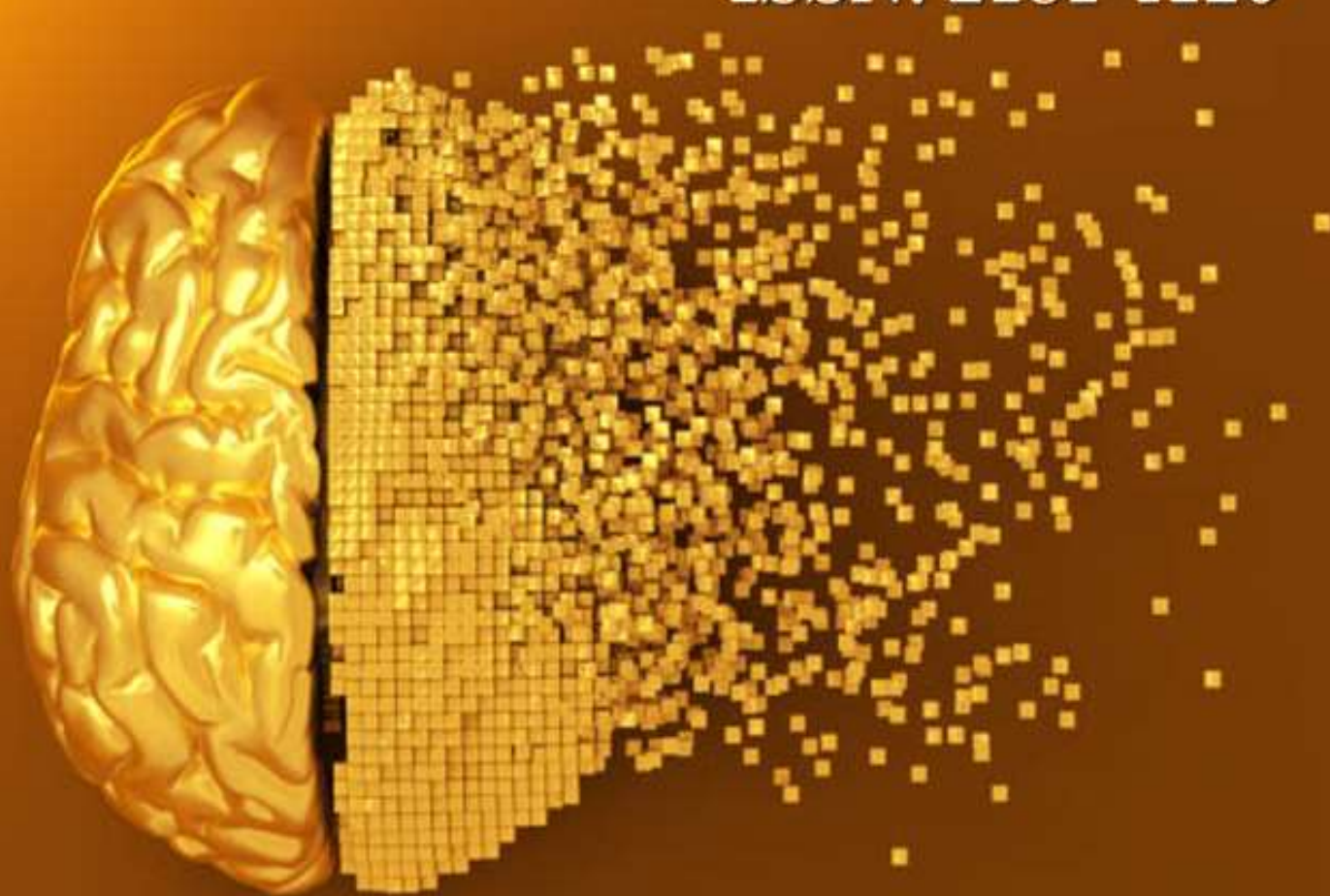


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## THE CHALLENGES ENCOUNTERED BY TEACHERS WHILE TEACHING STUDENTS IN EFL CLASSROOMS

**Muqimxo‘jayeva Xushnoza**

a student of Fergana State University

**Kosimova Mukammal Umaraliyevna**

a teacher of English language and literature department, FSU

***Abstract.** This article discusses about the most common difficulties faced by teachers in teaching English as a foreign language and how to overcome them. In this work, clear and concise conclusions are given from the speeches of selected teachers.*

***Key words:** classroom management, obstacles, method, teaching technique.*

### **I. Literature review**

Teaching is a noble and fulfilling profession, but it is not without its challenges. As educators, we face numerous hurdles as we navigate the ever-changing landscape of the classroom. From managing diverse student needs to staying updated on educational advancements, teachers continuously adapt to provide quality education. In this article, we explore some of the common challenges faced by teachers and discuss strategies to overcome them.

#### **1. Classroom Management:**

One of the primary challenges in teaching is effectively managing the classroom. Striking a balance between discipline and encouragement can be challenging, especially in diverse classrooms with varying student behavior and academic abilities. Building strong relationships with students, setting clear expectations, and implementing consistent routines can help foster an environment conducive to learning.

## **2. Student Engagement:**

Engaging students and keeping them motivated is another hurdle teachers often face. With distractions like technology and short attention spans, captivating students' interest can be a challenge. Implementing interactive teaching methods, incorporating technology creatively, and integrating real-world examples can significantly enhance student engagement and participation.

## **3. Differentiated Instruction:**

Each student comes with unique strengths, weaknesses, and learning styles. Providing differentiated instruction to meet individual needs is a challenge that requires careful planning and flexibility. Teachers can address this challenge by utilizing formative assessments, varied instructional approaches, and individualized learning plans to cater to diverse learning styles and abilities.

## **4. Limited Resources:**

Inadequate resources, such as textbooks, technology, and classroom materials, can pose significant challenges for teachers. However, creative problem-solving can help mitigate this limitation. Teachers can leverage open educational resources, collaborate with colleagues for resource sharing, and tap into community partnerships to bridge resource gaps.

## **5. Changing Educational Landscape:**

Education is constantly evolving, with new pedagogical approaches and technological advancements. Keeping up with the changing educational landscape and integrating innovative teaching practices can be demanding. Continuous professional development through workshops, conferences, and online courses can help teachers stay updated and implement effective strategies in their classrooms.

## **II. Methodology**

The aim of this article is analyzing the most common obstacles teachers face nowadays. For doing this, interview method is used and five teachers are selected and participated.

**Participants:**

Name	Experience	Level	What classes they teach
Ma'rufova Sarvinoz	2 years	C1	1, 2, 9, 11
O'ktamova Asila	2 years	C1	1, 2, 8, 9
Bozorboyeva Xusnida	2 years	B2	2, 3, 4, 5, 6, 7, 8, 9, 10, 11
Olimjonova To'lganoy	2 years	C1	2
Axmedova Zarnigor	2 years	C1	1, 2

**Research method:** Interview.

**When:** 19th of October

**Where:** At university

**How:** Face to face

**Data collecting tool:** Interview.

**Interview questions:**

1. Describe a time when a student challenged your authority in the classroom.

What did the student do, and how did you respond?

2. What was your greatest challenge in student teaching? How did you resolve it?

3. What techniques do you use to keep students actively involved and motivated during a lesson?

**III. Data analysis and discussion.**

According to answers, students challenged or disturbed teachers by not paying attention, using phone, disrespecting and fighting their classmates physically and one teacher mentioned that the whole class was too noisy on purpose. In such kind of situations, almost every interviewed teacher gave punishments and informed to the school authorities.

Great challenge in teaching was attracting pupil's attention and this is mentioned by three teachers. One of them said that she lacked explaining themes to students and another one said her students could not understand English during the lesson and it made her frustrated during the lesson. Many of them used authentic materials, methods to overcome the obstacles.

Interviewed teachers use rewards, like stickers, and TPR method in order to keep students actively involved and motivated during lessons.

### **Conclusion**

In conclusion, the most challenging difficulty teachers encounter is making students pay attention to the lessons and almost every interviewed teacher use effective methods, materials to tackle this issue.

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## FUNKSIYANING ISHLAB CHIQUARISH JARAYONLARIDA QO‘LLANILISHI

**Xudoyberdiyev Sardor Ismoilovich**

SamDAQU

[sardorxudoyberdiyev2604@mail.ru](mailto:sardorxudoyberdiyev2604@mail.ru)

**Annotatsiya:** Ushbu maqolada qurilish materiallarini ishlab chiqaradigan korxonaning mahsulotga talab bilan narx orasidagi, shuningdek taklif bilan narx orasidagi bog‘lanishlar chiziqli va chiziqsiz bo‘lishi o‘rganilgan.

**Kalit so‘zlar:** otimal yechim, model, tezlik, parametir, narx.

**Аннотация:** В данной статье изучаются линейные и нелинейные зависимости между спросом и ценой на продукцию, а также между предложением и ценой предприятия, производящего строительные материалы.

**Ключевые слова:** оптимальное решение, модель, скорость, параметр, цена.

**Annotation:** This article studies the linear and nonlinear relationships between demand and the price of products, as well as between supply and the price of an enterprise producing building materials.

**Key words:** optimalnoe reshenie, model, speed, parameter, tsena.

Agar qurilish materiallarini ishlab chiqaradigan korxonaning mahsulotiga talab noma'lum bo'lsa, bu qurilish materiallarini ishlab chiqaradigan korxonaning mahsulotlardan olinadigan umumiy foyda ham noma'lum bo'ladi. Bizga ma'lumki taqsimot masalalarida, talab va takliflar aniq qiymatga ega. Shuning uchun bu masalani yechganda maqsad funksiyaning otimal qiymatini aniqlash muhim ahamiyatga ega.



Shunday ekan talab va taklif miqdori narx bilan bog'langan. Bu bog'lanishlarni aniqlash uchun talab bilan narx orasida, shuningdek taklif bilan narx orasida bog'lanishlar chiziqli va chiziqsiz bo'lish hollarini qaraymiz.

Sodda hollarda talab modellarini tuzish.

Agar  $x$  deb narxni  $y$  deb talab miqdorini belgilasak,  $y = f(x)$  bog'lanish talab jarayonining matematik modelini anglatadi. Agar  $f(x)$  ya'ni funksiya chiziqli bo'lsa,  $f(x)$  ni

$$y = kx + b \quad k < 0, b \geq 0$$

ko'rinishida izlash lozim. Agar  $f(x)$  funksiyasi chiziqsiz bo'lsa, uni

$$y = \frac{a}{x} + b \quad a > 0, b > 0$$

ko'rinishida izlash lozim. Bu funksiya uchun

$$y' = -\frac{a}{x^2} < 0, \quad y'' = \frac{2a}{x^3} > 0$$

bo'ladi. Demak, funksiya qavariq.

Kuzatuvlar natijasida narx va talab uchun qo'ydagi ma'lumotlar olingan bo'lsin.

$$(x_1 < x_2, y_1 < y_2, x_1 > 0, x_2 > 0, y_1 > 0, y_2 > 0):$$

$x$	$x_1$	$x_2$
$y$	$y_1$	$y_2$

Talab funksiyasi chiziqli  $y = kx + b$  bo'lsin. Shu to'g'ri chiziq ikkita  $(x_1; y_1)$   $(x_2; y_2)$  nuqtadan o'tadi, uning tenglamasi esa quyidagi ko'rinishni oladi:

$$y = \frac{y_2 - y_1}{x_2 - x_1} \cdot x + \frac{x_2 \cdot y_1 - x_1 y_2}{x_2 - x_1} \quad (1).$$

Agar  $f(x)$  funksiyasi chiziqsiz bo'lib,  $y = \frac{a}{x} + b$  ko'rinishda bo'lsa, yuqoridagi jadvaldan foydalanib,  $a$  va  $b$  parametrlarini topamiz:

$$a = \frac{x_1 x_2 (y_2 - y_1)}{x_1 - x_2} > 0, \quad b = \frac{y_1 (x_1 - x_2)}{x_2 (y_2 - y_1)} > 0 \quad (2)$$

bo'ladi.

Sodda hollarda taklif modellarini ko‘rish.

Yuqoridagidek  $x$  narxni,  $y$  esa taklifni anglatsin ular orasidagi munosabatni  $y = f(x)$  funksiya ko‘rinishida yozamiz. Bu funksiya o‘tuvchi bo‘ladi, ya’ni  $f'(x) > 0$ ,  $x > 0$ , taklif funksiyasi chiziqli  $y = kx + b$ ,  $k > 0$  ko‘rinishida yoki chiziqsiz  $y = a\sqrt{x} + b$ ,  $a > 0$  ko‘rinishida izlash mumkin.

Taklif funksiyasi chiziqli bo‘lganda va taklif uchun  $y_1 < y_2$  ekanligini nazarda tutgan holda taklif funksiyasi uchun (1) formulani qo‘llash lozim.

Taklif funksiyasi chiziqsiz bo‘lganda unda  $a$  va  $b$  parametrlar uchun

$$a = \frac{y_2 - y_1}{\sqrt{x_2} - \sqrt{x_1}} > 0, \quad b = \frac{\sqrt{x_2}y_1 - \sqrt{x_1}y_2}{\sqrt{x_2} - \sqrt{x_1}} > 0$$

hamda, chiziqsiz taklif funksiyasi modeli ushbu

$$y = \frac{y_2 - y_1}{\sqrt{x_2} - \sqrt{x_1}} \sqrt{x} + \frac{\sqrt{x_2}y_1 - \sqrt{x_1}y_2}{\sqrt{x_2} - \sqrt{x_1}} \quad (3)$$

funksiyasi bilan tasvirlanadi.

Talab va narx funksiyasini qaraymiz: Bizga qo‘ydagi jadval berilgan bo‘lsin,

$x$	10	15	20
$y$	25	18	?

Talab funksiyasini chiziqli ko‘rinishida yozamiz:  $y = kx + b$ ,  $k < 0$ ,  $b > 0$ .

Sodda hisoblashlar yordamida  $k = -\frac{7}{5}$ ,  $b = 39$  topamiz. Demak, model  $y = -\frac{7}{x} + 39$  ko‘rinishida bo‘ladi. Agar  $x = 20$  bo‘lsa  $y(20) = -\frac{7}{5} \cdot 20 + 39 = 11$  bo‘ladi. Bu sodda holda bashorat qilishdir.

Endi chiziqsiz talab funksiyasini  $y = \frac{a}{x} + b$  ko‘rinishida olamiz jadval elementlari bo‘yicha  $a$  va  $b$  larni topamiz  $a = 210$   $b = 4$ . Demak chiziqsiz funksiya  $y = \frac{210}{20} + 4 = 14,5$  ko‘rinishida bo‘ladi, natijalarni jadvalni uchunchi ustuniga qo‘yamiz.

**Xulosa.** Talab egri chiziq bo‘ylab kamaysa, talabning kamayish tezligi to‘g‘ri chiziq bo‘ylab kamayganidagi tezlikdan kam bo‘ladi. Demak, talab funksiyasini chiziqsiz ko‘rinishda izlash maqsadga muvofiqdir.

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## RAQAMLI TEXNOLOGIYALARNING O‘QUV JARAYONIGA TA’SIRI

**Usarov Azamat Asatullayevich**

Samarqand Davlat tibbiyot universiteti, Samarqand, O‘zbekiston

### **ANNOTATSIYA**

*Davlatimiz rahbari Shavkat Mirziyoyevning “Dunyoqarashni nima o‘zgartiradi – ilm, daromad, manfaat” degan o‘gitlari hozirgi Yangi O‘zbekiston yoshlarini ilm o‘rganishlari uchun eng zo‘r motivatsiya deb o‘ylayman [1,2].*

**Kalit so‘zlar:** *Ilm, bilim, vaqt, tajriba, muvaffaqiyat, AKT, pedagogik vazifa, o‘zgalTirish, yaxshilash, almashtirish.*

### **ABSTRACT**

*According to the head of our state, Shavkat Mirziyoyev, the teachings of "What changes the worldview - science, income, benefit" are the best motivation for the youth of New Uzbekistan to learn science.*

**Key words:** *Science, knowledge, time, experience, success, ICT, pedagogical task, change, improvement, replacement.*

### **KIRISH**

Qanday muhim fazilatlar egasi bo‘lishimizga qaramay, har birimiz o‘z faoliyatimiz davomida kam miqdorda bo‘lsa ham xatoga yo‘l qo‘yamiz va bunga haqqimiz bor. Ularni kelgusida bizga foydasi tegishi mumkin bo‘lgan tajriba deb hisoblaymiz. Muvaffaqiyat to‘g‘ridan-to‘g‘ri biz tomoningizdan o‘tkazilgan tajribalar soniga bog‘liq [3].

