Researcher's Theory*, 1(2), 414-417.
10. Сулейманова, Н. М., & Абдуллаева, Л. Т. (2017). Имманентный характер синергетических свойств единиц языковой системы. In *ИННОВАЦИИ В СОВРЕМЕННОМ ЯЗЫКОВОМ ОБРАЗОВАНИИ* (pp. 61-65).
11. Ikramboyeva, A. D., & Ikramboyeva, S. D. (2023). *The Ways of Forming Secondary Nomination in Uzbek Language and Its Impact on Linguistics.*
12. Sattarova, D. (2024, January). *Siyosiy Notiqlikning Milliy Madaniy Va Lisoniy Tahlili (O'zbekiston Respublikasi Birinchi Prezidenti Ia Karimov Nutqlari Asosida). In Международная конференция академических наук (Vol. 3, No. 1, pp. 5-7).*
13. Jumayeva, M. B. (2023). *Chet Tillarini O'rganishda Ommaviy Axborot Vositalarining O'rni va Ahamiyati. Boshqaruv va Etika Qoidalari Onlayn Ilmiy Jurnal*, 3(5), 240-242.
14. Makhmudova, G. N., & Gulomova, N. F. (2023). *Unlocking the potential of the digital econ-omy in the EAEU countries: identifying and overcoming obstacles. π-Economy*, 16 (4), 7–25. DOI: <https://doi.org/10.18721/JE,16401>.
15. Сулейманова, Н. М. (2017). *Номинативный аспект речевого процесса. In Humanities and Social Sciences in Europe: Achievements and Perspectives* (pp. 76-82).
16. Sattarova, D. (2023). *Komunikativ Diskursning Tadqiqot Ob'yekti. Молодые ученые*, 1(22), 41-43.



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ТАИНСТВЕННЫЙ МИР ЖЮЛЯ ВЕРНА: ИССЛЕДОВАНИЕ ТВОРЧЕСТВА ВЕЛИКОГО ФАНТАСТА

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Аннотация: Жюль Верн — один из основоположников научной фантастики, чьи произведения продолжают вдохновлять читателей на протяжении более чем века. В его романах гармонично сочетаются приключения, научные открытия и философские размышления о будущем человечества. В статье «Таинственный мир Жюль Верна» раскрываются ключевые темы его творчества, такие как стремление к знаниям, изобретательность, исследование неизведанных территорий и освоение новых технологий. Также рассматривается влияние Верна на науку, культуру и литературу, его пророческие предсказания будущих открытий, а также социально-критические мотивы, которые делают его произведения актуальными и сегодня.

Ключевые слова: Жюль Верн, научная фантастика, приключения, технологии, изобретения, прогресс, подводные лодки, космические полеты, капитан Немо, литература, влияние науки, исследование, социальная критика, предсказания, культура, прогресс человечества.

Key words: Jules Verne, science fiction, adventures, technology, inventions, progress, submarines, space travel, Captain Nemo, literature, influence on science, exploration, social critique, predictions, culture, human progress.

Resume: Jules Verne is one of the founders of science fiction, whose works continue to inspire readers for more than a century. His novels seamlessly blend adventure, scientific discoveries, and philosophical reflections on the future of humanity. The article "The Mysterious World of Jules Verne" explores the key themes of his work, such as the pursuit of knowledge, inventiveness, the exploration of uncharted territories, and the development of new technologies. It also examines Verne's influence on science, culture, and literature, his prophetic predictions of future discoveries, and the socially critical motifs that keep his works relevant today.

1. Введение: Имя Жюль Верна давно стало символом захватывающих приключений и удивительных научных открытий. Его книги, наполненные таинственными экспедициями, путешествиями в неизведанные уголки планеты и космоса, пробуждают воображение читателей уже более века. Жюль Верн — это не просто писатель, он — создатель целого мира, где фантазия сплетается с наукой, а герои преодолевают невозможное. В этой статье мы рассмотрим уникальный мир Жюль Верна, его ключевые произведения и влияние на науку и культуру.



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2. Биография писателя: Жюль Верн родился 8 февраля 1828 года в Нанте, Франция, в семье адвоката. Несмотря на то, что он начал учиться на юриста по настоянию отца, его страсть к литературе и науке быстро взяла верх. Верн рано заинтересовался путешествиями, географией и открытиями, что отразилось на его первых произведениях. Он стремился создать книги, которые бы рассказывали о научных достижениях и открытиях в доступной форме.

3. Роль науки в произведениях Жюль Верна: Одной из главных особенностей творчества Жюль Верна является удивительное сочетание научных фактов и фантазии. В своих романах он описывал технологии, которые в то время казались невероятными, но многие из них позже стали реальностью. Например, подводная лодка в романе «Двадцать тысяч лье под водой» — «Наутилус», созданная капитаном Немо, предвосхитила изобретение современных подводных аппаратов. Верн увлекался наукой и всегда стремился к тому, чтобы его произведения базировались на реальных фактах и предположениях ученых. Благодаря этому его работы можно считать первыми образцами научной фантастики, хотя сам писатель не считал себя фантастом. В произведениях Верна часто поднимались актуальные для того времени научные вопросы: освоение воздушного пространства, изучение океанских глубин, исследования земных недр и даже космические полеты.

4. Ключевые произведения Жюль Верна: 1) «Путешествие к центру Земли» (1864) — одно из первых великих произведений Верна, где он описывает экспедицию к центру нашей планеты. В этой книге писатель исследует не только научные теории о внутреннем строении Земли, но и философские вопросы о месте человека в мире природы. 2) «Двадцать тысяч лье под водой» (1870) — роман о подводных приключениях капитана Немо и его подводной лодки «Наутилус». Это произведение считается одной из вершин творчества Жюль Верна и примером идеального сочетания науки и приключений. Здесь Верн описывает подводные исследования, загадочные океанские глубины и уникальную флору и фауну. 3) «Вокруг света за 80 дней» (1873) — веселая и захватывающая история о том, как Филеас Фогг, английский джентльмен, заключив пари, отправляется в путешествие вокруг света. Этот роман не только подчеркивает значимость технологического прогресса, но и показывает разные культуры и страны, объединяя их в одно захватывающее приключение. 4) «Таинственный остров» (1874) — это произведение продолжает некоторые темы, начатые в «Двадцати тысячах лье под водой». На этот раз Верн



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показывает, как группа людей на необитаемом острове использует науку и технологии, чтобы выжить и построить новую цивилизацию. Этот роман подчеркивает важность знаний и изобретательности. 5) «Из пушки на Луну» (1865) — Верн предсказал освоение космоса задолго до того, как человечество начало свои реальные шаги к звездам. Этот роман рассказывает о смелой попытке отправить человека на Луну при помощи гигантской пушки. Впоследствии он продолжил эту тему в сиквеле «Вокруг Луны» (1870).

5. Темы и мотивы: Мир Жюль Верна богат множеством тем и мотивов. Одной из ключевых является тема человеческой изобретательности и силы духа. Герои его книг — это смелые и решительные люди, которые не боятся неизвестного. Они сталкиваются с непреодолимыми трудностями, но находят способ их преодолеть благодаря своим знаниям, настойчивости и смекалке.

Еще одной важной темой является исследование неизвестного и стремление к открытиям. Верн описывал неизведанные территории, такие как глубины океана, космос, далекие острова и даже центр Земли. Его книги передают страсть к открытиям и жажду познания, которая движет человечеством.

Технологии и наука — еще одна центральная тема в его произведениях. Хотя многие из описанных Верном технологий на момент написания его книг казались фантастическими, они основывались на реальных научных знаниях того времени. Верн верил в прогресс и считал, что с помощью науки человечество может достичь невероятных высот.

Жюль Верн по праву считается одним из отцов-основателей жанра научной фантастики. Его уникальный подход к написанию романов отличался от всех его современников, поскольку он основывал свои произведения на научных теориях и фактах. На момент написания его книг многие из описанных в них технологий и изобретений считались невозможными или фантастическими, но с течением времени они либо стали реальностью, либо оказались правдоподобными с точки зрения современной науки.

Верн исследовал такие темы, как путешествия под водой, в космосе, в воздушном пространстве и в недрах Земли. Для каждого из этих путешествий он создавал детально проработанные технологии, обосновывая их с научной точки зрения. В этом смысле Верн не просто развлекал читателя, но и побуждал к размышлениям о будущем науки и технологий, формируя интерес к инженерии и научным открытиям у своих читателей. Это делает его творчество



уникальным, так как его романы стимулировали развитие научного воображения в эпоху, когда фантастика и наука только начинали сближаться.