Har bir sohada yuqori malakali, haqiqiy mutaxassisdan saboq olish kerak. Aks holda, boshqa usullar chalkashlikka olib keladi. Vaholanki, domlaning dars berish uslubiga hamisha amal qilingan. Axir, bu ishonchli bilimga ega bo‘lishning yagona yo‘li.

## ADABIYOTLAR TAHLILI

Bir yutuq barcha muvaffaqiyatsiz urinishlaringizni “yuvib ketadi”. Tomas Edison ishqorli akkumulyatorni ixtiro qilgunga qadar 50 mingdan o‘rtiq muvaffaqiyatsiz tajribalar o‘tkazgan. [5] Mukammal lampani yaratish uchun esa 9 mingdan o‘rtiq muvaffaqiyatsiz tajriba olib borishiga to‘g‘ri kelgan. Shunday bo‘lsa-da, umrining oxiriga borib Edison 1100 patentga egalik qilgan. Qissadan hissa shuki, bilim olish katta mashaqqat talab etadi.

## NATIJALAR

Ayni paytda universitetda raqamli transformatsiya amalga oshirilmoqda, bu ichki yangilanishga asoslangan faoliyatning zamonaviy modelini qabul qilish, ilg‘or raqamli texnologiyalardan foydalanish asosida universitetda o‘zgarishlar va innovatsiyalar zarurligini anglashdan iborat. Universitetning raqamli transformatsiyasining muhim qismi ta‘lim jarayonini raqamlashtirishdir. Elektron ta‘lim va raqamli texnologiyalardan foydalanish universitetni rivojlantirishning strategik ustuvor yo‘nalishi va samarali pedagogik texnologiyalardan foydalanishga asoslangan raqobatbardosh ta‘lim dasturlarini yaratish shartidir [4].

Raqamli texnologiyalar va resurslarning ta‘lim jarayoniga kirib borishi quyida sanab o‘tilgan shartlarga asoslanadi.

- Ta‘lim jarayoni ijodkorlikka asoslanishi va fan bilimlarini egallashni ta‘lim, tadqiqot faoliyati va amaliy mashg‘ulotlar bilan uzviy bog‘lashi kerak.
- Ta‘lim siyosati raqamli didaktikadan foydalanishni, moslashuvchan ta‘lim modellarini va norasmiy ta‘limni tan olishni o‘z ichiga olishi kerak.
- Ta‘lim texnologiyalari ta‘lim sifatini va talabga javob beradigan kompetensiyalarni shakllantirishni kafolatlashi kerak.
- E-learning ta‘lim samaradorligi va qulayligini oshirishga qaratilgan bo‘lib, ochiq ta‘lim resurslaridan foydalanishni nazarda tutadi va zamonaviy yoshlarning “doim aloqada bo‘lish” istagiga mos keladi.

Uzoq vaqt davomida SAMGTUda, boshqa universitetlarda bo'lgani kabi, raqamli texnologiyalarni joriy etish, qoida tariqasida, faqat 1 va 2 darajalarda sodir bo'ldi. Natijada, o'quv jarayoni raqamli texnologiyalardan muntazam foydalanishga qaratilgan bo'lib chiqdi. texnologiyalar. Binobarin, ularning amalga oshirilishi ta'lim sifatining oshishiga, yangi ta'lim natijalariga erishilishiga olib kelishini kutish qiyin.

## **E-LEARNING**

Elektron ta'lim - bu kompyuter va zamonaviy axborot texnologiyalaridan foydalangan holda o'rganish. Elektron ta'lim tufayli talabalar:

- istalgan joyda va istalgan vaqtda bilim olish;
- kompyuter, planshet, telefonda o'quv materiallari bilan mustaqil ishlash;
- onlayn konsultatsiyalar, maslahatlar, o'qituvchilarning baholashlarini olish;
- chatlar, forumlar va vebinarlar orqali o'qituvchi va bir-biri bilan masofadan turib muloqot qilish.

Universitetda elektron ta'limni joriy etishning asosiy talablari: o'qitish shaxsiylashtirilgan, o'zlashtirishga asoslangan va interaktiv bo'lishi kerak. Shaxsiylashtirish har bir talabaning o'ziga xos ehtiyojlarini qondirish uchun zarur. O'qituvchilarning kontseptual masalalarni chuqur anglashlari uchun sharoit yaratish maqsadida asosiy e'tibor o'zlashtirishga qaratilishi kerak. O'rganish va hamkorlikdagi loyihalarda interfaol va guruh modellari rag'batlantiriladi [4].

Elektron ta'lim universitet talabalariga quyidagi imtiyozlarni beradi:

- talabalarning elektron kurs materiallaridan kechayu kunduz foydalanishlari va ularni qulay vaqtda, qulay joyda, o'z tezligida o'zlashtirishlari;
- talabalar va o'qituvchilar va talabalar o'ITasidagi aloqa vositalari istalgan vaqtda va istalgan joyda mavjud;
- talaba ish yoki sevimli mashg'ulotlariga ko'proq vaqt ajratish imkoniyatiga ega bo'lsa, yanada moslashuvchan jadval bo'yicha o'qish imkoniyati mavjud;
- o'qituvchining o'qituvchiga bog'liqligi kamayadi, o'quv natijalarini baholash ob'ektiv bo'ladi, muloqot va test sinovlarida psixologik keskinlik pasayadi;

- masofaviy ta'lim jarayonida talabalar kunduzgi bo'lim talabalari bilan bir xil darajada zarur bilim va ko'nikmalarni egallash imkoniyatiga ega bo'ladilar.

O'qituvchilar ham elektron ta'lim texnologiyalaridan foydalanishga qiziqishadi, chunki:

- fanning mazmunini elektron muhitda taqdim etish uchun o'qituvchi turli vositalardan (matn, gipermatn, multimedia, interaktivlik) foydalanishi mumkin va b;

### **XULOSA O'RNIDA**

SAMGTUda elektron ta'lim quyidagi shakllarda amalga oshiriladi, ular sinf va elektron komponentlar o'ITasidagi ishlarni taqsimlash va o'quv jarayonini tashkil etish usullarida bir-biridan farq qiladi:

- veb-quvvatlash yordamida an'anaviy ta'lim (veb-fasillashtirilgan ta'lim, o'quv materiallarini talabalarga etkazish uchun elektron ta'lim tizimi qo'llaniladi, ular bilan ular asosan mustaqil ishlaydi);

- aralash ta'lim (aralashirilgan ta'lim, bilimlarni uzatish bilan bog'liq bo'lgan kursning kontakt ishining kamida 80% onlayn tarzda amalga oshiriladi; sinfda o'qitish odatda seminar tipidagi darslar bilan bog'liq va onlayn darslar bilan birlashtiriladi);

- to'liq onlayn ta'lim (onlayn o'rganish, kursning 80% dan oITig'i onlayn, ko'pincha yuzma-yuz muloqotsiz).

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## O‘ZBEKISTON HUDUDIDA KARTOSHKKA QURTI, KOLORADO QO‘NG‘IZINI TARQALISHI VA UNDAN O‘SIMLIKLARNI HIMOYA QILISH

Zubaydullayev Shohruhxon Nodir o‘g‘li

[zubaydullayev29.05.2005z@gmail.com](mailto:zubaydullayev29.05.2005z@gmail.com)

Xolmurodova Gulnoza Qurbonali qizi

Termiz agrotexnologiyalar va innovatsion

rivojlanish instituti talabalari

[xolmurodovag68@gmail.com](mailto:xolmurodovag68@gmail.com)

***Annotatsiya:** ushbu maqolada kartoshka qurti, kolorado qo‘ngizining tuzulishi, xususiyatlarini o‘rganish orqali unga qarshi kurashishning kimyoviy, agrotexnik va sanitariya usullar va xususidagi fikirlar keltirildi.*

***Kalit so‘zlar:** Kartoshka qurti kolorado qo‘ngizi bargxo‘rlar, entomofag jon zod, kimyoviy usullar, agrotexnik usul, qirquvchi usullar.*

### KIRISH

Endi kartoshkaga haf soladigan zararkunanda hashorotlarni ko‘rib chiqamiz.

Kolorado qo‘ng‘izi vatani AQSH Kolorado shtati. Shimoliy Amerika, 20-asr boshlaridan Yevropa mamlakatlarida (1922-yilda Fransiyada topilgan), keyinchalik Sharqiy Yevropa, Ukraina, Belorussiyada tarqaldi.

O‘zbekistonga Belorussiyadan urug‘lik kartoshka bilan dastlab Bo‘stonliq va So‘x tumanlariga (1972-yil) kelib qolgan. Hozir Xorazm, Buxoro viloyatlari va



Qoraqalpog‘istondan tashqari barcha viloyatlarda tarqalgan, kartoshka, baqlajon ekinzorlariga katta zarar yetkazmoqda.

Kolorado qo‘ng‘izi - bu juda katta zararkunanda hasharotlardan biri bo‘lib , kattalarini uzunligi 8 - 12 mm gacha va kengligi 7 mm gacha o‘sishi mumkin. Qo‘ng‘izlar tanasining shakli ma‘lum darajada suv tomchisini eslatadi: cho‘zinchoq, pastda tekis va tepasi qavariq bo‘ladi. Voyaga etgan qo‘ng‘iz 140-160 mg vaznga ega bo‘lishi mumkin. Rivojlanishning birinchi bosqichida kolorado qo‘ng‘izining lichinkasi to‘q kulrang, tanasi 2,5 mm gacha va mayda - mayda sochlari bor. U juda yumshoq yosh barglar bilan oziqlanadi, barglarni etini pastki qismidan iste‘mol qiladi.



### **Kartoshkani zararlanishiga olib keladigon hashorotlar**

Kolorado qo‘ng‘iziga qarshi samarali kurash vositalari yo‘q. Muhimi karantin Tadbirlari, kimyoviy preparatlardan foydalonib, buldok, detsis, konfidor, maspilan,

xostation, regent, sumialfa va boshqalardan foydalanish tavsiya etiladi. Hashorotlarga qarshi kurashda tabiiy va samarali usullarini birma - bir ko‘rib chiqamiz.

1. Piyoz po‘stlog‘i: Malum bo‘lishicha kolorado qo‘ng‘izini piyoz, xantal, sarimsoq, yalpizning o‘tkir hidiga toqati yo‘q. Shuning uchun mutaxassislar kartoshkani ushbu o‘simliklar bilan almashinib ekishni tavsiya etadi. Xususan, urug‘ qadash jarayoniga chuqurchaga piyoz po‘stlog‘ini ham tashlab qo‘yish yaxshi samara beradi

2. Hashorotlar qarshi kurashishda yana bir foydali va ekologik havfsiz metodlaridan biri. Ularni qo‘lda terib chiqish – kichikroq hamda kamsonli “lashkar” yigilgan maydonda ayniqsa qol leladi. Ammo, mayda lichinkalarini terish biroz diqqattalab yumush. Ko‘proq o‘simlik yapirog‘ini pastki qismiga e‘tibor qilsak, to‘q sariq rangli mitti kushanda odatda usha yerga berkingan bo‘adi.

3. Entomofag jonzodlar haqida eshitganmisiz unda bilib qo‘ying, bu termin o‘zi hashorot, bo‘la turib, ayni turdagi “maxluqotlar” bilan oziqlanadigonlarga nisbatan qo‘llaniladi. Masalan xonqizi, jujelitsa, qandala, chumoli va o‘rgimchaklar – kolorado qo‘ng‘izini tabiatdagi ashadiy dushmanlari hisoblanadi. Ammo ular uy sharoitida emas, biolaboratoriyalarda ko‘paytirish qulayroqdir.

4. Qatron: uning hidi o‘tkir va yoqimsiz, ammo qo‘ng‘iz bolasidan qutulmoqchi bo‘lsangiz, chidashda majbursiz. 1,5 litir shisha idishni qaynoq suv bilan to‘ldirasiz va unga 10 millilir qatiron qo‘shib, yaxshilab aralastiramiz. Keyin shesha qopqog‘idan kichkina “darcha” ochib gullash davrida kartoshka tublariga ishlov beriladi.

5. O‘simliklar kiliniklari, yaniy hozirgi kunda kelib tarqalayotgan kartoshka kuyasi bilan Kurashishga kirishiyotganda, shuni yodda tutingki ularni turli zararli moddalar bilan butkul yo‘q qilish - imkonsiz har popiliyatsiya jarayonida jonini omon saqlashning uddasidan chiqqan hashorot barbir topiladi. Buning uchun masalan “O‘simliklar kilinikasiga” murojat qilishimiz mumkun.

**Agrotexnik himoya usuli** (o‘simliklar himoyasida) — zararkunanda hasharotlar va kasalliklarning mavjudligi, zararkunandalarni, ko‘payishi va keng tarqalishiga tusqinlik qiluvchi sharoitlarni yara-tishga qaratilgan agrotexnik choratadbirlar. Bu

usulda zararkunandalarning qishlashi, yashab qolishi va rivojlanishi uchun noq va ekish usullari, muddatlarini tanlash, o'g'itlarni qo'llash, ekin navlarini tanlash bo'yicha muayyan tadbirlarni qo'llaniladi. Agrotexnika orqali ekologik sharoitni o'zgartirib, o'simliklarni hasharot va kasalliklardan himoya qilishga faol ta'sir ko'rsatish mumkin. Dehqonchilikda Agrotexnikning asosiy choralari: almash-lab ekish, o'simlik qoldiqlarini kuzda yig'ishtirib olishimiz mumkin.

**Kimyoviy himoya usuli** (o'simliklar himoyasida) — o'simlik zararkunandalari, kasalliklari va begona o'tlarga qarshi kurashda kimyoviy moddalardan foydalanish. Jahon qishloq xo'jaligida 1945 – yildan keyin bir qator samarali preparatlar yaratilishi bilan keng qo'llanila boshladi. Kimyoviy himoya usulida faqatgina xo'jalik hamda sanitariya - gigiyena jihatdan aprobatsiyadan o'tgan va Davlat komissiyasi ruxsat etgan pestitsidlar qo'llaniladi.

## Xulosa

Ushbu maqolani yozishdan maqsad O'rta Osiyo hududlatidan, jumladan O'zbekiston hududlariga ham keng tarqalgan ituzumdoshlar oilasiga mansub kartoshka ekinini zararlaydigan turli xildagi, zararkunanda hashorotlardan qutulish va ulardan, ekinlarni tozalash, yaxshi hosil olishi uchun qo'yiladigan chora tadbirlarni o'rdanish va buni ommaga tadbiq etish. Zararkunanda hashoratlardan qutulish uchun ham tabiiy va kimyoviy usullar orqali yangidan – yangi choralar qaytadan ishlab chiqilmoqda. O'simliklarga zararkunandalarni tarqalishi va turlarni xilma – xilligini shakillanishi tashqi muhitning o'zgaruvchanligi hamda turlarning ekologik moslashuvi bilan uzviy bog'liq. Har bir tur o'zi uchun qulay hudutga joylashadi. Jumladan O'zbekiston hudutlariga ham keng miqiyosda kartoshka va boshqa poliz ekinlariga katta ziyon yetkazadigan hashorotdir. Zararkunanda hashorotlarga qarshi kurashishda bir qancha samaraliy kimyoviy periparatlardan fazolon, detsis, maspilan kabi usullar O'zbekiston hududlariga keng qo'llanadi va boshqa hududlarga ham bu usullar tavsiya etiladi.