6. Пророчества Жюль Верна: Жюль Верн не был учёным, но его глубокий интерес к науке и технике позволил ему предсказать множество будущих изобретений и достижений. Его произведения можно рассматривать как своего рода пророческие видения будущего. Многие технологии, описанные Верном, спустя десятилетия стали реальностью. 1) Подводные лодки. В «Двадцати тысячах лье под водой» Верн описывает подводную лодку «Наутилус», которая была намного продвинутой по сравнению с теми, что существовали в его время. Лишь спустя годы начали появляться современные подводные лодки, такие как немецкий «U-Boot» или американские атомные субмарины, соответствующие по своим характеристикам видению Верна. 2) Космические путешествия. В романе «Из пушки на Луну» Верн описал полет на Луну с использованием гигантской пушки. Хотя в реальности человечество полетело на Луну на ракетах, произведение Верна вдохновило будущие поколения на освоение космоса. Более того, Верн невероятно точно предсказал некоторые аспекты космических миссий: старт с территории США, экипаж из трёх человек и возвращение на Землю после облёта Луны. 3) Путешествия на воздушных шарах. В романе «Пять недель на воздушном шаре» Жюль Верн описал детализированное воздушное путешествие над Африкой. Это произведение вдохновило многих исследователей на использование воздушных шаров в реальных научных экспедициях. 4) Видеоконференции. В романе «Париж в двадцатом веке» (написан в 1863 году, но опубликован лишь в 1994 году) Верн описывает нечто подобное современным видеоконференциям. В его видении люди могут общаться друг с другом на больших расстояниях через экраны, передавая голос и изображение.

7. Философия и социальные проблемы в произведениях Жюль Верна: Хотя основное внимание Жюль Верн уделял науке и приключениям, его произведения также полны философских размышлений и социально-критических идей. Одной из важных тем его творчества была борьба человека с природой. Для Верна человек не просто исследователь, но и часть природы, которую он должен уважать и понимать. Однако, параллельно с этим, его герои сталкиваются с вопросом освоения и подчинения природных сил, что можно рассматривать как символ философских споров того времени о прогрессе и его границах.



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Важное место в его книгах занимают темы несправедливости и угнетения. Наиболее яркий пример этого можно увидеть в образе капитана Немо, человека, разочаровавшегося в человечестве из-за социальных и политических несправедливостей. Немо — это бунтарь, символический мститель, который отвергает мир людей и стремится построить свою собственную изолированную цивилизацию под водой. Его борьба с угнетением, отказ от властных структур и стремление к свободе являются выражением социального протеста Верна против несправедливости в обществе.

8. Литературное наследие Жюль Верна: На протяжении десятилетий произведения Жюль Верна остаются источником вдохновения для многочисленных писателей, режиссеров и художников. Его романы стали основой для многих фильмов, сериалов, театральных постановок и даже видеоигр. Его вклад в литературу трудно переоценить, так как он заложил основы научной фантастики, жанра, который в последующие годы будет расти и развиваться, затрагивая все более сложные и актуальные вопросы.

Верна вдохновил таких авторов, как Герберт Уэллс, Рэй Брэдбери и Айзек Азимов, которые продолжили исследовать научную фантастику с философской точки зрения, поднимая вопросы о будущем человечества и науки. Влияние его идей и образов можно также увидеть в киноиндустрии. Фильмы, такие как «Вокруг света за 80 дней», «Путешествие к центру Земли» и «20 000 лье под водой», стали классикой и продолжают привлекать зрителей разных поколений.

9. Жюль Верн как вдохновитель научных открытий: Творчество Жюль Верна не только развлекало читателей, но и вдохновляло ученых и инженеров на реальные открытия и изобретения. Некоторые из них признали, что именно книги Верна стали для них катализатором в выборе профессионального пути. Константин Циолковский, один из основателей теории космических полетов, признавался, что после прочтения «Из пушки на Луну» он мечтал о покорении космоса. Американский изобретатель Роберт Годдард, пионер ракетной техники, также отметил влияние Жюль Верна на его жизнь и карьеру.

10. Влияние на современную культуру и науку: Творчество Жюль Верна оказало колоссальное влияние на развитие как научной фантастики, так и науки в целом. Его произведения вдохновили множество ученых и изобретателей, таких как Константин Циолковский и Роберт Годдард, которые признались, что их увлечение космосом началось с книг Верна. Его видение будущего стало



источником вдохновения для целых поколений инженеров, исследователей и писателей.

Мир кино и телевидения также не обошел стороной произведения Жюль Верна. Его книги многократно экранизировались, а его герои стали иконами поп-культуры. Например, образ капитана Немо и его «Наутилуса» остаются одними из самых узнаваемых символов классической фантастики.

11. Заключение: Мир Жюль Верна — это не просто фантазия, это гимн человеческой смелости, любознательности и научному прогрессу. Его книги продолжают захватывать воображение читателей и вдохновлять на новые открытия. Верн сумел предвосхитить множество технологических достижений и показал, что границы возможного постоянно расширяются, если мы стремимся к новым знаниям. Жюль Верн стал не просто великим писателем, но и культурным феноменом. Его работы являются символом того, как человек может исследовать и изменять мир, применяя знания и воображение. Его вера в науку и прогресс, смешанная с опасениями по поводу будущего человечества, продолжают оставаться актуальными и сегодня. Его произведения — это более чем приключенческие романы; это размышления о границах возможного, о человечестве и его месте в мире.

Мир Жюль Верна — это вечный источник вдохновения для всех, кто любит науку, приключения и верит в бесконечные возможности человеческого разума.

Список использованной литературы:

1. Верн, Ж. *Двадцать тысяч лье под водой*. Москва: Эксмо, 2016.
2. Верн, Ж. *Путешествие к центру Земли*. Санкт-Петербург: Азбука, 2017.
3. Верн, Ж. *Вокруг света за 80 дней*. Москва: АСТ, 2015.
4. Верн, Ж. *Таинственный остров*. Санкт-Петербург: Азбука, 2018.
5. Evans, A. *Jules Verne: Prophet or Fiction Writer?* New York: University Press, 2003.
6. Butcher, W. *Jules Verne: The Definitive Biography*. New York: Thunder's Mouth Press, 2006.
7. Gibson, R. *The Fantastic Imagination of Jules Verne*. London: Routledge, 2001.
8. Молотов, И. *Фантастика и наука: Жюль Верн и его предсказания*. Москва: Наука, 1982.
9. Evans, R. *Science Fiction and Jules Verne: Bridging Reality and Imagination*. Cambridge: Cambridge University Press, 2010.
10. Ланге, А. *Жюль Верн: Писатель, изменивший науку*. Москва: Литературная Россия, 1995.



IMPROVING LABOR RELATIONS AND HUMAN CAPITAL IN THE CONTEXT OF DEVELOPING THE DIGITAL ECONOMY

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Abstract: *This paper examines the impact of digital transformation on labor relations and human capital development in Uzbekistan. The rapid growth of the digital economy requires a rethinking of human capital as a critical factor in economic growth, particularly in the context of artificial intelligence and technological advancements. This study reviews the current trends and challenges in labor relations and explores strategies for enhancing human capital through modern technologies. A particular focus is placed on the integration of artificial intelligence with traditional management systems to optimize labor efficiency and innovation. The findings highlight the importance of digital literacy, organizational transformation, and effective leadership in accelerating human capital development, especially in emerging economies like Uzbekistan. Recommendations are made for policymakers and businesses on leveraging digital tools to improve human capital and foster sustainable economic development.*

Keywords: *Human capital, labor relations, digital economy, artificial intelligence, digital transformation, Uzbekistan, economic development, labor efficiency, innovation management*

Introduction

In today's world, alongside the rapid development of the digital economy, the growth of intellectualization and artificial intelligence processes is increasingly dependent on human factors, making "human capital" a critical driver of progress. According to global development trends, the digital economy and human capital are leading to significant qualitative changes in socio-economic sectors. According to the World Bank, "an increase in internet users by 10% can lead to an annual growth of 0.4-1.4% in the national economy's gross domestic product [1]." In the context of the rapid development of the digital economy, intellectualization, and artificial intelligence, organizing the effective management of human capital and improving labor relations has become one of the most pressing issues today.

In the global push for the development of the digital economy, the system for developing human capital and labor relations must be managed according to modern technologies. Research in this field is being prioritized to establish the theoretical, scientific, and methodological foundations for improving labor relations through the integration of artificial intelligence with traditional management methods. Special attention is being given to research on organizing labor relations in line with modern technologies, improving human capital management mechanisms in the context of digital transformation, enhancing methodological foundations of modern labor relations principles and methods, and increasing the accuracy of evaluating human capital development.

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In the "New Uzbekistan," comprehensive reforms are being implemented in areas such as the rapid development of the digital economy, organizing labor relations in accordance with effective technologies, and the efficient development of human capital. One of the goals is to improve Uzbekistan's position in the Global Innovation Index and to rank among the top 50 countries by 2030. To achieve this, it is necessary to create broad opportunities in all sectors for the implementation of innovative projects and to introduce modern mechanisms for supporting research and innovative initiatives. Addressing these tasks involves using advanced innovative technologies to enhance human capital development, increasing the efficiency of human resources in regional development, creating an optimal system for training and retraining personnel, and improving labor relations. Deepening research in these areas is essential.

Literature review

The scientific foundations of increasing labor potential, effectively utilizing labor resources, and developing human capital have been researched by foreign scholars such as G. Becker, T. Schultz, L. Thurow, R. Crawford, T. Garavan, and P. Rastor, among others [2,3,4,5,6,7]. The scientific and methodological aspects of human capital development have also been studied by scholars from CIS countries, including Y.G. Odegov, R.I. Kapelyushnikov, B.M. Genkin, V.T. Ryazanov and A.V. Buzgalin [8,9,10,11,]. In Uzbekistan, these issues have been the focus of works by local scholars such as academician K.H. Abdurakhmanov and professors B.Kh. Umurzakov, D.A.Nasimov, X.X.Мамадалиева, and others [13,14,15,16].

It should be noted that the scientific works of these economists only partially address the scientific, methodological, and practical aspects of developing human capital and improving labor relations in the context of the digital economy. The insufficient number of studies on this subject in Uzbekistan highlights the need for deeper scientific and methodological research in this area.

Results

One of the most crucial aspects of economic growth is human capital. Possessing human capital and using it effectively determines a country's position in the global economy. In this regard, it is essential to understand the quality of human capital and how its quantitative and qualitative characteristics align with the new socio-economic transformations driven by digitization. The formation of human capital can occur in various forms, with the most fundamental being the accumulation

of capital through education and the development of skills during professional training.

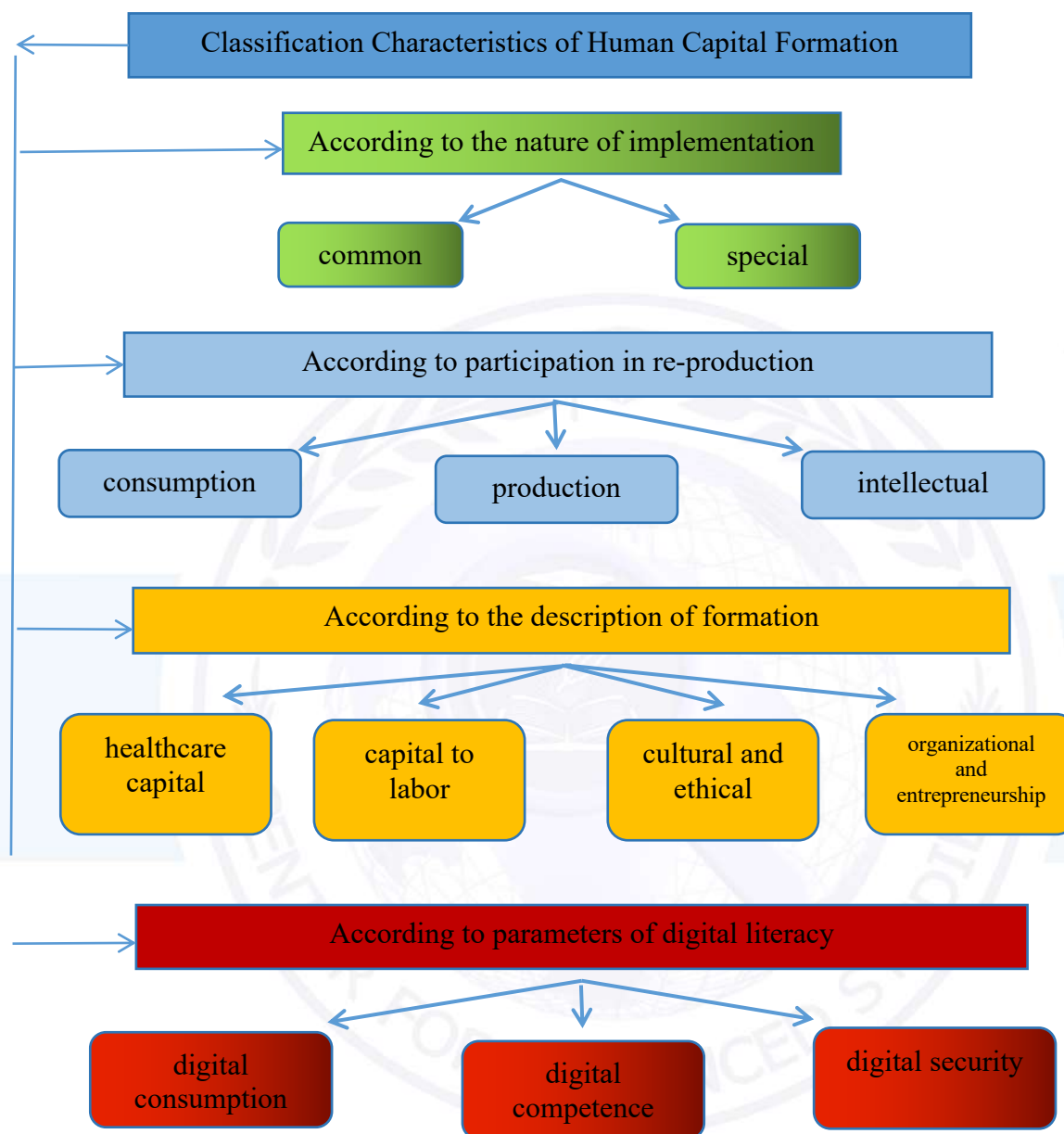


Figure 1. Classification of Factors Influencing the Development of Human Capital in the Context of the Digital Economy¹

Human Capital is the aggregate of abilities, knowledge, skills, and the economic efficiency of utilizing human resources, which enhances its competitiveness in the

¹ Developed by the author.



labor market. In the context of the digital economy, the development factors of human capital have an expanded classification (see Figure 1). In turn, human capital in the economic system is differentiated by the scale of collective human capital and individual human capital (the skills and abilities of an individual). The gradation of human capital levels has a cumulative nature, as each subsequent level builds upon the previous ones. Moreover, the human capital of an economic system represents the behavioral standards for knowledge acquisition, experience accumulation, professional skills realization, health maintenance, culture, and the synergy of this system, which ensures its effectiveness and quality.

Digital transformation refers to the integration of modern digital technologies into the business processes of socio-economic systems at all levels. This approach involves not only the installation of modern equipment or software but also fundamentally changing management, corporate culture, and approaches to external communication.

In our country, the digital transformation of the socio-economic system is characterized by macroeconomic, socio-demographic, and technological trends, identifying a system of external and internal factors that either constrain or accelerate the digital transformation of socio-economic systems. The key factors influencing the acceleration of the digital transformation of socio-economic systems include:

1. Support for Management: The digital transformation must be supported and encouraged by the organization's leadership or a group of organizations (in state and local governance – by "first" officials).

2. Existence of a Competence Center: It is essential to establish a cross-functional group composed of employees from departments responsible for specific aspects of the operational changes.

3. Organizational Transformation: New business processes are implemented by employees operating within the existing organizational structure over an extended period.

4. Evolutionary Integration with Legacy Systems: The digital transformation of business processes affects many legacy systems that cannot be eliminated simultaneously. Therefore, it is crucial to adopt and implement decisions regarding digital transformation gradually to mitigate risks.

5. Customer Engagement and Motivation: Customers' habits change gradually, which can slow the implementation of new service technologies. Hence, developing new models of consumer behavior is a vital element of digital transformation.



6. Flexible Model for Managing Business Processes: The classic theory of optimizing and reengineering business processes is supplemented with new, flexible approaches in the new reality.

7. Formation of a Technological Base: Before entering the digital transformation process, it is necessary to establish a foundation of relevant technological solutions on which the digitization processes will be based.

The development of human capital is a component of the overall strategy for entrepreneurship structure development, manifested in the following areas: identifying problems and substantiating the need to enhance resource management efficiency; defining the strategic management goals for human resources; developing sections of the overall strategy for the development of entrepreneurial entities; identifying the necessary resources for developing the human capital management system; developing a strategic plan for human capital management based on the operational plan; realizing the elements of the strategic components of human capital management and operational plans; and implementing control over the realization of strategic components of human capital management and operational strategies.

In the Republic of Uzbekistan, the number of preschool education organizations increased from 6,381 in the 2018–2019 academic year to 8,311 in the 2022–2023 academic year. During the same period, the number of children enrolled in these organizations grew from 874,900 to 2,246,300. When examining the availability of places in these preschool education organizations, it was found that there were 109 children per 100 places in the 2018–2019 academic year, which increased to 123 in the 2022–2023 academic year.

Additionally, the total number of general education institutions in the republic rose from 9,774 in the 2018–2019 academic year to 10,522 in the 2022–2023 academic year, reflecting a growth of 107.6%. The number of students receiving education in these institutions reached 6,461,700 in the 2022–2023 academic year, showing a growth trend of 110.4% compared to the 2018–2019 academic year.

Moreover, the number of students in secondary special and vocational education institutions has significantly decreased in the 2022–2023 academic year compared to previous periods (see Table 1).