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## PAXTA TOLALI IP CHIZIQLI ZICHLIGINING UNING HAJMIY ZICHLIGI VA KO'NDALANG KESIMI BO'YICHA TA'SIRI

**Mardonov Salohiddin Ergashevich**

Buxoro muhandislik-texnologiya instituti

***Annotatsiya:** Ip diametri to'quv va trikotaj matolarini loyihalash bilan bog'liq hisob-kitoblarda qo'llaniladigan eng muhim ko'rsatkichlardan biri hisoblanadi. Shu nuqtai nazardan, mato yoki trikotaj mato ishlab chiqarishda asosiy to'ldirish parametrlarini aniqlashning to'g'ri natijasini olish eng muhim omil hisoblanadi. Berilgan topshiriqni yechish uchun qayta tarash va karda tizimidagi har xil chiziqli zichlikdagi iplardan turli namunalar tanlab olindi. Yuqoridagi tadqiqotlar asosida paxta tolali ipining hajmiy zichligi va uning doimiy pishitish koeffitsienti va chiziqli zichligi orasidagi bog'liqlikning ilmiy asoslangan matematik modeli taklif qilingan.*

***Tayanch iboralar:** Ip, trikotaj, chiziqli zichlik, karda, mato, ko'ndalang kesim, parametr, loyihalash, diametr, buram.*

## ВЛИЯНИЕ ЛИНЕЙНОЙ ПЛОТНОСТИ ХЛОПЧАТОБУМАЖНОЙ ПРЯЖИ НА ЕЁ ОБЪЕМНУЮ ПЛОТНОСТЬ И ПОПЕРЕЧНОЕ СЕЧЕНИЕ

**Мардонов Салохиддин Эргашевич**

Бухарский инженерно-технологический институт

***Аннотация:** Диаметр пряжи является одним из важнейших показателей, используемых при расчетах, связанных с проектированием тканых и трикотажных полотен. В этой связи его расчет является важнейшим фактором для получения корректного результата определения основных*

заправочных параметров при выработке ткани или трикотажного полотна. Для решения поставленной задачи отобраны различные образцы гребенной и кардной пряжи различной линейной плотности. На основании приведенных исследований предложена научно обоснованная математическая модель зависимости объемной плотности хлопчатобумажной пряжи от ее линейной плотности при постоянном коэффициенте крутки.

**Ключевые слова:** Нить, трикотаж, линейная плотность, карда, ткань, поперечное сечение, параметр, проектирование, диаметр, скрутка

## INFLUENCE OF LINEAR DENSITY OF COTTON YARN ON ITS BULK DENSITY AND CROSS SECTION

**Mardonov Salohiddin Ergashevich**

Bukhara engineering-technological institute

**Abstract:** Yarn diameter is one of the most important parameters used in calculations related to the design of woven and knitted fabrics. In this context, it is the most important factor to obtain the correct result of determining the main filling parameters in the production of fabric or knitted fabric. To solve the given task, different samples of yarns of different linear density in the carding and carding system were selected. On the basis of the above researches, a scientifically based mathematical model of the relationship between the volume density of cotton fiber yarn and its constant cooking coefficient and linear density is proposed.

**Key words:** Thread, knitwear, linear density, carded, fabric, cross section, parameter, design, diameter, twist

To‘qimani loyihalash bilan bog‘liq hisoblashlarda ip diameti eng muhim ko‘rsatkichlardan biridir. Shu jumladan to‘qima ishlab chiqarishda asosiy to‘ldirish parametrlarini to‘g‘ri tanlash uni to‘g‘ri hisoblash muhim ahamiyatga ega va natijaga erishishning eng muhim omili hisoblanadi. Ipnining diametrini aniqlash uchun quyidagi formuladan foydalanadi

$$d = 0,0357 \sqrt{\frac{T}{\gamma}}, \quad (1)$$

Bu yerda  $d$  – ip diametri, mm;  $T$  – ipning chiziqli zichligi, teks;  $\gamma$  – ipning hajmiy zichligi, mg/mm<sup>3</sup>.

Adabiyotlar tahlilidan ma'lum bo'ldiki ip diametrini hisoblash uchun nafaqat uning chiziqli zichligi va ipdagi buramlar sonini balki ip ko'ndalang kesimidagi tolalar soni yoki o'rganilayotgan ipning chiziqli zichligi va bir qator jadval qiymatlar orasidagi bog'liqligini ham bilish kerak. Bunday holda, bu nisbat namunadagi va o'rganilayotgan iplarni ko'ndalang kesimidagi tolalar sonining farqiga proporsionaldir va to'liq ularning absolyut qiymatini almashtirishi mumkin. [5] ishda apparat tizimida yigirilgan jun tolali ipning chiziqli zichligini o'zgarimas pishitish darajasi turlicha bo'lganda uning hajmiy zichligi va diametrini aniqlash formulasi taklif qilingan. (Pishitish koeffitsiyenti),  $\alpha = \text{const}$ :

$$d = 0,0357 \sqrt{\frac{T}{\gamma}}, \quad (2)$$

Bu yerda  $\gamma(T)$  – chiziqli zichlik ( $T$ ) bilan ko'rib chiqilayotgan ipning hajmiy zichligi;  $m$  – ip tuzilishining tartibliligini tavsiflovchi parametr; apparat tizimida yigirilgan jun tolali ipning  $m = 0,11$ ;  $t \gamma$  – ipning hajmiy zichligi miqdori 84 teks, metrik pishitish koeffitsienti  $\alpha = 133$  va 100% junning ma'lum bir navi bilan ishlab chiqariladi.

Jun tolalari uzunligi, chiziqli zichligi va buramdorlik darajasi paxta tolalaridan sezilarli darajada farq qiladi, ipning chiziqli zichligi bo'yicha hajmiy zichligini aniqlash singari bunday omillarning ta'sir darajasini aniqlash qiziqish uyg'otadi. To'qimachilik ishlab chiqarish mahsulotlarini loyihalashda ikki turdagi bir-biridan tubdan farq qiluvchi tolalarni ipning hajmiy zichligiga va uning diametriga ta'sir qilish darajasi bo'yicha taqqoslash muhimdir [1,2,3,4].

Ushbu ishning vazifalaridan biri pishitish koeffitsientiga bog'liq ravishda paxta ipining diametrini hisoblash uchun keyinchalik olingan qiymatdan foydalanish uchun paxta ipining (2) formuladagi  $m$  parametrini aniqlashdan iborat.



Apparat tizimida olingan jun tolali iplar o'z xususiyatlariga ko'ra paxta ipidan tubdan farq qilganligi sababli (2) formulani quyidagi shaklga o'zgartirish taklif etiladi:

$$\gamma^{(T)} = \gamma_t \left( \frac{40}{T} \right)^m \quad (3)$$

(3) formulada chiziqli zichlik 40 teksga teng paxta iplari, tasodifan tanlanmagan.

Tolali materiallardan ip hosil bo'lishining fizik asoslari tolaning har qanday turi uchun bir xil bo'lganligi sababli, paxta ipining chiziqli zichligi qiymatini 40 teks va paxta iplari 40 teksga teng bo'lishidan kelib chiqib belgilashga qaror qilindi. Jun ip 84 teks ularning ko'ndalang kesimida taxminan bir xil miqdordagi tolalarga ega bo'lishi kerak. Bundan tashqari, paxta ipi uchun pishitish koeffitsienti jadval qiymati 80 ga teng bo'lishi taklif etiladi [5,6].

Turli xil chiziqli zichlikdagi iplarning mikroskop ostida ko'ndalang kesimini aniqlash uchun tanlangan namunalari tekshirildi. Buyum stolchasida iplar 4,9 cN bir xil taranglik ostida buram berib o'ralgan. 5-7 m uzunlikdagi har bir ip namunasi uchun 80 martagacha o'lchashlar o'tkazildi, bu esa 1% dan ko'p bo'lmagan nisbiy xatolikka erishishga imkon berdi. Paxta tolali ipni o'rganish mobaynida quyidagi chiziqli zichlikka ega bo'lgan qayta tarash va karda tizimidagi iplar ishlatildi.

- 1) qayta tarash tizimidagi ip : 14, 18,5 va 37 teks;
- 2) karda tizimidagi ip: 24, 40 va 56 teks.

Tajriba natijalari 1-jadvalda keltirilgan. Jadvalda chiziqli zichligi 2 teksli ip uchun faraziy ma'lumotlar keltirilgan, chunki aslida bunday ipni olish mumkin emas. Bunday kichik chiziqli zichlikka ega bo'lgan ipning hajmiy zichligi 10 ga teng bo'lgan ko'ndalang kesimdagi tolalar sonining olti burchakli tuzilishi uchun hisoblangan. Strukturaning nomukammallik koeffitsienti qayta tarash tizimidagi ip uchun 0,9 ga, karda tizimidagi ip uchun 0,83 ga teng deb qabul qilindi.

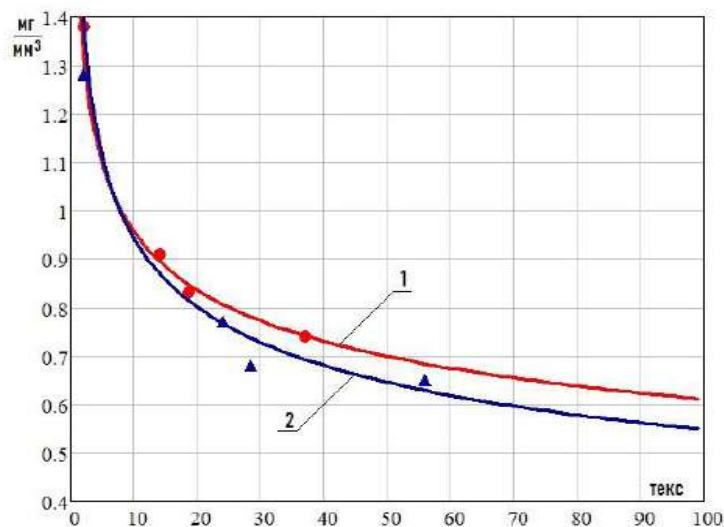
### 1-Jadval

Paxta ipining turi	Ipning chiziqli zichligi, teks	Ip diametri d,mm	Ipning hajmiy zichligi,mg/mm <sup>3</sup>
Qayta tarash	2	0,043	1,38
	14	0,140	0,91
	28	0,207	0,83
	37	0,252	0,74
Karda	2	0,045	1,28
	24	0,199	0,77
	28,5	0,231	0,68
	56	0,331	0,331

1-rasmda Mathcad matematik to'plami grafiklar shaklida tajriba ma'lumotlarini qayta ishlash va o'rganilayotgan ip namunalarning hajmiy zichligini hisoblash natijalari ko'rsatilgan.(1–qayta tarash tizimidagi ip; 2–karda tizimidagi ip; doirachalar va uchburchaklar-mos ravishda ipning hajmiy zichligi tajriba qiymatlari) [6,7].

m parametrini va hajmiy zichlikning jadvali qiymatini hisoblash eng kichik kvadratlar usuli yordamida ham Mathcad paketi yordamida amalga oshirildi.

1-rasmdan ko'rinib turibdiki ipning chiziqli zichligi oshishi bilan bir xil darajada pishitib ishlab chiqarilganligi  $\alpha$  va uning hajmiy zichligi kamayadi. Bu ipning ko'ndalang kesimidagi tolalar sonining ko'payishi va shunga ko'ra, ichki tolalarning qarshiligini oshirish tashqi tolalardan siqilishga chidamliligi oshishi bilan bog'liqdir.



1-Rasm

Qayta tarash va karda tizimida olingan iplar uchun  $m$  parametrining qiymatlaridagi farq tolalarni tekislash va yo'naltirishning turli darajalari bilan bog'liqdir. Chunki qayta tarash yigirish tizimida olingan iplardagi tolalar yaxshi yo'naltirilgan va to'g'rilanganligi sababli, ularni pishitish orqali ixchamlash osonroq bo'ladi va ip karda tizimida olingan ipga qaraganda yuqori mustahkamlikka ega bo'ladi [8,9,10].

2-jadvaldan ko'rinib turibdiki, (3) formulada qo'llaniladigan  $m$  parametr sezilarli darajada (2) modeldagi o'xshash parametrdan farq qiladi, bu oxir-oqibatda (1) formuladan foydalangan holda ip diametrining hisoblashga sezilarli darajada ta'sir qiladi.

## 2-Jadval

№	Tola turining nomi	Yakka ip			
		$m$	$\gamma_t, \text{mg/mm}^3$	$T_t, \text{teks}$	$\alpha_t$
1	Ingichka tolali paxta I-III tip (Qayta tarash tizimida olingan ip uchun)	0,195	0,73	40	80
2	O'rta tolali paxta IV-VII tip (Karda tizimida olingan ip uchun)	0,235	0,68	40	80

Tajriba ma'lumotlari 2-jadvalda keltirilgan va bundan to'quv yoki trikotaj kabi to'qimachilik materiallarini loyihalashda paxta tolali ipning diametrini hisoblash uchun ma'lumotnoma sifatida foydalanish mumkin [8,9,10].

Xulosa qilib shuni aytish mumkinki; 1.Yuqoridagi tadqiqotlar asosida o'zgarmas pishitish koeffitsientida ipning chiziqli zichligining uning hajmiy zichligiga bog'liqligining ilmiy asoslangan matematik modeli ishlab chiqildi. 2.Qayta tarash va karda paxta yigirish tizimlari uchun ip tuzilishining tartiblilikini tavsiflovchi parametr aniqlandi. 3.Tadqiqot natijalari ilmiy yangilikka ega bo'lib, gazlama va trikotaj mahsulotlarini loyihalashda paxta tolali ipning diametrini hisoblash modellarida qo'llanilishi mumkin.

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## KIMYOVIY ELEMENTLARNING INSON ORGANIZMIDAGI ROLI

**Saydaxmetova Shaxnoza Ravshanbekovna,**

Nizomiy nomidagi TDPU Kimyo va uni o'qitish metodikasi  
kafedrası dotsent vazifasini bajaruvchi, PhD.

[Saydaxmetova\\_shaxnoza77@mail.ru](mailto:Saydaxmetova_shaxnoza77@mail.ru)

**Feruza Pardayeva Sherzod qizi**

Nizomiy nomidagi TDPU Kimyo yo'nalishi  
3-kurs talabasi

***Annotatsiya:** Ushbu maqolada inson organizmidagi kimyoviy elementlar haqida so'z boradi. Inson organizmidagi mikroelementlar kabi makroelementlarning ham ahamiyati juda katta. Inson tanasi uchun 30 ga yaqin kimyoviy elementlarning roli aniq belgilab qo'yilgan, ularsiz u normal mavjud bo'lolmaydi. Ushbu elementlar hayotiydir. Bir yoki boshqa elementning yetishmaligi sabab, odam ma'lum kasalliklarning ko'rinishiga duch kelishi mumkin. Bunga yo'l qo'ymaslik uchun inson tanasiga makro- va mikroelementlar nima uchun kerakligini va ularning qancha miqdorda bo'lishi kerakligini tushunish kerak.*

***Kalit so'zlar:** kimyoviy, element, biologik, organizm, modda, uglerod, hujayralar.*

## РОЛЬ ХИМИЧЕСКИХ ЭЛЕМЕНТОВ В ОРГАНИЗМЕ ЧЕЛОВЕКА

**Сайдахметова Шахноза Равшанбековна**

PhD, исполняющий обязанности доцента  
Ташкентского государственного педагогического  
университета имени Низами

[Saydaxmetova\\_shaxnoza77@mail.ru](mailto:Saydaxmetova_shaxnoza77@mail.ru)

**Феруза Пардаева Шерзод кизи**

Студент 3 курса направления химия ТГПУ им. Низами

**Аннотация:** В этой статье речь идёт о химических элементах имеющих в организме человека. Значение макроэлементов в организме человека, как и микроэлементов в организме человека, очень велико. Для человеческого организма четко определена роль около 30 химических элементов, без которых он не может нормально существовать. Эти элементы жизненно важны. Из-за нехватки того или иного элемента у человека может возникнуть появление некоторых заболеваний. Чтобы этого не произошло, необходимо понимать, для чего организму человека нужны макро-и микроэлементы и в каком количестве они должны присутствовать.