Table 1

Key Indicators of Education in Uzbekistan (As of the beginning of the academic year)²

No	Indicators	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	Change %
1	Number of preschool education organizations (units)	6,381	6,968	7,753	7,868	8,311	130.2
	Number of children in them (thousands)	874.4	1,276.9	1,444.3	1,779.0	2,246.3	2.6 times
2	Provision of places for children in preschool education organizations (children per 100 places)	109	118	104	115	123	112.8
3	Number of general education institutions (units)	9,774	10,090	10,181	10,289	10,522	107.6
	Number of students in them (thousands)	5,850.9	6,168.2	6,287.9	6,304.6	6,461.7	110.4
4	Number of secondary special and vocational education institutions (units)	1,537	1,117	732	741	727	47.3
	Number of students in them (thousands)	656.3	239.2	189.0	368.5	398.7	60.7
5	Number of students admitted to secondary special and	33.5	28.2	203.5	205.9	209.4	6.2 times

² Based on the data from the Statistics Agency under the President of the Republic of Uzbekistan. www.stat.uz

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	vocational education institutions (thousands)						
6	Number of students graduating from secondary special and vocational education institutions (thousands)	454.9	468.8	177.6	134.6	138.7	30.5
7	Number of higher education institutions (units)	98	119	127	154	191	194.9
	Including branches of foreign higher education institutions	9	18	21	25	41	4.6 times
	Number of students in them (thousands)	360.2	441.0	571.5	808.4	1,040.4	2.9 times
8	Number of students admitted to higher education institutions (thousands)	114.5	138.1	174.9	235.9	284.3	2.5 times
9	Number of specialists graduating from higher education institutions (thousands) Number of specialists graduating from higher education institutions (thousands)	70.3	70.8	83.9	103.9	101.9	144.9

Discussion



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This study aimed to assess the integration of human capital development and labor relations within the digital economy's evolving landscape in Uzbekistan. The findings underscore the vital role of human capital as a driver of economic growth, especially as the nation transitions into a more digitized framework. The significant increase in educational institutions and enrollment numbers highlights the government's commitment to enhancing human capital. However, the decline in secondary vocational education enrollment suggests a potential mismatch between labor market demands and educational outputs.

The results align with existing literature, particularly Becker's human capital theory, which posits that investments in education and training yield economic returns through improved productivity. This correlation emphasizes the necessity of aligning educational programs with the skills needed in a digital economy, ensuring that the workforce is equipped for emerging technological roles.

Despite the promising advancements, several limitations were observed. For instance, the study primarily focused on quantitative data from educational institutions, which may overlook qualitative aspects such as student satisfaction and curriculum relevance. Furthermore, the rapid pace of digital transformation poses challenges in keeping educational curricula updated, which could hinder the alignment between education and market needs.

Future research should explore qualitative factors, such as the experiences of students and employers regarding skill adequacy. Additionally, investigating the long-term impacts of digital transformation on labor relations, such as job displacement and the emergence of gig economies, would provide valuable insights. Addressing these gaps will be crucial for developing comprehensive strategies to enhance human capital and labor relations in Uzbekistan's digital economy.

Conclusion

In conclusion, this study highlights the critical interrelationship between human capital development and labor relations in the context of Uzbekistan's evolving digital economy. As the nation strives to enhance its global competitiveness, the findings emphasize the importance of investing in human capital through education and training tailored to the demands of a rapidly digitizing workforce. The significant increase in educational institutions and enrollment figures reflects the government's commitment to fostering a skilled labor force, yet the observed decline in vocational



education enrollment indicates a pressing need for alignment between educational outputs and labor market requirements.

The challenges posed by digital transformation necessitate a strategic approach to improve labor relations, focusing on integrating innovative management practices and technologies that enhance workforce engagement and productivity. By addressing existing gaps and adapting educational curricula to reflect industry needs, Uzbekistan can effectively harness its human capital potential.

Ultimately, the findings of this research contribute to the broader discourse on sustainable economic development, offering insights for policymakers, educators, and business leaders aiming to navigate the complexities of a digital economy. As Uzbekistan continues on its path towards becoming a knowledge-based economy, ongoing research and collaboration will be essential in shaping effective strategies for human capital development and labor relations.

References

1. Goldin, I. (2021). COVID-19 Is Increasing Multiple Kinds of Inequality. Here's What We Can Do about It. World Economic Forum.
2. Becker, G. S. Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education. University of Chicago Press, 2009.
3. Schultz, T. P. "Human Capital, Schooling, and Health." *Economics & Human Biology*, vol. 1, no. 2, 2003, pp. 207-221.
4. Thurow, L. Investment in Human Capital. Belmont, 1970.
5. Crawford, J. K., and Cabanis-Brewin, J. Optimizing Human Capital with a Strategic Project Office: Select, Train, Measure, and Reward People for Organization Success. Auerbach Publications, 2005.
6. Garavan, T. N. "A Strategic Perspective on Human Resource Development." *Advances in Developing Human Resources*, vol. 9, no. 1, 2007, pp. 11-30.
7. Rastogi, P. "Knowledge Management and Intellectual Capital as a Paradigm of Value Creation." *Human Systems Management*, vol. 21, no. 4, 2002, pp. 229–240.
8. Одегов, Ю.Г., и Капелюшников, Р.И. Экономика труда: учебник и практикум для вузов. Записка об отечественном человеческом капитале. Москва, 2008.
9. Генкин, Б.М. Экономика и социология труда: учебник (7-е изд., испр. и доп.). М.: НОРМА; ИНФРА-М, 2007. 447 с.
10. Рязанов, В.Т. "Креативный труд и собственность каждого на все: возможность и проблемы." *Социологические исследования*, № 3 (407), 2018, с. 138-143.



11. Бузгалин, А.В. Глобальный капитал. В 2-х тт. («Капитал» re-loaded). М.: ЛЕНАНД, 2015. 904 с.
12. Махмудова, Г. Н., & Гуломова, Н. Ф. (2023). Unlocking the potential of the digital economy in the EAEU countries: identifying and overcoming obstacles. *π-Economy*, 16(4), 7-25.
13. Abdurakhmanov, K.H., Zokirova, N.K., Islamov, B., & Hiwatari, M. Systemic Transformation and Sustainable Human Development: The Case of Uzbekistan. Jakarta: Gunadarma Publisher, 2016. 230 p.
14. Ikromjonovna, J. S. (2024, March). Methods of Teaching Mathematics in Primary Classes. In International Global Conference (Vol. 1, No. 4, pp. 19-25).
15. Nurillayev, J. Y. (2022). The role of corporate management system in providing financial security in commercial banks.
16. Makhmudova, G. N., & Gulomova, N. F. (2023). Unlocking the potential of the digital econ-omy in the EAEU countries: identifying and overcoming obstacles. *π-Economy*, 16 (4), 7–25. DOI: <https://doi.org/10.18721/JE.16401>.
17. Гуломова, Н. (2022). Основные компоненты развития «умного» туризма в регионах. Направления развития благоприятной бизнес-среды в условиях цифровизации экономики, 1(01), 63-67.
18. 니고라. (2017). Empowering Women Sports Leaders in Uzbekistan A critical analysis of transforming the role of Women in Sports Management (Doctoral dissertation, 서울대학교 대학원).
19. Махмудова, Г. Н., Ашуров, З. А., & Гуломова, Н. Ф. (2022). Факторы и проблемы цифровой трансформации в условиях усиления конкурентоспособности национальной экономики Узбекистана. In Управление устойчивым развитием экономических систем в цифровую эпоху (pp. 49-77).
20. Umurzakov.B.Kh. Mehnat resurslari shakllanishi va taqsimlanishining hududiy xususiyatlari. Monografiya. Tashkent: LESSON PRESS, 2017. 188 p.
21. Nasimov, D.A. "Raqamli iqtisodiyotni rivojlantirish sharoitida ish bilan bandlikning zamonaviy shakllari." *Iqtisodiyot va innovatsion texnologiyalar (Scientific Electronic Journal)*, Tashkent, no. 4, July-August 2020.
22. Махмудова, Г. Н., & Гуломова, Н. Ф. (2023). Проблемы формирование цифровой экономики в странах ЕАЭС. In Интеллектуальная платформенная экономика: тенденции развития (pp. 10-48).
23. Mamadalieva Kh.Kh. "Assessment of Causes and Factors Influencing the Dynamics of Birth Rates Across the Regions of Uzbekistan." *Economics and Education*, No. 5, 2022, pp. 332–338.