**Ключевые слова:** химический, элемент, биологический, организм, вещество, углерод, клетки.

## THE ROLE OF CHEMICAL ELEMENTS IN THE HUMAN BODY

**Saydakhmetova Shakhnoza Ravshanbekovna**

PhD, Acting Associate Professor of  
Tashkent State Pedagogical University named after Nizami  
[Saydaxmetova\\_shaxnoza77@mail.ru](mailto:Saydaxmetova_shaxnoza77@mail.ru)

**Feruzha Pardayeva Sherzod qizi**

3rd year student of the chemistry direction of  
TSPU named after Nizami

**Abstract:** In this article we are talking about the chemical elements that have in the human body. The value of macronutrients in the human body, as well as trace elements in the human body, is very high. For the human body, the role of about 30 chemical elements is clearly defined, without which it cannot exist normally. These elements are vital. Due to the lack of this or that element, a person may experience the appearance of certain diseases. To avoid this, it is necessary to understand why the human body needs macro- and microelements and in what quantity they should be.

**Key words:** chemical, element, biological, organism, substance, carbon, cells.

## KIRISH

Ko'pgina olimlarning fikriga ko'ra, tirik organizmda nafaqat barcha kimyoviy elementlar mavjud, balki ularning har biri o'ziga xos biologik funksiyani bajaradi. Tirik organizmlarning bir qismi bo'lgan va bir vaqtning o'zida biologik funksiyalarni bajaradigan kimyoviy elementlar biogen elementlar deyiladi[1, 178]. Ular hujayralarda juda kam miqdorda uchrasa-da, muhim biologik ahamiyatga ega. Biogen elementlar mikro va makroelementlarga bo'linadi. Ba'zi olimlarning qarashlari bundan ham chuqurroqdir. Ularning fikricha tirik organizmda nafaqat barcha kimyoviy elementlar mavjud, balki ularning har biri o'ziga xos biologik funksiyani bajaradi, deb hisoblaydilar[4, 8]. Bu gipoteza tasdiqlanmasligi ham mumkin. Ammo bu yo'nalishdagi tadqiqotlar rivojlanib borishi bilan kimyoviy elementlarning ko'payib borayotgan biologik roli aniqlanmoqda[2, 12].

## ADABIYOTLAR TAHLILI VA METODOLOGIYA

Tabiat bo'ylab topilgan elementlarning ko'pchiligi ham tananing ichida joylashgan. Tana uchun foydali va zarur bo'lgan barcha moddalar unga oziq-ovqat mahsulotlari, ayrim moddalarning yetishmasligini bartaraf etish uchun mo'ljallangan biologik qo'shimchalar tufayli kiradi. Shuning uchun inson dietasiga juda ehtiyot bo'lishi kerak bo'ladi. Darhaqiqat, inson tanasi uchun makro- va mikroelementlarning roli benihoya katta. Axir ular ko'plab jarayonlarda faol ishtirok etadilar. Mikro va makro elementlarning funksiyalarini boshlashdan oldin ularning ta'rifini tushunish kerak.

1. Makroelementlar. Ular hujayra moddasining asosiy qismini tashkil qiladi. Ular umumiy hujayra massasining taxminan 99 %ni tashkil qiladi. To'rt elementning konsentratsiyasi ayniqsa yuqori: kislorod, uglerod, azot va vodorod (barcha makroelementning 98%). Makroelementlarga hujayradagi tarkibi foizning o'ndan bir qismi bilan hisoblangan elementlar ham kiradi. Bular nisbatan past atom massaga ega bo'lgan 11 ta element: vodorod, uglerod, azot, kislorod, magniy, natriy, kaliy, kalsiy, oltingugurt, fosfor va xlordir.



2. Mikroelementlar. Bularga asosan fermentlar, gormonlar va boshqa hayotiy moddalarning bir qismi bo'lgan og'ir metall ionlari kiradi. Organizmda bu elementlar juda oz miqdorda bo'ladi: 0,001 dan 0,000001% gacha; Bunday elementlarga bor, kobalt, mis, molibden, rux, vanadiy, yod, brom va boshqalar kiradi.

### ASOSIY QISM

Inson tanasi 60 % suv, 34% organik va 6% noorganik moddalardan iborat. Suv-barcha tirik organizmlarning asosiy moddasidir. Ko'pgina tirik organizmlarning hujayralarida o'rtacha suv miqdori taxminan 70% ni tashkil qiladi. U ham hujayralar orasida mavjud. Masalan, qon va to'qimalar va hujayralarning suyuqligi asosan suvdur. Organik moddalarning asosiy komponentlaridan uglerod, vodorod, kislorod bo'lib, ularga azot, fosfor va oltingugurt ham kiradi. Inson tanasida 22 xil kimyoviy elementlar mavjud: S, B, Na, Mg, Cl, K, N, Mn, Fe, Cr, Si, Se, Ca, P, Co, Ni, Cu, Zn, Ag, Pb, Mo. So'nggi paytlarda to'qima va hujayralardagi gipotireoz rivojlanishida energiya, kislorodning faol shaklini hosil bo'lishi bilan boradigan patologik jarayonlarni korreksiyalash muammolariga katta e'tibor qaratilmoqda. Hozirgi kunda mamlakatimizda qalqonsimon bez yetishmovchiligi bilan bog'liq kasalliklarni davolash uchun ijobiy ta'sirga ega dori vositalarini yaratishga va amaliyotga joriy qilishga alohida e'tibor qaratilmoqda[6, 2021].

Kimyoviy elementlarning biologik roli quyidagicha:

❖ Oltingugurt ba'zi aminokislotalarda va oqsillarda uchraydi. Bu tana massasining taxminan 0,2-0,3% ni tashkil qiladi.

❖ Natriy, kaliy kabi musbat zaryadlangan iondir. Bu tana massasining taxminan 0,1-0,2% ni tashkil etadi. Natriy tufayli osmotik bosim, kislota-ishqor muvozanatini bir darajada ushlab turish mumkin. Natriy va nerv impluslarini yetkazib berish uchun javobgardir va qon, hujayralardagi suv hajmiga nisbatan homeostazni saqlaydi. Natriyning yetishmasligi kasalliklarning rivojlanishiga olib keladi. Tanadagi suyuqlik muvozanatini saqlashda ishtirok etadi.

❖ Azot inson tanasidagi yana bir muhim element bo‘lib, umumiy tana vaznining 3% ni tashkil etadi. Oqsillarning qurilish bloklari bo‘lgan aminokislotalarning va nuklein kislotalarning muhim tarkibiy qismi hisoblanadi.

❖ Rux tirik organizmda vitaminlar kabi muhim ahamiyatga ega. 70 kg li odam organizmida ruhning miqdori 1,4-2,3 grammga teng. Ruh organizmda eng ko‘p miqdorda muskullarda, terida, jigarda, sochda va prostata bezida uchraydi, skelet muskullari bu elementga boy[6, 26639]. Ruh yaralarni erta davolashga, shikastlangan joylarni tiklashga olib keladi.

❖ Magniyning barcha elementlar orasida vazifalari kengdir. U suyaklar, tishlarning shakllanishida, safro ajralishida, ichaklarning ishida, asab tizimini barqarorlashtirishda, yurak ish faoliyatini normallashtirish unga bog‘liq. Ushbu element yetishmasa oshqozon-ichak traktiga, safro ajralish jarayonlariga ta’sir qilishi mumkin[3, 176; 6, 26641].

❖ Inson tanasida eng ko‘p miqdorda bo‘lgan element bu-kislorod. U umumiy tana vaznining 65% ini tashkil qiladi. Bundan tashqari, hujayrani nafas olishi uchun kislorod ham muhim ahamiyatga ega.

❖ Uglerod barcha organik birikmalarda mavjud bo‘lgan, miqdor jihatdan ikkinchi o‘rindagi element bo‘lib, tana massasining 18% ini tashkil qiladi. Uglerod hayot uchun muhim element hisoblanadi. Chunki u barcha organik molekulalarning, jumladan uglevodlar, oqsillar va nuklein kislotalarning asosini tashkil qiladi[4, 6].

❖ Inson tanasida eng ko‘p uchraydigan uchinchi element vodoroddir. U umumiy tana vaznining 10 %ini tashkil qiladi. Vodorod suv molekulalarining, shu bilan bir qatorda nuklein kislotalar va lipidlarning muhim tarkibiy qismidir.

❖ Kaltsiy tishlar va suyaklarda topilgan eng muhim element va mushaklarning qisqarishi va asab tolalarda impulslarning uzatilishida muhim rol o‘ynaydi. Uning yetishmasligi oqibatida osteoporoz kabi suyak va tish muammolariga olib kelishi mumkin[3, 156, 5, 2021].

❖ Temir tufayli organizmda oksidlanish jarayoni sodir bo‘ladi. Chunki u sitoxromlarga kiradi. Temirning yetishmasligi o‘sish jarayonining kechikishiga,

tananing zaiflashishiga va eng yomoni anemiya rivojlanishiga olib kelishi mumkin, bu qizil qon tanachalari sonining kamayishi va qonning kislorodni tashish qobiliyatining pasayishi bilan tavsiflanadi[1, 2043].

❖ Selen kuchli immunitet tizimini ta'minlaydi. Agar bu element yetishmasa, mushaklarning, ayniqsa yurak zaiflashishiga olib keladi. Natijada, o'sish, kamqonlik va suyak shakllanishi bilan bog'liq muammolar kelib chiqadi.

❖ Ftor tish emalining bir qismi hisoblanadi. Agar fluor elementi kam miqdorda bo'lsa, ya'ni yetishmasa unda tish emalining shikastlanishiga va kariyesiga sabab bo'ladi[1, 2044].

Inson organizmidagi elementlar yetarli miqdorda bo'lmasa organizmda o'zgarishlar boshlanadi, misol uchun yod ionini yetishmasa, odamda bo'qoq kasalligi, temir ionini yetishmasa kamqonlik, fosfor va kalsiy yetishmasa suyak kasalligi kabilar kelib chiqadi. Tirik organism uchun zahar bo'lgan juda ko'p sonli elementlar mavjud, masalan, simob, talliy va boshqalar. Ular salbiy biologik ta'sirga ega, ammo ularsiz organism ushlay oladi. Hozirgi vaqtda, deyarli barcha tirik organizmlar ion fenomeni-ionlarning hujayra ichida va tashqarisida notekis taqsimlanishi bilan tavsiflanadi. Masalan, mushak tolalari, yurak, jigar va buyraklar hujayralari ichida hujayradan tashqari tarkibga nisbatan kaliy ionlarining ko'payishi kuzatiladi. Natriy ionlarning konsentratsiyasi, aksincha, hujayra tashqarisida uning ichidagiga qaraganda yuqori. Demak, tirik organizmga kimyoviy elementlarning ta'sir etish doirasi keng.

## **XULOSA VA TAKLIFLAR**

Xulosa o'rnida shuni ta'kidlash joizki, inson har qanday oziq-ovqatni iste'mol qilmasin, u uchun foydali mikro va makroelementlar ovqat tarkibidan organizmga o'tib, insonni ma'lum darajada immunitet bilan ta'minlaydi. Ularning muvozanatini tiklash uchun kerakli elementni o'zida mujassam etgan mahsulotlarga ustunlik berib, to'g'ri oziq-ovqatni tanlash, ya'ni to'g'ri ovqatlanish tizimini yo'lga qo'yish kerakdir.

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## E.VOHIDOVNING “RUHLAR ISYONI” DOSTONI TAHLILI

**Abdusamatova Nozanin Azim qizi**

Samarqand davlat universiteti

Urgut filiali o‘zbek tili va adabiyoti yo‘nalishi talabasi

***Annotatsiya:** Ushbu maqolada Erkin Vohidov dostonlari, xususan “Ruhlar isyoni” dostoni tahlili haqida fikr yuritilgan. Maqolada doston bosh qahramoni – Nazrul Islom hayot yo‘li, hamda asar syujetidagi ayrim voqaealar qisqacha bayon etib o‘tilgan.*

***Kalit so‘zlar:** Doston, she‘riyat, “Ruhlar isyoni”, epigraf.*

### **Kirish:**

Sir emaski, adabiyot kishi ruhiyatini poklovchi, uni qalban matonatga undovchi quroldir. Nafaqat she‘rlar, balki dostonlar ham insonning qalbini, iymonini mustahkamlovchi bir kuch misol. Erkin Vohidov ijodida ana shunday tuyg‘ular o‘zining ustuvorligini hozirga qadar qo‘ldan bermay kelmoqda. Buni biz ijodkorning “Nido”, “Orzu chashmasi”, “Ruhlar isyoni”, “Quyosh maskani”, “Palatkada yozilgan doston” kabi adabiy asarlarda misolida yaqqol ko‘rishimiz mumkin. Doston o‘zining isyonkor she‘rlari bilan butun Hindistonni erk uchun, ozodlik uchun kurashga ruhlantirgan otashin bengal shoirining orzu-armonlari, jasorati, fojiviy qismati haqida. „Ruhlar isyoni“garchi Nazrul Islom haqida bo‘lsa-da, unda men shoir hayoti bahonasida o‘zimning umuman shoirlik, insonlik, fidoyilik, erkka tashna ijod ahlining zamonasi, xalqi bilan murakkab munosabati, qolaversa, inson hayotining ma‘nosi, hayotning ham shafqatsiz, ham adolatli haqiqati haqidagi o‘y-mulohazalarimni kitobxon bilan baham ko‘rishga intildim.<sup>[2]</sup>

## ADABIYOTLAR TAHLILI VA METODOLOGIYA

Bu dostonlarning ahamiyatligi shundaki, ularda o‘z zamonasi va uning ijtimoiy holati haqqoniy, hech qanday bo‘rttirilish va ko‘zbuyamachiliklardan yuqori mohirona qalamga olingan. Albatta bu dostonning o‘qishligini va kitobxonning ilmiy salohiyatini shakllantirishga turtki bermay qo‘ymaydi. Bulardan “Ruhlar isyoni” dostonini bugungi kun renesansi bilan taqqoslaydigan bo‘lsak, ushbu doston xalqlar va dinlar orasidagi o‘zaro kurash, adovat hissini haqqoniy tarixiy tushuncha va faktlar bilan izohlab, o‘tmish kezlarini ayni haqiqatini o‘zida aks ettirgan mukammal asar hisoblanadi.<sup>1</sup>

Ushbu dostonda Islom hamda Budda diniga sig‘inuvchi kishilarning qarama-qarshi his-tuyg‘ularini ifodalab berganligini ko‘rishimiz mumkin. Dostonning markazida turuvchi asosiy personaj- Nazrul Islom bo‘lib, u asarda pok, hamda insoniy mehr-muruvvat hislariga to‘la, ammo zamonasining achchiq va shafqatsiz qarashlari natijasida jaholatning ummoniga g‘arq qilingan ijodkor, inson sifatida talqin qilinib, xarakter qirralari to‘laqonli ochib, bayon qilingan. Nazrul Islomning murakkab hayot ziddiyatlari ishonarli tarzda aks ettirilib, o‘ziga kironxon fikr-u hayolini jamuljam etadi. Shoir 75 yil umr ko‘rgan bo‘lib, u 35 yoshida aql-hushidan ayrilgan obrazdir. Asar - muqaddima, 5 fasl, hamda nihoyatdan iborat hisoblanadi.