CRITERIA OF COMPUTER TERMS IN ENGLISH, UZBEK AND KARAKALPLAK LANGUAGES

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Abstract: *The study of Uzbek and Karakalpak linguistic words is examined in this scientific article, which looks at terminological writings on linguistic terminology produced between 1920 and the present, including research articles, scientific collections, monographs, and other publications.*

Keywords: *terminology, linguistic phenomenon, terminology, jargon, slang, internet, computer, technology, language, professional.*

Numerous scientific investigations on the analysis of linguistic words have been carried out in Uzbekistan up to this point. Scholars Abdurauf Fitrat (1886–1938) and Mashrik Yunusov (Elbek) (1898–1939) offered ideas about the scientific validation of linguistic words [1,336]. Fitrat, who also penned "Sarf" and "Nahv," advanced the notion that "we need to work a little harder and help each other to clarify all the rules of our language and put their terms on the field." Sarf examines the morphology and phonetics of the Uzbek language, whereas Nahv examines the meanings of terms pertaining to speech, parts of speech, ordered sections, speech kinds, and introduction words. He goes into detail on the meaning and history of the term "cut," which is one of the main parts of speech, in a unique way: [1:76] “..1. Birds sing in the morning in the garden. 2. We say that Chulpon recently wrote a good poem, and what we want to explain is to stop the game. It's a matter of words. At the end of the speech, the word was cut off. That is why he wrote at the end of the above two sentences, we call the words "sayra" "cut words of the sentence" or simply "cut" [1.333]. There are also punctuation marks, full stops (.), One pause (;), a semicolon (,), a question mark (?), A consonant (!), A colon (:), quotation marks (“”). , terms such as bows (()), four-pointed bows ([]), large bows ({}), lines (-), dots (...) are also explained.

Elbek's research also takes into account the study of language words. He advanced certain scientific and theoretical concepts in the fields of phonetics and morphemes during the process of elucidating the theoretical and practical aspects of these words in linguistics. He uses the term "vowel" in phonetics to describe the speech and writing sounds: Additionally, there are phrases pertaining to vowels, vowels, and the classification of vowels, such as thick upper vowels (o), thin upper vowels (a), and long vowels (vowels); ost bottoms, thick ost bottles (e), thin ost



bottles (i). Regarding consonants, he referred to them as continuous and long vowels. [2:33]

Concurrently, he clarified the meaning of words and adjectives. Uzbek language, and A. Khodzhiev examined the standards used in word selection as well as the condition of Uzbek linguistic terminology. Throughout his research of linguistic terminology, I.R. Ermatov selected terms from textbooks, councils, and textbooks from the era of independence that were produced throughout this process. Though with certain limitations, he claims that Uzbek linguistic terminology started to take shape in the 1920s. Since the original textbooks were written within the confines of grammar, the majority of these words are grammatical. This study is a first effort to examine the mutual reliance and exchange of linguistic terminology between Uzbek Karakalpak and Russian.

Conclusion

This dissertation examines, for the first time, how Russian linguistic words influenced the creation and evolution of Uzbek linguistic vocabulary. A comparative analysis of language words was carried out in the work of AN Rajabov two years later. The study of linguistic terms in the Uzbek and Russian languages is examined in this dissertation through the examination and analysis of materials from scientific research studies, textbooks, manuals, terminological dictionaries, monographs, collections of Uzbek and Russian linguistic terminology, and other publications published between 1970 and 1992. In the course of AN Rajabov's research, words were chosen in compliance with State law. A comparative and comparative lexicographic examination of linguistic words was also carried out by DI Khodjaeva using the materials of the explanatory dictionaries of the English, Russian, and Uzbek languages. The study's analysis of linguistic terms is characterized by the following terminological requirements: precision, logical coherence, structure, adherence to literary language norms, popularity, and interlinguistic lexical-semantic characteristics of linguistic terms, as well as the degree of codification in explanatory dictionaries.

The research of linguistic terms as a separate functional layer was conducted using Chinese linguistic terminology as an example. It also examined the stages and methods of these terms' production as well as the scientific validation of structural and lexical-semantic properties. Within it, the researcher formulated guidelines regarding the management of Chinese language terminology, mitigating issues with



their translation into Uzbek, steering clear of literal and indirect translations, and providing equivalent terms in Karakalpak through this substitute.

References:

1. Abdurauf Fitrat. Selected works Volume IV: textbooks and manuals, scientific articles and research. - Tashkent: Manaviyat, 2006.
2. Elbek Selected works // Foreword by the author: H. Uzoqov; Responsible editor: Sh. Salimova. - Tashkent: Sharq, 1999.
3. Reshetova L.V. The grammatical terminology of the Uzbek language. Diss. ... Cand. philol. sciences. - Toshkent, 1961 .
4. Hojiev A. Term selection criteria. - Tashkent: Fan, 1996.; the same author. On the current state of Uzbek linguistic terminology / Uzbek language terminology and prospects for its development. Proceedings of the I Republican Conference on Terminology. - Tashkent: Fan, 1986.
5. Ermatov IR Formation and development of Uzbek linguistic terms (based on textbooks of general secondary schools). Doctor of Philosophy. ... diss. author's ref. - Tashkent, 2019.



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Volume: 2 Issue: 8

INFORMATIKA PÁNIN OQÍTÍWDA INFORMACIYA TEXNOLOGIYALARÍNAN PAYDALANÍWDÍN ÁHMIYETI

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*Nókis qalası 27-sanlı ulıwma bilim beriw
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Annotaciya. *Bul maqalada zamanagoy texnologiyalar járdeminde mekteplerde informatika pánin oqıtıwdın nátiyjeliligın asırıw, oqıw orınlarında informatika pánin nátiyjeli oqıtıw hám tájiriybeli kadrlardı tayarlawda talap etiletuǵın zárúrli sharayatlardı jaratıp beriw haqqında sóz etilgen bolıp, pikir hám usınıslar ilimiy dálillengen.*

Gilt sózler: *informatika, texnologiya, kompyuter, pedagogika, pedagogikalıq texnologiyalar, metod, kompyuter sawatxanlıǵı, dástúriy támiynat, modellestiriw.*

Búgingi kúnde, zamanagúy texnologiyalar ásiri bolǵan bir dáwirde mámleketimizdiń bilimlendiriw sistemasında informatika pánin nátiyjeli ámelge asırıw boyınsha birqansha isler ámelge asırılmaqta. Informatika pánin oqıtıwdı jaqsılawǵa baǵdarlangan bunday islerdiń baslı maqseti – oqıw orınlarında bilim alıwshılardı kerekli informaciyanı jetkizip beriw, olarda erkin pikirlew qábiletin rawajlandırıw, sabaqlardı qızıqlı, jańa zaman talabına saykes shólkemlestiriw hám olardıń ózlestiriw dárejesin anıqlawdan ibarat.

Informatika pániniń nátiyjeliligın asırıwda eń tiykarǵısı bul metod hám qurallar. Informatika pání oqıtıwshıları tárepinen tómendegi kóriniste metod hám qurallardan nátiyjeli paydalanıp, bul pániniń nátiyjeliligın asırıw múmkin: lekciya, lekciya seminar, seminar, auditoriya sawbeti, oqıwshılardıń bilim dárejesin anıqlawshı hár qıylı tańlawlar, ámeliy iskerlik sıyaqlı shınıǵıw túrleri, laboratoriya hám ámeliy shınıǵıwlar, mashqalalı jaǵdaylardı sheshiw, “Klaster”, “6x6x6”, “Intellectual hújim”, “Pikirlerdiń kúshli hújimi”, “Qararlar shejiresi”, “Kubik” sıyaqlı metodlar; oqıw-texnikalıq qurallar - radio, televidenie, video-qurılma, kompyuter, slayd hám nusqa kóshiriwshi qurılmalar, sonday-aq, informatika pání oqıtıwshılarınıń bilimlerin bayıtıw, olarda ǵárezsiz talimdi shólkemlestiriwge salıstırǵanda jańasha kóz-qarastı qalıplestiriwge baǵdarlangan iskerlik procesinde turmıslıq waqıya-qubılıslardan misallar keltiriw hám taǵı da basqalar [1]. Bul jaǵdaylar tiykarında tómendegi wazıypalar orınlanadı: informatika pání shınıǵıwları maqsetin anıqlap alıw; maqset sheńberinde ámelge asırılatuǵın wazıypalardı belgilew; informatika pání shınıǵıwları mazmunın islep shıǵıw; metod hám qurallardı anıqlaw; studentler tárepinen tema yamasa oqıw materialınıń ózlestiriliw dárejesin belgileytuǵın qadaǵalaw jumısların ámelge asırıw; studentler tárepinen tema yamasa oqıw materialı mánisiniń ózlestiriligin ańlatıwshı nátiyjelerdi ulıwmalastırıw, analizlew hám



juwmaqlaw; informatika pání shınıǵıwlarınń nátiyjelilik dárejesi tiykarında náwbettegi iskerlik baǵdarın belgilep alıw.

Ilmiy-texnikalıq rawajlanıw túrli tarawlarda qollanılatusın texnika hám texnologiyalardı tez-tezden jańalap turıwdı talap etpekte. Házirgi dáwirde ilim-pán hám texnikanın sońǵı jetiskenliklerin ózinde jıynagan jańa qural hám texnologiyalardıń óndiriste qollanıwı ápiwayı jaǵdayǵa aylanıp qaldı [2]. Ilmiy-texnikalıq rawajlanıw procesinde zamanagóy islep shıǵarıw tiykarlarınń ózgeriwı, jańa qurılma hám texnologiyalardıń qollanıwı intellektual miynet úlesiniń, jumısshınıń dóretiwshilik qábiletiniń, onıń kásiplik tájiriybesiniń joqarılawına sebep bolmaqta.