Ibrohim G‘ofurov doston haqida „Menga u ko‘p jihatlardan bugungi o‘zbek she‘riy tafakkurining – lirik tafakkurining cho‘qqisi bo‘lib ko‘rinadi“, deb yozgan<sup>2</sup>. Dostonga epigraf sifatida esa ijodkor” Tug‘ilgansan ozod, mudom ozod bo‘lib qol” jumlasini keltirib o‘tganligi asardagi asosiy personaj xarakteri uyg‘unligi asosida bayon etib o‘tilgan. Dostonda shoir qalbini ezgan tuyg‘u- “ibtidoning dardidir” deb aytib o‘tilgan va aynan shu jumlar orqali ham Nazrul Islomni xalq hayoti, uning turmush tarziga nisbatan befarq bo‘lmaganligini ko‘rishimiz mumkin. Koinotda isyonkorlik ruhi hukmronligi, agar Nazrul Islom VII asr avval tug‘ilganida Xusrav Dehlaviy kabi dostonlar bitishini, yarim ming yil avval tavallud bo‘lganida esa, xuddi

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<sup>1</sup> G‘ulomova, Nazira. *Ona tili va adabiyot*. Toshkent- 2014.

Bobur kabi otashin g‘azallar, ruboiylar bita olishini achchiq alamlar bilan bayon etgan. Garchi asarning bosh qahramoni Nazrul Islom bo‘lsada, bu qahramon orqali adib o‘zing qarashlarini o‘z obraziga ko‘zgu misol tutib, unga fikrlari, his-tuyg‘ularini singdirib o‘tadi.

Doston haqida adib o‘z qarashlarini bildirar ekan:” Nazrul Islom o‘z e‘tiqodi yo‘lida yosh jonini ayamqadi. She’ri bilan, so‘zi bilan’ o‘zi nashr etgan jaridasi bilan hurriyat yo‘lida kurashdi. Lekin tinimsiz tazyiqlar, hibsi qiyanoqlar o‘z ishini qildi. Shoir o‘ttiz beshga yetganda, ayni ijoddan qaynaganda es-hushidan ayrildi.

Xalq o‘z shoirini so‘nggi damgacha e‘zozladi. Uning nuroniy, sokin, behush va beruh vujudini tavof qildi.

“Ruhlar isyoni” Nazrul Islomning ana shu fojiali qismati haqida. Umuman, shoirlik, insoniylik, fidoiylik, erkka tashnaligi haqida” deb yozadi adibning o‘zi asar dastavvalida.<sup>1</sup>

## MUHOKAMA

Asar dastlab “Muqaddima” qismi bilan boshlangan bo‘lib, unda ijodkor asar haqidagi dastlabki umumiy xulosalarini bildirar ekan, dunyoning quvonch-g‘ami bisyorligi, dard-g‘amlari undanda ziyoda ekanligi, dildosh inson o‘z kulfatini yaqin insoniga barilla to‘ka olishini, ammo yolg‘iz bo‘lgan kishi o‘z g‘amini aritmoqqa kishi yo‘qligi haqida arz qiladi.

Asarning keying qismi “Abadiyat haqida rivoyat” bobida esa, adib o‘z fikrlarini “roviy” so‘zi asosida shakllantirib, allaqaysi bir zamonda bir karvon falokatga uchraganini, poyoni yoq sahroda bu karvon ichidagi odamlardan faqatgina bir inson tirik qolganligini va u chanqoqdan qiynalib qumli sahro orasida yurganida uning oldidan bir chashma chiqadi va bu chashma sehrli bo‘lib, undan suv ichgan jamiyki jonli mavjudot-u o‘t- g‘iyohlar ham abadiy hayot kechirishga mahkum ekanligi ta’riflangan. Yo‘lovchi ham tashnaligi uchun bu suvdan totmoqchi bo‘lgan on buloq tilga kiradi va unga o‘zining sehrli qudrati haqida bayot etadi. Ayni shu choq

<sup>1</sup> E.Vohidov “Sharqiy qirg‘oq” Toshkent 1981-yil 124 bet.

personajning qarshisida qumda yotgan bosh ko‘rinib, u ham bu suvdan ming yil avval ichib, hozirgacha tirikligi, bu hayotda yashashidan hech qanday ma’no- mazmun va na biron suhbatdosh-tengdosh u bilan qolmaganligidan shikoyat aytib, kajraftordan shikoyat qiladi. Yo‘lovchi esa bu holatni ko‘rib chashma suvidan qonmay, o‘z yo‘lida davom etaveradi.

Bu rivoyatning keltirilishidan asosiy sabab esa, odamzot bu hayotga kelgan onda har kuniga shukr qilmog‘i, faqat bugunini yoki o‘tmishi haqida emas, kelajak umri uchun ham harakatda bo‘lmog‘i va o‘ziga berilgan umrdan qanoat hosil qilib yashamog‘i lozimligini ta’kidlab o‘tadi. Baxt tushunchasi ham ayan mana shu yashayotgan umrning mazmunlilik bilan bog‘liqligini aytib o‘tadi. Darhaqiqat, Naqshbandiy aytganidek: “ Odamlar aytadi: Falonchi odam baxtli yashaydi. Aslida esa o‘z qismatiga rozi bo‘lgan kishigina haqiqiy baxtlidir” Zero, adib odamzotning mangu hayotga havas qilmasligi tushunchasini o‘z qahramoni va u boshidan o‘tkazgan sujet bilan gavdalantirib tasvirlashi kitobxon ongida bu qarashlarning shakllanishiga turtki berib o‘tadi.

Asar davom etar, shoir navbatdagi bo‘limiga “Shoir qalbi” deya nom beradi. Ushu sarlavha ostida E.Vohidov Nazrul Islom hayotini avval boshidan yoritib boradi:

Nazrul Islom

Bu dunyoga

Shoir bo‘lib tug‘ildi.

Ilhom otli pok ziyoga

Go‘dak qalbi yo‘g‘irildi- deya Nazrul Islomning hayot yo‘li haqida hikoya qiladi.

Hind bilan musulmon orasidagi nizolardan o‘z qahramoning qalbi o‘rtaganligini hikoya qilar ekan, u bu asari orqali tarixga ham o‘z nigohini tashlab o‘tadi. Zero, bu davrda hind hamda musulmon nizolari alanga olganligini hamda bu jarayonda bevosida ushbu davrdagi hind diyorini mustamlakaga aylantirgan inglizlarning qo‘li borligi tarixan ma’lum tushuncha. Ijodkor mana shu tarixiy jarayonni shunday o‘z xolicha emas, balki jamiyatdagi kishilar taqdiriga bog‘lab, unda tarixiy haqiqatni yo‘qotmagan holda, badiiy tasvirlab berganligi dostonnavisning yuksak badiiy mahoratining



namunsi deya barilla ayta olamiz. Zotan, “Adabiyot hayot ko‘zgusi, lekin uning ayan qog‘ozga tushirilgan nusxasi emas”.

Asarning eng kulminatsion nuqtasi esa “Jaholat to‘g‘risida rivoyat” bobida jamlangan bo‘lib, unda jaholatli zamonda begunoh qurbon bo‘lgan doniishmand tabib haqida so‘z boradi. Bu donishmand kun bo‘yi giyoh to‘plab, odamlarga shifo ulashishi va bundan odamlar ham hayrat bilan uni dohiy darajasiga ko‘tarib, ihlos quyishganligi yoritilgan. Tabib tibbiyotga bora-bora chuqur bog‘lanib, hatto bir kuni jamiyat uchunhali notanish bo‘lgan so‘qirlik dardiga shifo ulashadi va Nishtar bilan ko‘rning ko‘zlariga shifo bag‘ishlaydi. Ammo qora xalq buni Xudo ishiga isyon deya, tabibni sazoyi qiladilar va uni gulxanda yoqishga ahd qilishadi. Kimlardir savob uchun xas-xashak, kimlardir o‘tin tashlaydi. Hattoki, davo topgan bemorning o‘zi ham poxol ko‘tarib, uning poyi sari tashlaydi. Bemor uning bu ishidan afsusdaligi hamda unga nuridiyda bag‘ishlagani uchun unga bo‘lgan nafratini ro‘yi-rost bayon qiladi. Donishmand uning bu so‘zlarini eshitib undan odam shifo topib, olam shifo topolmaganligidan achchiq faryod ila o‘kinadi va shoir gulxanda kul qilinadi. Lekin, u yongan chog‘da xalq ko‘zidan yosh tomib, ayblarini tushunadi va yilla o‘tib donishmandning nurli haykalini o‘rnatadilar.

“Tutqunlik”da qismida esa, Nazrul Islomning qamoqxona ichidagi achchiq hayoti ila davom etadi. Bunda shoir Rudakiyning adolatni ta‘ma qilib ko‘zlariga mil tortilganligi, Firdavsiyning olamga Zolni tanitib, o‘zi tahqirga qolganligi-yu Boburning yoshlik chog‘idan unga shohlik martabasi berilib, unga qilingan fisq-u fasod qilinganlinini ko‘z oldiga keltiradi va Nazeul Islomning hayotdan zada bo‘ganligi, hamda uning ruhini sharpalar olib ketib, qamoq ichida kishanlangan yo‘lg‘iz jismi qolganligi uni olomon ruhsiz tanini halos qila olganligi bilan asar tugallanadi. Bu qismga monand qilib aynan Bobuqning “Tole yo‘qki jonimga balolig‘ bo‘Ldi g‘azali keltirib o‘tilganligi Bobur hayoti haqida qisqacha material vazifasini o‘taydi.

Asar haqida shuni aytish mumkinki, doston o‘zida shoirlikning asl ma‘vosini, uning tub negizini, aynan shoirlik- fidoiylik ekanligini ta‘riflaydi. Shavkat Rahmon

aytganidek: “Shoirlik-jasorat so‘zining tarjimasidir” va ayni bu jasorat tushunchasi Nazrul Islom ruhiyatida hukmronligi asar davomida yaqqol namoyon bo‘ladi. Bu asarda aynan Nazrul Islom hayotini yoritish emas, bashariyatning uy-xayollariga, yashash tarziga ko‘zgu tutish hisoblanadi. Bu doston orqali adib o‘zining tushunchalarini barilla- hech kim va hech vaqodan qo‘rqmay hayqiriq bilan kuylay olgan. Erkin vohidov ana shunday metin jasorat egasi edi.

## **XULOSA**

Bugungi kunda yoshlarning adabiy asarlar bilan hamohang holda ta’lim olishi muhim jarayon hisoblanadi va bunday masalada badiiy adabiyotning o‘rni beqiyos. Erkin Vohidov asarlari esa nafaqat o‘qishliligi va saviya ko‘lamining kengligi, boz ustiga didaktik jihatdan ham o‘z qadr-qimmatiga ega asarlar hisoblanadi. Adibning yuqorida keltirilgan doston tahlili misolida esa aynan mana shu jihatlar o‘tkir namouon bo‘la boradi.

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## ANALYSIS OF INVESTMENT CHARACTERISTICS OF PUBLIC-PRIVATE PARTNERSHIP PROJECTS

**Djurayev Xolmurod Akramovich**

Student of Project Management master's degree at the  
Graduate School of Business and Entrepreneurship

**Abstract:** *In this article, the problems, advantages and disadvantages of the financing of public-private partnership projects are widely covered. The economic nature and importance of public and private sector cooperation in financing investment projects, the methods and main forms of project financing in the context of public-private partnership, and the legal basis of public and private sector cooperation in financing investment projects are widely covered in the article. Below, the main directions of development of public and private sector cooperation in the financing of investment projects, the prospects of using foreign experience in our country in the development of methods of financing projects in the context of public-private partnership are fully revealed.*

**Key words:** *public-private partnership, project, financing, private sector, non-profit partner, investment, private capital, credit.*

### **Introduction**

A public-private partnership is a long-term agreement between public and private sector institutions. Typically, this involves private capital funding public projects and services upfront, then collecting revenue from taxpayers and users to generate profits over the course of the public-private partnership agreement. Public-private partnerships have been implemented in many countries and are mainly used in infrastructure projects. Although they are not required, public-private partnerships have been used to build, equip, operate, and maintain schools, hospitals, transportation systems, and

water and sanitation systems. Cooperation between private entities, corporations, and governments has existed since the emergence of independent nations, particularly for the purposes of tax collection and colonization. The modern "public-private partnership" appeared around the end of the 20th century. They were aimed at increasing the participation of the private sector in public administration. They have been seen by governments around the world as a way to finance new or refurbished public sector assets off their balance sheets. Although public-private partnership funding comes from the private sector, these projects are always paid for by taxes or service users, or a combination of both. Public-private partnerships are structurally more expensive than publicly funded projects because the private sector's borrowing costs are high, resulting in users or taxpayers footing the bill for disproportionately high interest costs. Public-private partnerships also have high transaction costs. Public-private partnerships are controversial as financing instruments, mainly due to the fact that the public return on investment is lower than the private financier's return. Public-private partnerships are closely related to concepts such as privatization and contracting out public services. Secrecy surrounding their financial details complicates the process of assessing the success of public-private partnerships. Proponents of public-private partnerships emphasize risk sharing and foster innovation, while critics decry their high costs and accountability issues. For example, evidence of the performance of public-private partnerships in terms of value for money and effectiveness is mixed and often non-existent. Public-private partnerships in infrastructure are typically financed on a project basis (as opposed to corporate financing). This involves financing where lenders look to the cash flows of the investment for repayment, with neither equity sponsors nor the public sector turning to cover any shortfall. This arrangement reduces/insulates the financial risk of investors with several advantages; more careful examination of the project, analysis of risks leading to changes in the project structure, reduction of risk and more correct distribution of risks between parties.

## Methods

A public-private partnership is defined as an agreement between a public sector institution and a private entity, where the private party performs a function normally provided by the public sector and uses public property under the terms of the public-private partnership agreement. Most of the project risk (technical, financial and operational) is transferred to a private entity. The public sector pays for the full range of services, including new infrastructure, maintenance and facilities management, through monthly or annual fees. In a traditional government project, the public sector pays the capital and operating costs and bears the risk of cost overruns and late deliveries. It is important to understand that the processes and structures used in project financing are dynamic and continue to evolve. Public-private partnership projects vary significantly in terms of duration and structure. The purpose of using project finance to raise capital is to create a structure that is bankable (attractive to investors) and to limit stakeholder risk and shift some of the risk to those who can better manage it. In project financing, an independent legal vehicle (SPV) is created to attract the necessary funds for the project. Payment of principal, interest, dividends, and operating expenses will be made from project revenues and assets. Investors, both debt and equity, require certain key legal, regulatory and economic conditions throughout the life of the project. The revenues of the public-private partnership project are obtained from the fees (tariffs) collected from the government and service users. In some projects, the private sector provider also pays a concession fee to the government or other authority in exchange for access to government projects, such as a concession fee based on service usage or net revenue, giving the government a vested interest in the project's success. In such cases, the interests of the state can be compared with the interests of the investor. As budgets become increasingly constrained and unable to generate additional revenue, many governments have turned to private sector partnerships. Such contractual arrangements are usually related to quality improvement, improved service delivery, cost savings and reduced financing costs. Typically, a public-private partnership is a partnership between one or more government agencies and one or more

private sector or non-profit partners to support or finance, design, build, operate and/or maintain public services. is conceptualized as a contractual agreement concluded for the purpose of showing. a specific project for public benefit. These types of partnerships are typically designed with the implicit and explicit goal of leveraging additional funding resources and expertise that might not otherwise be available for government purposes through traditional procurement practices. Public-private partnership implies a synergistic and mutually beneficial relationship between direct or indirect partners. In other words, partnership (based on trust and common interests) as a contractual arrangement provides greater efficiency and improved results than a simple contractual arrangement – as if the sum is greater than its parts. This is obviously a strong assumption that can easily be questioned on the basis of wishful thinking and a bit of naivety. Yet this is the underlying, if often unspoken, assumption behind many of the benefits associated with public-private partnerships. A public-private partnership without long-term mutual commitment beyond the terms of the contract is a contract. A key motivation for governments considering public-private partnerships is the opportunity to attract new sources of funding to fund public infrastructure and service needs. There are a number of financing mechanisms for infrastructure projects, particularly public-private partnership projects.