Kásiplik tálimdi kompyuterde qollap-quwatlaw salasınıń sistemalı úyreniliwi uzaq tariyxǵa iye. Bul dáwir ishinde AQSh, Frantsiya, Yaponiya, Rossiya hám basqa mámleketlerdiń tálim mákemelerinde túrli EHMLar ushın tálimge arnalǵan kóplegen kompyuter sistemaları islep shıǵılǵan. Bunnan tisqari, rawajlangan mámleketlerde jańa quramalı qurılma hám texnologiyalardı úyreniw hám ámelge kirgiziw proceslerin tezlestiriw ushın olarǵa kompyuterdi úyreniw sistemaların kirgiziw búgingi kúnniń aktual máselelerinen bolıp qalmaqta. Metodologiyalıq tárepten kásiplik tayarlıqtı qollap-quwatlawda kompyuter qurallarınıń islep shıǵılıwı hám qollanıwı basınan baslap bir-biri menen baylanıslı bolmaǵan túrli tarawlarda rawajlana baslaǵan. Birinshi baǵdar dástúriy úyretiw ideyalarına tiykarlanadı. Bunda túrli pánler boyınsha avtomatlastırılǵan úyretiw sistemaları (AUT) islep shıǵıladı hám qollanıladı. AUTǵa mısıl retinde shet eldegi PLATO yamasa Rossiyadaǵı AOSB sistemaların keltiriwge boladı. Ekinshi baǵdar, ulıwma bilim beriw hám kásiplik tayarlıqtı kompyuterde qollaw, insan iskerliginiń túrli tarawların kompyuterlestiriw esaplanadı. Bular qıyın esaplawlardı ámelge asırıwshı, matematikalıq modeller tiykarında processler yamasa obyektlerdiń qásiyetlerin uyreniwshi hár túrli dástúrler bolıwı múmkin.

Juwmaq sıpatında sonı aytıwımız múmkin, házirgi kúnde kompyuter texnologiyaları bazarlarında kásiplik tayarlıqqa hám de informatika pánin nátiyjeli shólkemlestiriwge kóbirek múmkinshilikler bere alatuǵın jańalıqlar payda bolıp atır. Bular úlken kólemdegi maǵlıwmattı ózinde saqlay alatuǵın CD-ROM kompakt disklerine tiykarlangan sırtqı optikalıq eslep qalıw qurılımaları, gipertekstli programmalıq qurallar, multi-hám gipermedia quralları, virtual bolmıs sistemaları hám basqalar. Ózbekstan bilimlendiriw sistemasında informatika pánin oqıtıwda



kompyuter mümkinshiliklerin asırıwshı jańa texnikalıq hám programmalıq qurallardan paydalanıw informatika pániniń nátiyjeli oqıtılıwına járdem beredi.

Paydalanılğan ádebiyatlar:

1. Yusupov, M., Tazhibayeva, R., Ziyaeva, S., Kubyashev K. (2021). Numerical modeling of the salt-transfer problem in soils. E3S Web of Conferences, 264, 01005
2. Ахмедов, Б.А., Якубов, М. С., Карпова, О. В., Рахмонова, Г.С., & Хасанова, С. Х. (2020). Геймификация образовательного процесса кластерный подход. INTERCONF, 2 (38), 371-378.
3. Ахмеджонов Дилмурод Гуломович, Нодиржон Носиржонович. Гадаев (2020). Interration, Partnership and Innovation in Cjnstruction Science and Education (IPICSE 2020).
4. Гулбоев, Н. А., Дуйсенов, Н. Э., Ахмедов, Б. А. (2020). Модели систем управления электрическими сетями. Молодой ученый, 22, 105-107.



THE USE OF WORD GAMES IN ENHANCING VOCABULARY

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Abstract. *This article explores the use of word games as an effective strategy to enhance vocabulary learning. By integrating fun, competition, and meaningful context, word games actively engage learners, increase motivation, and improve vocabulary retention. Various types of word games are discussed in terms of their benefits and challenges in the classroom. While challenges such as classroom management and time constraints exist, the article concludes that with careful implementation, word games can significantly boost vocabulary acquisition and learner engagement in ESL contexts.*

Keywords: *Vocabulary acquisition, word games, ESL learners, language learning, classroom engagement, vocabulary retention, interactive learning, teaching strategies, English as a Second Language.*

Vocabulary is a fundamental aspect of language learning, serving as the building blocks that allow learners to express ideas, understand others, and engage with a new language environment. For learners of English as a Second Language (ESL), the challenge of mastering an extensive vocabulary can be daunting, often leading to disengagement and frustration [2, 183-186]. Traditional methods of vocabulary teaching, such as rote memorization and repetitive drills, may not provide the motivation or context needed for effective learning. In contrast, interactive approaches, particularly word games, have emerged as innovative and engaging tools that can make vocabulary acquisition both enjoyable and effective.

Crossword puzzles are a classic vocabulary game that challenges learners to recall word meanings and spellings based on given clues. By filling in the blanks, learners strengthen their understanding of word definitions, context, and spelling patterns. Crosswords can also introduce synonyms and antonyms, helping learners develop connections between related words.

Moreover, Scrabble is a well-known game that promotes word formation and spelling skills. Players use letter tiles to create words on a board, maximizing their score by placing words strategically. This game encourages learners to think critically about word structure, syllables, and letter combinations. Similarly, word scrambles involve rearranging jumbled letters to form correct words, challenging learners to recognize familiar word patterns and practice quick recall.



Furthermore, Vocabulary Bingo is a variation of the traditional bingo game where learners must listen to word definitions or synonyms and match them with words on their bingo cards. This game enhances listening skills, encourages quick recognition of vocabulary, and provides an opportunity for learners to engage with words in a competitive, interactive way [3, 109-113].

Also, Hangman is a simple yet effective word game where learners guess letters to form a word. This game reinforces spelling, helps with word recognition, and encourages learners to use contextual clues to figure out unfamiliar words. It can be adapted to any vocabulary level, making it versatile for different groups of learners.

Each of these word games provides a unique approach to vocabulary learning, making the process more engaging and effective for ESL learners. By incorporating these games into classroom activities, teachers can create a dynamic learning environment where vocabulary acquisition is fun and meaningful.

Conclusion. Word games offer a dynamic and interactive approach to vocabulary learning, making the process more engaging and enjoyable for ESL learners. These games not only enhance active participation but also improve vocabulary retention by allowing students to practice new words in meaningful and playful contexts. Incorporating word games into the language classroom can foster a positive learning environment where students are motivated to expand their vocabulary through fun, collaborative, and memorable activities. Ultimately, word games prove to be an effective tool in supporting long-term vocabulary acquisition and language proficiency.

References:

1. Al Neyadi, O. S. (2007). The effects of using games to reinforce vocabulary learning.
2. Arwandi, A. W., Syarif, H., & Ardi, H. (2020, August). Improving Students' Vocabulary Through Words Games at Grade VI of SDS Setia Padang. In Eighth International Conference on Languages and Arts (ICLA-2019) (pp. 183-186). Atlantis Press.
3. Nuraeni, S., & Lube, C. I. (2020). Improving English vocabulary mastery through word game. PROJECT (Professional Journal of English Education), 3(1), 109-113.
4. Yahoui, N. (2012). The Effectiveness of Language Games in Improving Learners' Vocabulary (Master's thesis).

МЕТОДЫ АНАЛИЗА МИКРОЭЛЕМЕНТОВ В БИОЛОГИЧЕСКИХ
ПРОБАХ**Атажанова Зубайда Сулеймановна***учительница химии в Президентской школе
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Аннотация. Анализ микроэлементов в биологических пробах играет ключевую роль в медицине, экологии и биохимических исследованиях, так как микроэлементы участвуют во многих жизненно важных процессах организма. В данной статье рассматриваются основные методы анализа микроэлементов, такие как атомно-абсорбционная спектрометрия (ААС), индуктивно-связанная плазменная спектрометрия с масс-спектрометрией (ICP-MS), рентгенофлуоресцентный анализ (РФА), методы хроматографии и оптическая эмиссионная спектрометрия с индуктивно-связанной плазмой (ICP-OES).

Ключевые слова: микроэлементы, биологические пробы, атомно-абсорбционная спектрометрия, ICP-MS, рентгенофлуоресцентный анализ, хроматография, ICP-OES, аналитическая химия.

Анализ микроэлементов в биологических пробах является важной задачей в биомедицине, экологии, пищевой промышленности и других областях [3; 168-173]. Микроэлементы, такие как железо, медь, цинк, марганец и другие, играют ключевую роль в физиологических процессах организма. Недостаток или избыток этих элементов может привести к различным заболеваниям. Поэтому точное определение их концентраций в биологических пробах (кровь, моча, ткани) важно для диагностики и мониторинга состояния здоровья. В этой статье рассмотрены основные методы анализа микроэлементов и их применение.