- Funding by the state
- Corporate or balance sheet finance
- Project financing

Public financing means that the government may choose to finance some or all of the capital investment in the project and turn to the private sector for expertise and efficiency. This typically occurs in a design-build-operate project, where the operator is paid a lump sum for the completed construction phases and then receives an operating fee to cover the operation and maintenance of the project. Another example is when a government chooses to carry out the construction work for a project through traditional procurement and then engages a private operator to operate and maintain or maintain the facilities. There is a growing recognition that there are certain aspects or

risks in a project that the government may find easier or more reasonable to accept. This is discussed in the section on public support for financing public-private partnerships. A private operator may accept part of the capital investment financing for a project and decide to finance the project through corporate financing - this involves financing the project based on the private operator's balance sheet. than the project itself. This is a mechanism typically used in lower-cost projects where the cost of financing is not significant enough to warrant a project financing mechanism, or the operator is so large that it chooses to finance the project from its own balance sheet. The benefit of corporate finance is that the cost of financing is the same as the cost of financing the private operator itself, and therefore it is usually lower than the cost of financing the project. In addition, it is less complicated than project financing. However, there is an opportunity cost to corporate financing, as a company can only raise a limited amount of financing relative to its equity (debt-to-equity ratio), and the more it invests in a single project, the less likely it is to finance it. . or invest in other projects. Project Financing One of the most common and often the most effective methods of financing public-private partnership projects is "project financing," also known as "constrained resource" or "resource-free" financing. Project financing is usually in the form of a limited recourse loan to a specially created project vehicle with the right to construct and operate the project. It is usually used in the context of new construction or large-scale renovations, and therefore does not have an existing business in the SPV. The SPV will depend on revenue streams from contractual agreements and end-user tariffs, which will only kick in once construction is complete and the project is operational. Therefore, it is a risky venture and before they agree to finance a project, lenders will want to carefully consider the potential viability of the project and whether the allocation of project risk will adequately protect the project company. This is commonly known as a project's "bankability" check.

Results If we consider investors in public-private partnership projects in developing countries, the highest ranks are:

-Commercial banks (domestic/international) Commercial banks are important investors in infrastructure projects, particularly through senior loans and collateral products such as performance guarantees and letters of credit. The complexity and duration of project-financed projects often means that local banks in developing countries lack the technical capacity or willingness to enter into these projects, and where they are junior members of the syndication.

-Capital markets/ bondholders (domestic/international) Bond financing is suitable for project financing because it has a longer maturity than commercial loans. However, there is less flexibility in lending. Given that many institutional investors can only invest in investment-grade products, it may be easier for an infrastructure fund to obtain financing through the capital markets rather than an individual project.

-Equity Funds Private equity funds (often called "infrastructure funds") can play an important role in project mezzanine financing, taking on more risk than traditional lenders but less than sponsors.

An equity fund is a collective investment scheme that invests in stocks. Collective investment schemes are a way for investors to invest with other investors to take advantage of the inherent advantages of working as part of a group. These benefits include:

- hiring a professional investment manager who theoretically offers good returns and/or risk management prospects

- benefit from economies of scale - sharing costs among others

is more diversified than is possible for most individual investors, which, in theory, reduces risk.

## **Discussion**

Public-private partnerships enable the completion of large public projects, such as roads, bridges, or hospitals, with private funds. This partnership works best when private sector technology and innovation are combined with public sector incentives to complete work on time and on budget. Risks for private enterprise include cost



overruns, technical defects and failure to meet quality standards, while the user fees agreed for public partners may not be supported by demand, for example for a toll road or bridge. Despite its advantages, public-private partnerships often blur the lines between legitimate public objectives and private profit-making activities, and the self-dealing and leasing that can occur. is criticized for exploiting the public due to receiving.

#### Advantages and disadvantages of public-private partnership

Partnerships between private companies and governments provide advantages for both parties. Private sector technologies and innovations, for example, help improve the operational efficiency of public service delivery. The public sector, in turn, encourages the private sector to deliver projects on time and within budget. In addition, creating economic diversification will increase the country's competitiveness in strengthening its infrastructure base and developing related construction, equipment, support services and other enterprises.

A private partner may face particular risks when entering into a public-private partnership. Physical infrastructure, such as roads or railways, includes risks associated with construction. If the product is not delivered on time, costs exceed the estimate, or there are technical defects, the private partner usually bears the burden. In addition, the private partner faces an existence risk if it fails to provide the promised service. A company may not meet safety or other relevant quality standards, such as in the management of a prison, hospital or school. Demand risk occurs when there are fewer users than expected for a service or infrastructure, such as toll roads, bridges or tunnels. However, if the public partner agrees to pay the minimum fee regardless of demand, this risk may be transferred to the public partner.

Public-private partnerships also pose risks to the general public and taxpayers. The cooperation of private operators with the state can exempt them from responsibility for public service users cutting too many corners, providing poor service or even violating citizens' civil or constitutional rights. At the same time, the private partner can use the position to increase duties, tariffs and fees for captive consumers who may

be forced by law or geographic natural monopoly to pay for their services. Finally, as in any situation where ownership and decision-making power are separated, public-private partnerships can create complex principal-agent problems. This can facilitate corrupt deals, payments to political cronies, and rent-seeking activities, undermining the connection between the private parties who make important project decisions, who benefit, and accountability to taxpayers.

### **Conclusion**

Public-private partnership is a special type of contract, according to which the public partner (state entity) transfers part of its obligations to the private partner under a long-term contract, in which the rights and obligations of each party is set. period, as well as mechanisms to restore financial balance in the event of unforeseen events or non-compliance by the parties. Public-private partnerships are an important tool for infrastructure development and therefore economic development. They are used in infrastructure such as roads, airports, ports, energy, water and solid waste, and usually involve investment, operation and maintenance. Public-private partnerships are also used in social infrastructure such as health and education, e.g. construction and maintenance of hospital or school facilities, but may also include clinical or educational services in whole or in part. There is potential for public-private partnerships in any sector.

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**MALAKAVIY O‘QUV AMALIYOTIDA BO‘LAJAK  
TARBIYACHILARNING KASBIY KOMPETENSIYALARINI  
RIVOJLANTIRISH METODIKASI**

**Ramozonova Bahoroy Sadriddinovna**

Nizomiy nomidagi TDPU

“Maktabgacha ta’lim metodikasi” kafedrası o‘qituvchisi

**Maxmudova Diyora Akmalovna**

Nizomiy nomidagi TDPU

“Maktabgacha ta’lim metodikasi” kafedrası o‘qituvchisi

**Ergasheva Ba’rno Ziyovitdin qizi**

Nizomiy nomidagi TDPU

“Maktabgacha ta’lim metodikasi” kafedrası o‘qituvchisi

**ANNOTATSIYA**

*Mazkur maqolada bo‘lajak tarbiyachilarning malakaviy o‘quv amaliyotida kasbiy kompetensiyalarini rivojlantirish metodikasining ahamiyati haqida yoritilgan. Bo‘lajak tarbiyachilarning o‘z ustida izlanishi, o‘z mutaxassisligi bo‘yicha yetarli bilim ko‘nikmalarni, kasbiy mahoratini oshirishi hamda o‘z faoliyati jarayonida kreativ bilimlarni oshirish, kreativlikning mohiyati, tarbiyachi pedagoglarning ta’lim-tarbiyaviy faoliyatga kreativ yondashuvi, kreativ o‘qitishning metod va turli usullari haqida bayon etilgan.*

**АННОТАЦИЯ**

*В данной статье освещается значение методики развития профессиональных компетенций будущих воспитателей в профессиональной образовательной практике. В нем рассказывается о поиске будущих педагогов над собой, о том, как адекватные знания по специальности повышают навыки, профессионализм, а также повышают креативные знания в процессе своей деятельности, о сущности креативности, о креативном подходе педагогов-*

*педагогов к учебно-воспитательной деятельности, о методах и различных методах креативного обучения.*

### **ANNOTATION**

*This article covers the importance of the methodology for the development of professional competencies in the qualification training practice of future educators. The search for future educators on their own, the improvement of sufficient cognitive skills, professional skills in their specialty, as well as the improvement of creative knowledge in the process of their activities, the essence of creativism, the creative approach of educational educators to educational activities, methods and various methods of creative teaching are described.*

Respublikamizda so‘nggi yillarda ta‘lim tizimi rivojlanishining zamonaviy bosqichida maktabgacha ta‘lim pedagoglarining salohiyatini yanada yuksaltirish ijodiy va kasbiy o‘z-o‘zini takomillashtirishga mutaxassislarni tayyorlashning huquqiy-me‘yoriy asoslari yaratilmoqda. “Uzluksiz ta‘lim tizimini yanada takomillashtirish sifatli ta‘lim xizmatlari imkoniyatlarini oshirish mehnat bozorining zamonaviy ehtiyojlariga mos yuqori malakali kadrlar tayyorlash sistemasini davom ettirish” yurtimizda ustuvor vazifa etib belgilandi.

Bo‘lajak pedagogining ta‘lim tarbiya berish jarayonidagi o‘rnini qay darajada muhimli uning malakaviy amaliyot jarayonida kasbiy kompetensiyalarini rivojlanganligida namoyon bo‘ladi. Kasbiy kompetensiyalarning rivojlanganligi fikrlaridagi sezgilaridagi, muloqotdagi, alohida faoliyat turidagi, ijodiy yondashish, bilish darajasida namoyon bo‘ladi. Ta‘lim sohasiga qo‘yiladigan talablar orasida maktabgacha ta‘lim tashkilotlari mutaxassislarning kasbiy kompetentligini oshirish uchun qator chora- tadbirlar yo‘lga qo‘yilgan. Pedagog shaxsiga qo‘yiladigan talab – eng avvalo o‘z ustida izlanishlar olib borishidir.

Shunday ekan, maktabgacha ta‘lim tizimida eng muhim ehtiyoj maktabgacha ta‘lim tashkiloti mutaxassislarning kasbiy kompetensiyalarining rivojlanganligidir.

“Kompetentlik” tushunchasi ta’lim sohasiga psixologik izlanishlar natijasida kirib kelgan. Shu sababli kompetentlik “noan’anaviy vaziyatlar, kutilmagan hollarda mutaxassisning o‘zini qanday tutishi, muloqotga kirishishi, raqiblar bilan o‘zaro munosabatlarda yangi yo‘l tutishi, noaniq vazifalarni bajarishda, ziddiyatlarga to‘la ma’lumotlardan foydalanishda, izchil rivojlanib boruvchi va murakkab jarayonlarda harakatlanish rejasiga egalik”ni anglatadi.

Bo‘lajak tarbiyachilarning malakaviy amaliyot jarayonida kasbiy kompetensiyalarini rivojlantirish, bolalarga ta’lim-tarbiya berish sifati uchun jamiyat oldidagi o‘z mas’uliyatini anglashga, kasbiy vazifalariga mas’uliyatli yondashishga, o‘z mahoratini doimo takomillashtirib borish va ishdagi pedagog hamkasblarini o‘shishiga yordam beradi.

Demak, bolajak tarbiyachi avvalo, bilimli bo‘lishi, o‘zi yashab turgan ulkan hayotini bilishi, tabiat va jamiyatning qonuniyatlarini tushunishi, ijtimoiy faol bo‘lishi, umumiy va maktabgacha tarbiya pedagogikasini, bolalar ruhiyati va fiziologiyasini egallashi va bolalarning yosh xususiyatlarini bilishi kerak.

Bo‘lajak tarbiyachida quyidagi xususiyatlar uning kasbiy kompetensiyalarini rivojlantirishda muhim:

- O‘z kasbini sevishi va chuqur puxta bilimga ega bo‘lishi;
- O‘z ustida tinimsiz ishlashi, yangiliklarni tez o‘zlashtirishi;
- Tarbiyachi ta’lim-tarbiya jarayonida samarali shakl, metod va vositalaridan unumli foydalana olishi;
- Bolalarni yosh xususiyatlarini inobatga olgan holda faoliyatni tashkil eta olishi;
- Yuksak pedagogic mahorat va kommunikativ layoqatga ega bo‘lishi;
- Pedagogik texnika, nutq, yuz, qo‘l, oyoq va gavda harakatlari, mimika, qonuniyatlarini chuqur o‘zlashtirishi;
- Bolalarni kuzata oladigan, ularni xulqi, xatti-harakati sabablarini to‘g‘ri tahlil qilib, unga ta’sir etuvchi vositalarni qo‘llay oladigan bo‘lishi kerak

Malakaviy amaliyot jarayonida bo‘lajak tarbiyachilar kasbiy kompetensiyalarini rivojlantirishda pedagogic mahoratlarini oshirish ustida ishlashi, izlanishi lozim. Bu

esa o'z navbatida bo'lajak tarbiyachidan pedagogic, psixologik va metodik tayyorgarlikni talab etadi.

Malakaviy amaliyot jarayonida bo'lajak tarbiyachilarning kasbiy kompetensiyalarini rivojlantirishda pedagogik mahorat quyidagi asosiy komponentlarni o'zlashtirishni talab etadi:

- Pedagogik ijod
- Pedagogik texnika
- Pedagogik muomala
- Pedagogik madaniyat
- Pedagogik nazokat
- Pedagogik qobilyat

Bularning barchasi xususiy mohiyat-mazmun kasb etsada, ular yaxlit holda bo'lajak tarbiyachining kasbiy malakalarining mazmunini ifodalaydi.

Malakaviy amaliyot jarayonida bo'lajak pedagoglar innovatsiyalarni o'zlashtirishi, to'g'ri qo'llay olishi, amaliyotga joriy etishi kasbiy kompetensiyalarini rivojlantirishda muhimdir.

Bo'lajak tarbiyachining innovatsiya chuqurroq bilim olish, o'rganish, o'zlashtirish, keng hajmdagi bilimlarni olishga qaratilmog'i yaxshi natijalar berishi mumkin.

Bular doimiy pedagogik muammo bo'lib kelayotgan: o'quv-tarbiyaviy faoliyat motivatsiyasini oshirish, dars jarayonlarida o'quv materialni hajmini oshirish, o'quv jarayonini jadallashtirish, vaqtni tejash, ko'proq ilg'or metodlardan foydalanish, o'quv-tarbiyaviy ishlarda interfaol usullardan foydalanish, ilg'or texnologiyalarni qo'llash, axborot-kommunikatsiya texnologiyalarni joriy qilishdan iborat. Yuqori natijalar beradigan yangi g'oyalar, yangi nazariy bilimlar beruvchi, shaxsni rivojlanishiga olib keluvchi, tom ma'nodagi innovatsiyalarni yaratish, izlash, joriy etish talab etiladi.

Demak bugungi kunda malakaviy amaliyot jarayonida bo'lajak pedagoglarning kasbiy kompetensiyalarini rivojlantirishda pedagogik mahoratini oshirishi, innovatsion faoliyatga tayyor bo'lib ta'lim-tarbiya jarayoniga so'ngi yangiliklarni olib kerishi, o'z ustida doimo izlanishda bo'lishi ta'lim sifati va samaradorligini ta'minlashda muhim.

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## GRUNT SUVINING EKOLOGIYAGA SALBIY TA'SIRI

**Bekzod Umarov Baxtiyorjon o'g'li**

And QXAI assistenti

**Shamshidinova Mushtariy Pattojon qizi**

And QXAI talabasi

**Annotatsiya:** Ushbu maqolada yer yuzasi grunt suvlarining ekologik holati, u suvlarni tozalab ichimlik va sug'orish maqsadida foydalanish bo'yicha qilinishi lozim bo'lgan ishlar bo'yicha ilmiy ma'lumotlar berilgan

**Kalit so'zlar:** grunt suvlari, yer po'sti, ifloslangan suvlar, g'ovak jinslar, kasallik tarqatuvchi bakteriyalar, mexanik tarkib, diareya, filtrlash

**Аннотация:** В данной статье представлена научная информация об экологическом состоянии подземных вод на поверхности земли, о работах, которые следует провести по их очистке и использованию для питьевых и ирригационных целей.

**Ключевые слова:** грунтовые воды, корка, загрязненная вода, пористые породы, болезнетворные бактерии, механический состав, диарея, фильтрация.

**Annotation:** This article provides scientific information on the ecological status of ground water on the surface of the earth, the work that should be done on cleaning it and using it for drinking and irrigation purposes.

**Key words:** ground water, crust, polluted water, porous rocks, disease-spreading bacteria, mechanical composition, diarrhea, filtration.

## Kirish

Yer po‘stining yuza qismidagi g‘ovak jinslar orasida joylashgan suvlar grunt suvlari deyiladi. Grunt suvlari yer yuzasida joylashgan suvlardan katta maydonlarda tarqalgan bo‘lib, suv o‘tkazmaydigan qatlam ustida joylashganligi bilan farq qiladi.

Grunt suvlari ham yer yuzasidagi suvlar kabi atmosfera yog‘inlari va yer ustki suvlaridan hosil bo‘ladi. Yer po‘stining yuza qismidagi g‘ovak jinslar orasida joylashgan suvlar grunt suvlari deyiladi. Grunt suvlari yer yuzasida joylashgan suvlardan katta maydonlarda tarqalgan bo‘lib, suv o‘tkazmaydigan qatlam ustida joylashganligi bilan farq qiladi. Grunt suvlari ham yer yuzasidagi suvlar kabi atmosfera yog‘inlari va yer ustki suvlaridan hosil bo‘ladi. Grunt suvi tarkibida juda ko‘p miqdorda tuz mavjud. Jumladan, kalsiy gidrokorbanat ( $\text{Ca}(\text{HCO}_3)_2$ ), magniy gidrokorbanat ( $\text{Mg}(\text{HCO}_3)_2$ ), kalsiy sulfat, magniy sulfat, kalsiy xlorid, magniy xlorid kabi tuzlar. Bu tuzlar esa tabiatga ham o‘zining salbiy ta‘sirini o‘tkazadi. Grunt suvi tuproq unumdorligini pasaytiradi. Grunt suvi bilan muntazam sug‘orilgan tuproq qattiq, sho‘r bosgan bo‘lib, u yerda yashil o‘simliklar unishi qiyin bo‘ladi. Shu sababli tuproq unumdorligi pasayadi. Keling uni misollar bilan ko‘rib chiqamiz.

## Grunt suvida sug‘orilgan yerlar



### Oqava suvdan sug'orilgan yerlar



Atrofimizni rang-barang olamsiz tasavvur qilib bo'lmaydi. Insonlarga o'simliklarning ta'siri juda katta. Shuning uchun ham ularning o'sishi uchun qulay sharoit bo'lishi lozim. Ekologik muammo bo'lib qolayotgan grunt suvi, o'simliklarga ham o'z ta'sirini o'tkazmay qolmayapti. O'simliklar tuproqda o'sganligi sababli, tuproq ham shu suvdan muntazam sug'orilgan bo'lsa, o'simlik rivojlanishi qiyin kechadi. Atrofimizni rang-barang olamsiz tasavvur qilib bo'lmaydi. Insonlarga o'simliklarning ta'siri juda katta. Shuning uchun ham ularning o'sishi uchun qulay sharoit bo'lishi lozim. Ekologik muammo bo'lib qolayotgan grunt suvi, o'simliklarga ham o'z ta'sirini o'tkazmay qolmayapti. O'simliklar tuproqda o'sganligi sababli, tuproq ham shu suvdan muntazam sug'orilgan bo'lsa, o'simlik rivojlanishi qiyin kechadi. Yashil o't-o'simliklar tabiatga va ekologiyaga juda katta foydasi bor. Chunki ular fotosintez jarayonini amalga oshirib, havoni kislorod bilan boyitadi.



Grunt suvi tozalanmaganligi sababli inson va hayvon organizmiga salbiy ta'siri bor. Dunyoda har yili 3 milliondan ortiq insonlar ifloslangan suv tufayli vafot etadi. Ko'pincha ifloslangan suvdan kelib chiqqan diareya kasalliklari besh yoshgacha bo'lgan bolalar o'limining asosiy sabablaridan biri bo'lib, har yili taxminan 525000 o'limga olib keladi. Noto'g'ri sanitariya infratuzilmalari va gigiena amaliyoti ko'plab mahalliy suv manabalarini ifloslantiradi hamda suv orqali yuqadigan kasalliklarning aksariyati ifloslangan suvni iste'mol qilish natijasida yuzaga keladi..Har yili bolalarda 1,7 milliard diareya kasalligi qayd etiladi.



Tabiatimizni asrab qolish o'z qo'limizda. Ekologik muammolar juda ko'p. Ulardan eng asosiysi hayot manbai bo'lgan suvdur. Statistika ma'lumotlariga qaraganda 2050-yilga borib yer yuzida suv tanqisligidan 5 mlrd kishi aziyat chekishi mumkin. Mana birgina grunt suvi insonga ham, hayvonga ham, o'simlikka ham salbiy ta'sir ko'rsatishini ko'rib chiqdik. Buning oldini olish uchun chekka nuqtalarga toza ichimlik suvini yetkazib berishdir. Atrof-muhit ekologiyasiga hamma birday javobgar. Tabiat qancha toza bo'lsa, salomatligimiz ham shuncha yaxshi bo'ladi. Abu Ali Ibn Sino aytganidek: „Agar chang va g'ubor bo'lmasa, odam ming yil yashashi mumkin edi“. Insonlar ham grunt suvlaridan iste'mol qilmaslik uchun suvni isrof qilmaslik kerak. Chunki suv obi-hayot. Go'zal va betakror tabiatimizni betakror insonlar bilan birga asrab qolaylik!

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## AUDIOVIZUAL TARJIMA QIYINCHILIKLARI: HUJJATLI FILMLAR MISOLIDA

**Norbekova Farangiza Shuhrat qizi**

Alisher Navoiy nomidagi Toshkent davlat

o'zbek tili va adabiyoti universiteti tayanch doktoranti,

[farangiza-norbekova@mail.ru](mailto:farangiza-norbekova@mail.ru)

**Annotatsiya:** Maqolada hujjatli audiovizual mahsulotlarni tarjima qilishning turli yondashuvlari haqida to'liq ma'lumot berilgan. Onlayn platformalarda mavjud bo'lgan hujjatli filmlarning ko'pligi ularni turli tillarga tarjima qilishga talabning oshishiga sabab bo'lmoqda, chunki audiovizual kontentni onlayn ko'rishning zamonaviy an'analari turli til tanlash va tarjimani taqdim etish usullarini talab qiladi.

Hujjatli filmlar alohida filmlar guruhini o'z ichiga oladi. Batafsil tasniflashning har bir bandining o'ziga xosligi ushbu mahsulotlarni tarjima qilish jarayoniga individual yondashuvni talab qiladi. Film terminologiyasi ham alohida e'tibor talab qiladi, chunki u hujjatli asarlar tarjimasining asosiy muammolaridan biridir. Maqolada ovozli tarjima uchun zarur bo'lgan talablar, hujjatli kino san'atining o'ziga xos xususiyatlari va audiovizual matn turlari bayon etilgan.

**Kalit so'zlar:** Audiovizual tarjima, hujjatli filmlar, janr, uslub, audiovizual ishlab chiqarish tahlili, subtitrlash, ovozli, audio tavsif, audio kirish, intervyu, hujjatli filmda terminlar.

**Abstract:** The article presents a comprehensive overview of different approaches to translating documentary audiovisual productions. The abundance of documentary films available at online platforms lead to a higher demand for their translation into different languages as the modern tradition in viewing audiovisual content online requires a variety of language choice and modes of translation presentation (subtitling, voice-over, accessibility means for people with auditory and visual

challenges). Documentary productions present a separate group of films that can be further classified according to their production methods and the presentation styles. The specificity of each item of the detailed classification calls for an individualized approach to handling the process of translating these productions. Film terminology

*also requires special attention as it is one of the basic challenges of documentary productions translation.*

**Keywords:** *Audiovisual translation, documentaries, genre, style, audiovisual production analysis, subtitling, voice, audio description, audio access, interview method, terminology in documentary films.*

## KIRISH

Turli janrlarda ko‘plab audiovizual mahsulotlar mavjud, ammo bu maqolada hujjatli filmlar va seriallarga e‘tibor qaratiladi. Hujjatli film - bu kinematografiyaning ob‘ektiv voqelik, haqiqiy voqealar va shaxslarni suratga olishga asoslangan maxsus yo‘nalishi. Hujjatli filmlarni bugun o‘n yil oldingi holatga nisbatan tomoshabin osonlik bilan qabul qilmoqda va qiziqish ham ortmoqda. Internetning rivoji turli onlayn platformalar hujjatli filmlarning katta assortimentini taqdim eta boshladi va bu janr ommalashib bormoqda. Shu o‘rinda, ushbu sohada malakali audiovizual tarjimonlar uchun ham talab o‘sib bormoqda.

Bir paytlar zerikarli va monotondek tuyulgan hujjatli filmlar janri bugun butun dunyo bo‘ylab millionlab tomoshabinlarni o‘ziga tortmoqda. Ushbu turdagi spektakl hozir dramatik badiiy filmdan qolishmaydi. Turli ijodiy va texnologik yondashuvlar, shuningdek, o‘tkir, ba‘zan baxsli mavzular haqidagi qiziqarli hikoyalar yordamida hujjatli filmlar tomoshabinlarni ekranda ko‘rsatilgan voqelik kontekstiga jalb qiladi.

Ammo hujjatli filmlarning ommalashib borayotgani va ularning janrlarining xilma-xilligiga qaramasdan, badiiy bo‘lmagan filmlarning tarjimasi bilan bevosita shug‘ullanuvchi tadqiqotlar ko‘p emas. Audiovizual tarjima nazariyasining mustaqil sohasi sifatida boshqa tarjima nazariyalariga qaraganda kechroq shakllana boshladi. Biroq kinematografiyaning keng tarqalishi va ommaviyligi tufayli tarjimaning bu turiga talab tobora ortib bormoqda. Audio-vizual tarjima hatto professional tarjimonlar uchun ham alohida muammo hisoblanadi, chunki u o‘ziga xos xususiyatlarga ega. Ushbu turdagi tarjimaning asosiy xususiyatlaridan biri shundaki, tomoshabin bir vaqtning o‘zida ikkita kanal - audio va vizual kanallar orqali ma‘lumot

oladi. Shuning uchun audiovizual asar tarjimoniga asar matni, shuningdek audio va video taqdimot bilan ishlash ko'nikmalari kerak.

Rus tadqiqotchisi A.E.Korolkova hujjatli film tarjima qilishda ma'lum bir algoritmgga rioya qilishi kerak deb hisoblaydi. Tarjima jarayonidan tarjimon ushbu bosqichlardan o'tishi kerak:

- Har bir kadrning mazmuni va uning plyonkadagi koordinatalarini aniq ko'rsatgan holda film tavsifini o'qish.

- Film ishlab chiqaruvchini aniqlash.

- Filmning tuzilishi bilan tanishish, shuningdek, film sahnalashtirilganmi, film reportaj yoki arxiv video, audiodan iboratmi yoki yo'qligini aniqlash.

- Hujjatli filmning struktura turlarini ko'rib chiqish.

- Tarjima jarayonida matnni tomoshabin uchun moslashtirish.

- matnda mavjud bo'lgan qadriyatlarni maqsadli tilda so'zlashuvchilarning asosiy qadriyatlari nuqtai nazaridan qayta ko'rib chiqish (milliy va madaniy qadriyatlarni noto'g'ri talqin qilish xatolarga va natijada sifatsiz tarjimaga olib kelishi mumkin).

- Materialni taqdim etish shaklini aniqlash (turli tillardagi iboralar uzunligi sezilarli darajada farq qilishi mumkin). Ushbu bosqichda tarjimon hikoyaning qanday turlari bilan ishlash kerakligini tushunish uchun materialni taqdim etish shaklini aniqlaydi. Film dialoglar, muallif matni, ovozli monolog yoki dialog yoki ichki monologdan iborat bo'lishi mumkin.[1]

## ADABIYOTLAR TAHLILI VA METODOLOGIYA

Audiovizual tarjimaning ikkita asosiy turi mavjud: interlingual va intralingual. Interlingual tarjima quyidagilarni o'z ichiga oladi: ovozli tarjima uchun tarjima, ikki o'lchovli subtitr uchun tarjima, dublyaj uchun tarjima (qayta ko'rsatish) va to'liq dublyaj uchun tarjima. O'z navbatida, audiovizual tarjimaning intralingual turiga eshitish qobiliyati zaiflar uchun subtitrlar, jonli izohlar, opera va teatrdagi subtitrlar kirishi mumkin. Audio tavsif, vizual kanal orqali uzatiladigan ma'lumotni og'zaki bayon qilish intersemiotik tarjima turiga tegishli. Audiovizual tarjimaning asosiy



maqsadi asarning asl maqsadini saqlab qolish, qahramonlar nutqining uslubi va o'ziga xos xususiyatlarini kuzatishdir.

Audiovizual ishlab chiqarishning har bir janri tarjimaga alohida yondashuvni talab qiladi, chunki ularning har biri og'zaki uslublarning ma'lum o'ziga xosligini (badiiy filmlar, monologlar yoki filmlardagi dialoglarning ko'pligi, hujjatli filmlardagi tavsiflar va boshqalar), o'ziga xos vizual tuzilma va alohida turdagi audio) namoyon qiladi.

Hujjatli filmlarda juda ko'p janrlar mavjud. Hujjatli audiovizual mahsulotlarning xilma-xilligini aks ettiruvchi tasnifga quyidagi turlar kiradi:

xronika, etnografik film (antropologik film), kino insho/kino kundaligi, tergov-surishtiruv, kuzatish, portret, eksperimental hujjatli film, hujjatli animatsiya.

Amerikalik kinoshunos va nazariyotchi E.Nikols hujjatli filmlarning oltita asosiy uslubi borligini ta'kidlaydi [E.Nichols, 2010]:

- poetik (bunday asarlarning maqsadi kayfiyatni yaratish va estetikani yetkazishdir);
- tushuntirish (o'quv va ma'rifiy filmlar);
- ishtirokchi (bu filmlar hujjatli film ijodkorining bevosita ishtiroki bilan tavsiflanadi);
- kuzatuv (bunday filmlarning maqsadi hujjatli rejissyorning aralashuvisiz voqelikni aks ettirishdir.
- aks ettiruvchi (bunday filmlarning asosiy e'tibori hujjatli film muallifi va film muallifi o'rtasidagi munosabatlardir
- ijro etuvchi (bunday filmlarda hujjatli film muallifining shaxsiy tajribasi orqali ijtimoiy-siyosiy yoki tarixiy voqelik dunyoqarash prizmasi ko'rsatiladi).

Hujjatli kino san'atining o'ziga xos xususiyatlaridan biri muayyan voqea yoki hodisani tavsiflovchi terminologiya, voqelik va tushunchalarning ko'pligi bo'lib, bu

ayniqsa aniq tarjimini talab qiladi, shuning uchun terminologik birlikni ta'minlash tarjimaning o'zi ham yuqori sifatni ta'minlaydi.