Атомно-абсорбционная спектрометрия — один из наиболее распространённых методов для количественного анализа микроэлементов. Метод основан на измерении поглощения света атомами элемента при определённой длине волны. Пробы биологических материалов подвергаются предварительной подготовке, которая включает минерализацию и перевод пробы в раствор. Этот метод обладает высокой чувствительностью и селективностью [1; 29-38].



Индуктивно-связанная плазменная спектрометрия с масс-спектрометрическим детектированием (ICP-MS)- это метод, который сочетает в себе использование индуктивно-связанной плазмы для атомизации элементов и масс-спектрометрии для их детектирования. Он позволяет измерять сверхмалые концентрации микроэлементов с высокой точностью. Метод подходит для анализа как макро-, так и микроэлементов в сложных биологических пробах, таких как сыворотка крови и моча.

Рентгенофлуоресцентный анализ основан на возбуждении атомов исследуемых элементов рентгеновским излучением и измерении флуоресцентного излучения, испускаемого этими атомами. Метод активно используется для неразрушающего анализа тканей и клеток.

Хроматографические методы, такие как газовая хроматография (ГХ) и жидкостная хроматография (ЖХ), используются для разделения и идентификации микроэлементов в сложных биологических матрицах. Часто эти методы сочетаются с другими техниками, такими как масс-спектрометрия (МС), что позволяет повысить чувствительность и точность анализа [5; 152-157].

Оптическая эмиссионная спектрометрия с индуктивно-связанной плазмой (ICP-OES)— это метод, при котором атомы микроэлементов в плазме возбуждаются, и их эмиссионные спектры регистрируются для количественного анализа. Этот метод отличается высокой точностью и позволяет одновременно измерять концентрации многих элементов.

Заключение. Каждый из описанных методов имеет свои преимущества и ограничения. Выбор подходящего метода анализа микроэлементов зависит от типа исследуемой пробы, требуемой чувствительности и доступного оборудования. Современные тенденции развития аналитической химии направлены на улучшение чувствительности и селективности методов, а также на минимизацию необходимого объема биологического материала для анализа.

Использованная литература:

1. Забокрицкий, М. П., & Сабуров, В. В. (2014). Критерии выбора спектрального метода применительно к анализу микроэлементов в биологических объектах. Микроэлементы в медицине, 15(4), 29-38.
2. Иваненко, Н. Б., Ганеев, А. А., Соловьев, Н. Д., & Москвин, Л. Н. (2011). Определение микроэлементов в биологических жидкостях. Журнал аналитической химии, 66(9), 900-915.

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REPUBLICAN SCIENTIFIC AND PRACTICAL CONFERENCE



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3. Лисецкая, Л. Г. (2005). Методологические вопросы анализа микроэлементов в биосредах. *Acta Biomedica Scientifica*, (1), 168-173.
4. Тогузов, Р. Т., Соколова, Н. А., Савина, М. И., Мамедов, И. С., & Талицкий, В. В. (2007). Современные методы определения компонентов минерального обмена в биологических образцах. *Клиническая лабораторная диагностика*, (9), 81-81.
5. Чмиленко, Ф. А., & Саевич, О. В. (2013). Современные тенденции развития многоэлементного анализа биологических проб. *Вопросы химии и химической технологии*, (3), 152-157.





ZIG'IRNING FARMAKOTERAPEVTIK TA'SIR MEXANIZMI BILAN BOG'LIQ FARMAKOLOGIK SHARH

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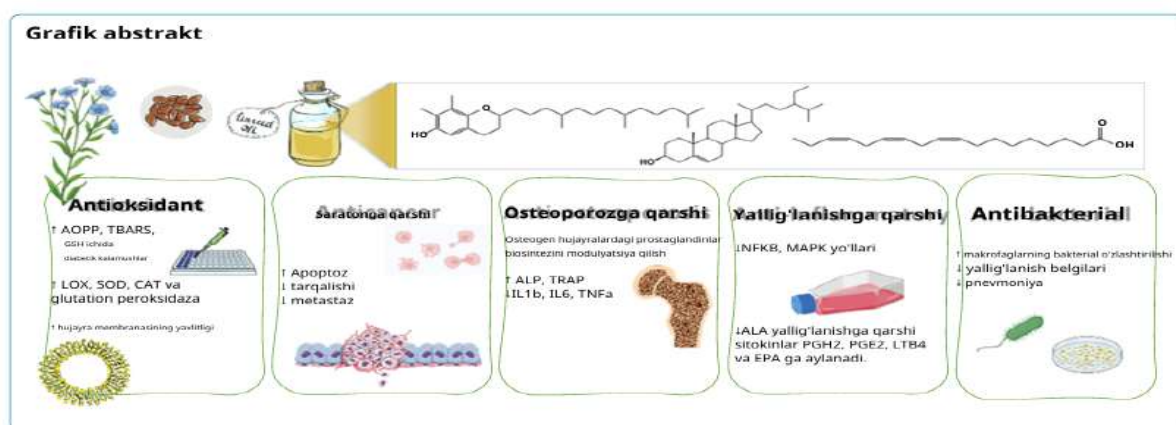
*Nizomiy nomidagi TDPU kimyo fanlari
nomzodi*

Annotatsiya. Ushbu ilmiy mahsulot O'zbekistonda mahalliy sharoitda yetishtirilgan zig'irning farmakoterapevtik ta'siri bo'yicha adabiyotlar sharhi yordamida yig'ilgan ma'lumotlar birlashtirilgan.

Kalit so'zlar: α -linolenik kislota, Linaceae, *Linum usitatissimum*, omega-3.

Zig'ir urug'i (*Linum usitatissimum* L.) - omega-3 ko'p to'yinmagan yog'li kislotalarga, shu jumladan α -linolenik kislota boyligi sababli xalq tabobatida ko'plab kasalliklarda qo'llanilgan. Zig'ir urug'ini keng qamrovli biokimyoviy tahlil qilish natijasida uning biofaolligini oshiruvchi, ya'ni inson salomatligini yaxshilashda qo'llanilishi mumkin bo'lgan lignanlar aniqlab topilgan. Zig'ir urug'i yog'i, tolalar va lignanlar sog'liq uchun foydali hisoblanib, yurak-qon tomir kasalliklari, ateroskleroz, qandli diabet, saraton, artrit, osteoporoz va nevrologik kasalliklarni oldini olish va davolashda samarali natija beradi. O'rganilgan adabiyotlar asosida farmakoterapevtik ta'sirlar orasida antioksidant, yallig'lanishga qarshi, mikroblarga qarshi, saratonga qarshi, yaraga qarshi, osteoporozga qarshi, kardioprotektiv, metabolik va neyroprotektiv ta'sirlar mavjudligi aniqlandi. Ushbu tadqiqot zig'ir urug'i yog'ining ta'sirini uning fitokimyoviy tarkibi bilan bog'liq bildirilgan ta'sir mexanizmlari bilan va boshqa α -linolenik kislota boylar bilan solishtirganda ko'rib chiqadi. Ushbu tadqiqot bir qator kasalliklarni davolash va oldini olish uchun zig'ir urug'i yog'ining sog'liq uchun foydali xususiyatlarini o'zida jamlagan.

Zig'ir urug'i lotinchada *Linum usitatissimum* deb atalib, Linaceae oilasiga mansub. Zig'ir urug'i asrlar davomida kundalik hayotda qurituvchi yog' sifatida va tibbiy maqsadlarda: nafas olish kasalliklari, qabziyat, qorin og'rig'i, siydik yo'llari infektsiyasi va terining yallig'lanishida ishlatilgan. Zig'ir urug'i tarkibida 9-10% to'yingan yog' kislotalari (palmitik va stearik), 20% mono-to'yinmagan yog'



kislotalari (asosan olein kislotalari) va 70% dan ortiq α -linolenik kislota uchrashi aniqlangan. Zig'ir urug'ida protein miqdori 20 dan 30% gacha bo'ladi. Zig'ir urug'i yog'i tarkibiy qismlari urug' turiga, joylashishiga, atrof-muhit holatiga va tahlil qilish usullariga ko'ra farqlanadi. Zig'ir urug'i yog'i tarkibiy qismlari urug' turiga, joylashishiga, atrof-muhit holatiga va tahlil qilish usullariga ko'ra farqlanadi. Zig'ir urug'i yog'i o'zining noyob kimyoviy tarkibi bilan boshqa o'simliklardan keskin farq qiladi, to'yinmagan yog' kislotalarining miqdori bo'yicha eng boy manbalaridan biri hisoblanadi. Zig'ir urug'i yog'i, ayniqsa, α -linolenik yog' kislotalariga boy. Linoleik kislota (n-6) araxidon kislotalariga, α -linolenik kislota (n-3) esa eikosapentaenoik kislota (EPK) aylanadi. α -linolenik kislota yallig'lanishga qarshi vosita sifatida keng tarqalgan bo'lib, yallig'lanish sitokinlari, lipidlar va lipoproteinlar ishlab chiqarishni kamaytiradi. Yallig'lanishga qarshi sitokinlarni ishlab chiqarishni ingibitorlash osteoklastning proliferatsiyasi va faollashuvini tartibga solish orqali suyak reabsorbsiyasi bo'yicha keyingi ta'sirni ta'minlaydi, shuningdek, osteoblastni osteoklast differentsiatsiyasi omilini chiqarish uchun rag'batlantiradi. Zig'ir urug'i yog'ining sog'liq uchun foydali ta'siri saraton va yurak-qon tomir kasalliklari xavfini kamaytirish, shuningdek, xolesterin miqdorini kamaytirishni o'z ichiga oladi. Zig'ir urug'i yog'i antioksidant ta'sir ham ko'rsatadi. Bunday antioksidant faollik yog'ning kimyoviy tarkibiy qismlarining miqdoriga bog'liq. Zig'ir urug'i yog'i tokoferol, β -karotin kabi bir qancha antioksidantlarga, shu jumladan fitosterollar, polifenollar va



flavonoidlarga boy ekanligi aniqlangan. Tokoferollar asosan to'rtta izomerda mavjud bo'lgan muhim lipidlarda eriydigan fitobirikmalar guruhidir. Tokoferollarning antioksidant faolligi, asosan, ularning fenolik vodorodlarini lipidli erkin radikallarga berish qobiliyatiga bog'liq. Zig'ir urug'i yog'idagi tokoferollar va omega yog' islotalari bilan antioksidant ta'sirga nisbatan sinergik ta'sir paydo bo'lishi haqida ma'lumotlar aniqlanmagan.

Turli ekstraksiya usullarining zig'ir yog'i tarkibiga ta'sirini va uning antioksidant faolligi bilan bog'liqligini o'rganilgan tadqiqotda faqat uch xil tokoferol izomerlari mavjudligi aniqlandi. Aniqlanishicha, geksan bilan ekstraksiya qilingan moy 160 °C da issiq presslangan moy (mos ravishda 483 mg/kg) va sovuq presslangan moy (564 mg/kg) bilan solishtirganda 614 mg/kg- tokoferolning yuqori miqdorini o'z ichiga oladi. Bundan tashqari, qovurish jarayoni zig'ir yog'idagi tokoferollar darajasiga sezilarli ta'sir ko'rsatdi. Sovuq presslangan moy 12,2, 43,4 va 508 mg/kg a, g va d-tokoferolni o'z ichiga oladi. Garchi g-tokoferol barcha ekstraksiya usullarida eng ko'p tarqalgan tur bo'lsa-da, a- va g-tokoferollarning eng yaxshi ekstraksiya sharoitlari 120 °C dan oshmaydigan haroratda (mos ravishda 13,0 va 553 mg/kg) bo'lishi taklif qilingan. Shu bilan birga, bunday haroratda d-tokoferol miqdori 43,1 mg / kg ga tushdi. E'tiborli tarafi shundaki, qovurish harorati 160 °C ga ko'tarilgandan so'ng, a- va g-tokoferol miqdori sezilarli darajada pasaygan (11,3 va 472 mg / kg) hamda d-tokoferol aniqlanmagan. Fitosterollar tarkibi o'rganilganda zig'ir yog'ida 6 xil fitosterollar aniqlangan.

Dominant izomer b-sitosterol edi, undan keyin sikloartenol, kampesterol, D5-avenasterol, 2,4-metilensikloartenol va stigmasterol. Sovuq presslangan yog'da umumiy fitosterollarning eng yuqori miqdori (11,8 g / kg) mavjud edi. Bundan tashqari, zig'ir urug'idan olingan yog' kislotali hujayraning turli metabolik jarayonlariga samarali ta'sir ko'rsatadi. Zig'ir urug'i yog'ining tarkibidagi to'yinmagan yog' kislotalari bir qator kimyoviy moddalarga, shu jumladan omega-3 yog' kislotalariga, shuningdek, gipolipidemik va antioksidant ta'sir ko'rsatadigan lignanlarga qo'shimcha ravishda bog'liq. Mavzular bo'yicha guruhlangan maqolalar barcha toifalar orasida 38% tibbiyotga tegishli ekanligini va uning sog'liq uchun potentsial foydalarini ta'kidlab o'tildi. Adabiyotlar sharhini o'rganishdan asosiy maqsad zig'ir urug'i yog'ining inson organizmiga farmakodinamik ta'sir mexanizmlari haqidagi ma'lumotlarni birlashtirishdan iborat. Hujayra asosidagi tahlillar, hayvonlar tahlillari va klinik tadqiqotlar tasdiqlaganidek, aniqlangan ta'sirlar antioksidant, yallig'lanishga qarshi, mikroblarga qarshi, saratonga qarshi, yaraga qarshi,



osteoporozga qarshi, kardioprotektiv va neyroprotektiv ta'sirlarni o'z ichiga olgan keng ko'lamli xususiyatlarni o'z ichiga oladi. Web of Science, PubMed va Scopus ma'lumotlar bazalari yordamida keng qamrovli qidiruv amalga oshirildi, shu jumladan kalit so'zlar, shu jumladan bitta qidiruv elementi sifatida zig'ir urug'i yog'i va maqsadli biologik ta'sirlar, ya'ni antioksidant, yallig'lanishga qarshi, mikroblarga qarshi, saratonga qarshi, yaraga qarshi, osteoporozga qarshi, kardioprotektiv, neyroprotektiv va metabolik sindrom kabi kasalliklarda qo'llanilish usullari va ta'sir mexanizmlari o'rganildi. To'yinmagan omega-3 yog' kislotalarining yurak kasalliklari xavfini kamaytirishda samarali ta'siri o'rganilgan adabiyotlarda keltirilgan. Tadqiqotlar shuni ko'rsatdiki, baliq yog'ining asosiy funktsional tarkibiy qismlari bo'lgan eikosageksaenolik kislota va dokosageksaenolik kislota aritmiya kabi yurak-qon tomir kasalliklari xavfini kamaytirishi aniqlangan.

Foydalanilgan adabiyotlar ro'yxati:

1. Martinez-Pérez JM, Robles-Peres D, Benavides J, Moran L, Andres S, Giraldez FJ va boshqalar. Zig'ir urug'i yog'i yoki E vitamini bilan oziq-ovqat qo'shimchasining eksperimental ravishda kasallangan qo'ylarga ta'siri *Fasciola hepatica*. *Res vet Sci*. 2014;97(1):71–9.
2. Kaithwas G, Majumdar DK. In vitro antioksidant va in vivo antidiyabetik, zig'ir moyining albinos kalamushlarda streptozototsin tomonidan qo'zg'atilgan toksikligiga qarshi antihiperlipidemik faolligi. *Eur J Lipid Sci Technol*. 2012;114(11):1237–45.
3. Herchi W, Bahashwan S, Sebei K, Saleh HB, Kallel H, Boukhchina S. Niholning zig'ir urug'ining kimyoviy tarkibi va antioksidant faolligiga ta'siri (*Linum usitatissimum* L.) moy. *Grasas aseitlari*. 2015;66(1): e057.
4. Saini A, Harjai K, Mohan H, Punia RPS, Chhibber S. Uzoq muddatli zig'ir yog'i qo'shimchalari dietasi BALB/c sichqonlaridan himoya qiladi. *Streptococcus pneumoniae* infeksiya. *Med Microbiol Immunol*. 2010;199(1):27–34.
5. SEMPO, Y. E., & KITABI, B. (2017). *Uluslararası Türk Dünyası*. 7. Michael McCarthy and Felicity O'Dell. "English Idioms in Use"—Cambridge university press.—L.
6. Wallace FA, Miles EA, Calder PC. Sog'lom odamlarda zig'ir yog'i va baliq yog'ining turli dozalari mononuklear hujayralar funktsiyasiga ta'sirini taqqoslash. *Br J Nutr*. 2003;89(5):679–89.
7. Saini A, Harjai K, Chhibber S. Ko'p to'yinmagan yog 'kislotalarining apoptozisga inhibe qiluvchi ta'siri. *Streptococcus pneumoniae* alveolyar makrofaglarda. *Hindiston J Med Res*. 2013;137(6):1193.
8. Liu Y, Liu Y, Li P, Li Z. Zig'ir yog'idan siklinopeptidlarning antibakterial xususiyatlari va ularni mol go'shtiga qo'llash. *Oziq-ovqat kimyosi*. 2022;385: 132715.

THE ROLE OF EXACT SCIENCES IN THE ERA OF MODERN DEVELOPMENT

REPUBLICAN SCIENTIFIC AND PRACTICAL CONFERENCE



Volume: 2 Issue: 8

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