Ekvivalentlarni tanlashni tizimlashtirish va tarjimada atamalarning birligini ta'minlash uchun tarjimon professional lug'at tuzishi kerak. Tilda bir xil so'zning ma'nosi ko'pincha turli xil so'zlar yoki iboralar orqali yetkazilishi mumkin, ular ma'no jihatidan sezilarli darajada farq qilishi mumkin. Shuni ta'kidlash kerakki, ba'zi hollarda, xususan, sanoat tarjimasida, atamaning o'ziga xos ma'nosidan foydalanish va har qanday o'zgarishlardan qochish ayniqsa muhimdir, chunki noto'g'ri tanlangan atama ma'lumotlarning buzilishiga olib kelishi mumkin. Shunday qilib, professional terminologik lug'at yaratish tarjima jarayonining muhim qismidir.

### **METODLAR TAHLILI**

Hujjatli filmlarni tahlil qilishda ushbu maqolada qo'llaniladigan usullar quyidagilardan iborat:

- lingvistik faktlarni tahlil qilishning tavsif usuli (terminologiyani qayta ishlashda);
- tarjimadan oldingi tahlil usuli;
- qiyosiy usul;
- tasodifiy tanlab olish usuli

### **MUHOKAMA**

E. Frankoning fikricha, hujjatli tarjimaga ikki sababga ko'ra yetarlicha e'tibor berilmagan. Birinchi sabab - yaxshi shakllangan adabiy an'ana, shubhasiz, audiovizual tarjima tadqiqotchilarining badiiy filmlarni afzal ko'rishiga ta'sir qilgan. Ikkinchidan, Frankoning fikriga ko'ra, ko'plab tadqiqotchilar hujjatli filmlar tarjimasini an'anaviy ravishda ob'ektiv deb da'vo qiladigan va murakkab adabiy tilga ega bo'lmagan faktlarni tarjima qilishga asoslangan oddiy tarjima turi sifatida qabul qiladilar [E.Franco, 2001: 289].

Hujjatli filmlarni yaratishning ishlab chiqarishdan oldingi va keyingi bosqichlarida ularning ijodkorlari unga mazmunli va zarur deb topadigan ma'no va kontekstlarni qo'shadilar. Shunday qilib, hujjatli filmlar bilan ishlaydigan tarjimon ularga badiiy filmlarga qanday munosabatda bo'lsa, xuddi shunday munosabatda bo'lishi kerak.

Umuman olganda, hujjatli asarlarni tarjima qilish juda uzoq va murakkab jarayon bo'lib, tarjimadan oldin chuqur tahlil qilishni talab qiladi. Shu munosabat bilan tarjimon tarjima jarayonini osonlashtiradigan va tezlashtiradigan barcha mavjud vositalardan foydalanishi kerak. Hujjatli film janri juda xilma-xil mavzularni qamrab oladi va bu tarjimonni nafaqat mahsulot qamrab olgan mavzularni batafsil o'rganishga, balki turli ixtisoslashgan sohalarning terminologik birliklarini o'rganishga ham undaydi. Bu shuni anglatadiki, odatda ma'lum bir sohaga ixtisoslashmagan tarjimon hujjatli filmni tushunish va uni adekvat tarjima qilish uchun zarur bo'lgan barcha ma'lumotlarni topa olishi kerak.

## NATIJALAR

Intervyu - hujjatli filmda ma'lumot berishning eng mashhur usullaridan biri. Film ustida ishlayotganda, uning ijodkorlari odatda guvohlar, voqealar ishtirokchilari yoki film mavzusi bo'yicha o'zlarining ekspert xulosalarini bera oladigan mutaxassislardan ma'lumot to'plashadi. M.Rabiger intervyuni metaforik tarzda "hujjatli kinoning yuragi" deb ta'riflaydi. Tadqiqotchining ta'kidlashicha, "intervyu" so'zi nafaqat kamera oldida ma'lumot olish, balki qahramon bilan shaxsiy munosabatlarni saqlab qolishning murakkab qobiliyatini ham anglatadi. Hujjatli filmlardagi intervyularni tarjima qilish alohida ahamiyatga ega, chunki u nafaqat faktlarning to'g'ri uzatilishini, balki suhbatdoshdan olingan boshqa barcha ma'lumotlarni ham ta'minlashi kerak [Rabiger, 2006: 248].

A. Matamala o'zining "Hujjatli filmlarni tarjima qilish: Neandertallardan Supernenigacha" maqolasida matn uzunligini moslashtirish (ovozli izoxroniya), matn va tana tilini sinxronlashtirish (kinetik sinxronizatsiya), matnni sinxronlashtirish va

vizual (harakat sinxronligi), va tushunarli nutqni yaratish uchun tilni o'zgartirish kabi faktorlar muhim jihatlar ekanligini aytib o'tgan[3].

Izoxroniya (ovozli izoxroniya) ovozli tarjima uchun asosiy talabdir. Ovozni lablar sinxronizatsiyasi bilan to'liq dublyaj qilish qiyin bo'lishiga qaramay, asl nusxa va tarjima hali ham taxminan bir xil vaqtni olishi kerak.

Kinetik sinxronizatsiya tarjima qilingan matn va ma'ruzachining ekrandagi tana harakatlari o'rtasidagi yozishmalarni nazarda tutadi. Dinamik sinxronizatsiya tarjima matni va umuman ekranda sodir bo'layotgan narsalar o'rtasidagi yozishmalarni nazarda tutadi. Misol uchun, agar filmda ma'ruzachi ekranda ko'rsatiladigan ba'zi elementlarni navbatma-navbat sanab o'tsa, tarjimon tarjimada bu elementlarning asl ketma-ketligini ham saqlab qolishi kerak.

Subtitrlashda nafaqat og'zaki hikoya, balki og'zaki vizual bayon ham tarjima qilinadi: asosiy sarlavhalar, yo'l belgilari, yo'l belgilari, sarlavhalar va boshqalar tarjimaga kiritiladi.

Ovozli tarjimada dublyaj va subtitrlash bilan solishtirganda nisbatan kam cheklovlar mavjud bo'lgani uchun tarjima boshqa tarjima turidan ko'ra tezroq amalga oshiriladi. Bu ovoz yozish bosqichini tezroq boshlash mumkinligini anglatadi. Tahrirlash bosqichi ham kamroq vaqt oladi. Ovozli tarjimaga qo'yiladigan talablardan ko'rinib turibdiki, bu turdagi tarjimaning ijobiy va salbiy tomonlari ham bor. Ovozli tarjimaning quyidagi afzalliklari qayd etilgan:

- cheklovlarning minimal soni;
- dublyajga qaraganda qisqaroq muddatda bajarilishi mumkin;
- sarflangan xarajatlar nuqtai nazaridan byudjetbop.

Eshitish yoki ko'rish qobiliyati zaif bo'lgan turli maqsadli guruhlar nuqtai nazaridan qaralsa, subtitr va ovozli tarjimaning o'ziga xos kamchiliklari bor. Subtitrning kamchiliklari uning ko'rish qobiliyati zaif odamlar uchun mavjud

emasligidir. Masalan, ko‘zi ojizlar subtitrlil filmni tomosha qilishda muayyan muammolarga duch kelishlari mumkin

Subtitrlardan farqli o‘laroq, ovozli (dublyaj) ularga film tarjimasini eshitish imkoniyatini beradi. Kar va eshitish qobiliyati past odamlar uchun o‘qish ma’lumotni idrok etishning eng yaxshi variantidir, shuning uchun kar va zaif eshituvchilar uchun subtitrlar mos keladi.

Hujjatli audiovizual asarlarni tarjima qilishda e’tiborga olinadigan yana bir muhim jihat - bu asarda qo‘llanilgan atamalarning tarjimasi. Terminlarni tarjima qilishning turli usullari mavjudligiga qaramay, har qanday atama qo‘llanilayotgan sohaga qarab o‘z ma’nosini o‘zgartira oladigan so‘z sifatida qaralishi kerakligini unutmaslik kerak. Ingliz tilida atamalar (boshqa leksik birliklar kabi) ko‘p ma’no bilan tavsiflanadi. Bitta va bir xil atama turli fanlarda turli xil ma’noga ega bo‘lishi mumkin. Xususan, bu ma’lum kontseptual tizimlar tomonidan shartlangan atamalar turli xil yuqori ixtisoslashgan ma’nolarga ega bo‘lganda, bu tarmoqlararo polisemiya taalluqlidir. Ushbu hodisani omonimiya yoki polisemiya sifatida tavsiflash mumkin.

Jumladan, men tarjima qilgan “Taom haqida afsona va haqiqatlar” teleko‘rsatuvi matnida uchragan ayrim atamalarning o‘zbek tilida ekvivalenti yo‘q. Masalan,

*Enrobed in pesto or rocking a puttanesca original, pasta looks good in everything- Xoh u “pesto” qaylasi bilan tayyorlansin, xoh “puttaneska” qaylasi ila dasturxonga tortilsin, makaron bariga nafislik bag‘ishlayveradi.*

*(tarjima muallifniki)*

Tarjima matnida o‘xshash semantik vazifani bajara oladigan lug‘at birligini tahlil qilish va tanlashda tarjimondan alohida harakat talab etiladi. Yana bir qiyinchilik tarjimon uchun cheklovlarni qo‘llash bo‘ladi. Chunki tanlangan lug‘at birligiga turli xil audiovizual tarjima turlariga (subtitr, ovozli, SDH, audio tavsif, audio kirish) subtitr uchun tanlangan ekvivalent yoki so‘z juda uzun bo‘lishi mumkin. Masalan, koroner - odatda Anglo-Sakson huquqiy oilasida to‘satdan va g‘ayrioddiy sharoitlarda sodir

bo'lgan o'limlarni tekshiradigan amaldor. Ko'pgina huquqiy tizimlarda bu lavozimning ekvivalenti yo'q. Ba'zi mamlakatlarda sud-tibbiy ekspertiza, dastlabki tergov va sud kabi bir qator organlar tomonidan sudlanuvchiga o'xshash vazifalar bajariladi.

Shuning uchun atama ba'zan transliteratsiya orqali tarjima qilinadi, chunki ko'pincha analogni tanlash uning ma'nosiga to'liq mos kelmaydi va atamaning tavsifiy tarjimasida juda ko'p joy oladi yoki yozuvda juda ko'p vaqtni oladi. To'g'ri tuzilgan tarjima lug'ati yangiligi tufayli maqsadli tilda o'xshash bo'lmagan atamalarni manba tilda o'rganish va tavsiflash imkonini beradi. Bundan tashqari, ma'lum bir kontekstdagi terminologik birliklar keng tarqalgan lug'atlarda keltirilganidan butunlay boshqacha ma'noga ega bo'lishi mumkin.

Lug'at ixtisoslashtirilgan terminologiyani tarjima qilishdagi noaniqliklarni kamaytiradi va foydalaniladigan terminologik birliklarning bir xilligini ta'minlash orqali tarjima sifatini oshiradi.

## **XULOSA**

Xulosa qilib aytadigan bo'lsak, globallashtirish va xorijiy kino ishlab chiqarishning keng tarqalishi tufayli audiovizual tarjima eng ustuvor ta'lim yo'nalishlaridan biriga aylanib bormoqda. Audiovizual tarjima tarjimondan turli ilmiy fanlar va kasblarning ko'nikma, qobiliyatlari va nazariy asoslarini uyg'unlashtirishni talab qiladi. Audiovizual mahsulotlar tarjimasida tarjimaning boshqa turlaridan farqli o'laroq, o'ziga xos idrok etilishi bilan ajralib turadi, chunki tomoshabin ma'lumotni ikki kanal - vizual va akustik kanallar orqali oladi.

Lingvistik tadqiqot ob'ekti sifatida hujjatli film ma'lum qiyinchiliklarni keltirib chiqaradi, chunki u ancha murakkab tizim bo'lib, uni tushunish uchun nafaqat matnning o'zi, balki undagi tildan tashqari omillarni ham o'rganish kerak. Hujjatli filmlar juda xilma-xil mavzularni qamrab olganligi sababli, ularni tarjima qilish uchun tarjimadan oldin chuqur tahlil qilish kerak. Tarjimon turli mavzularda batafsil

tadqiqotlar olib borishi, turli ixtisoslashgan sohalardagi terminologiyani o'rganishi va kerakli ma'lumotlarni to'liq topa olishi kerak.

Hujjatli asarlarni tarjima qilish murakkab jarayon bo'lib, u turli xil materiallarni qayta ishlash, shuningdek, ma'lum bir film mavzusini o'rganishni o'z ichiga oladi.

Tarjimon tarjimini ma'lum bir auditoriya uchun to'g'ri moslashtirishi, film mavzusini tushunishi kerak. Hujjatli filmlar zamonaviy madaniyatning muhim elementidir. Hujjatli film janri uni badiiy filmlardan ajratib turadigan o'ziga xos xususiyatlarga ega. Asosiy farqi shundaki, hujjatli filmlar real voqea va faktlarga asoslangan. Shunday ekan, tarjimon janr bilan ishlayotganda ham barcha faktlarning haqiqiyliги va haqqoniyliğini saqlab qolishi kerak. Hujjatli filmlar, shuningdek, badiiy filmlar yillar davomida xronika, kinoesse, kuzatuv, kinoportret va boshqalar kabi turlarga aylandi. Shuni ta'kidlash joizki, hujjatli filmning har bir turi badiiy mahoratning har xil darajasini nazarda tutadi, shuning uchun uning tarjimasiga boshqacha yondashiladi. Hujjatli audiovizual tarjimada atamalarning birligini ta'minlash va mumkin bo'lgan tarjima xatolarining oldini olish uchun lug'atlar zarurdir.

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## BUGUNGI KUNDA TARIX FANINI O'QITISHNING DOLZARB AHAMIYATGA EGA MASALALARI

**G'anijonova Dilafruz Noiljon qizi**

Andijon davlat pedagogika instituti o'qituvchisi

[Ganijonova1995@gmail.com](mailto:Ganijonova1995@gmail.com)

### ANNOTATSIYA

*Maqolada yoshlarga tarix fanini o'rganish borasidagi olib borilayotgan islohotlar, O'zbekiston Respublikasida yoshlarning tarixiy savodxonligini oshirish masalalariga ilmiy jihatdan to'xtalib o'tilgan, hamda xulosa va tavsiyalar ishlab chiqilgan.*

**Kalit so'zlar:** *Tarix, O'zbekiston, tarixiy savodxonlik, mustaqillik.*

### KEY ISSUES IN HISTORY TEACHING TODAY

### ABSTRACT

*In the article, the ongoing reforms in the study of history for young people, the issues of improving the historical literacy of young people in the Republic of Uzbekistan were scientifically discussed, and conclusions and recommendations were developed.*

**Key words:** *History, Uzbekistan, historical literacy, independence.*

### КЛЮЧЕВЫЕ ПРОБЛЕМЫ ПРЕПОДАВАНИЯ ИСТОРИИ СЕГОДНЯ

### АННОТАЦИЯ

*В статье научно обсуждены проводимые реформы в изучении истории для молодежи, вопросы повышения исторической грамотности молодежи в Республике Узбекистан, разработаны выводы и рекомендации.*

**Ключевые слова:** *История, Узбекистан, историческая грамотность, независимость.*

## KIRISH

Bugun o‘zining turli xil, rang – barang o‘zgarishlari bilan, dunyo ahlini hayrat va tashvishga solib kelayotgan global muammolar, insoniyatni bir talay sinovlar girdobiga tashlamoqda. Dunyoning qaysi bir mintaqasida tabiiy ofatlar avj olib insoniyat ushbu ofatlarning og‘ir azob va uqubatlarini tortib kelayotgan bo‘lsa, ayrim mintaqalarida esa odam savdosi, ekstremizm va terrorizm, qurol savdosi, narkomaniya, ijtimoiy tengsizlik, gender muammolari avj olayotganligi dunyo hamjamiyatini chuqur o‘yga solmoqda. Binobarin, xalqaro hamjamiyatni, xalqaro tashkilotlarni o‘yga solib kelayotgan bunday zo‘ravonliklarga qarshi kurashishda, ma‘lum bir tashkilotlar yoki gegemon davlatlar emas, balki butun insoniyatni o‘zi o‘zining qadr-qimmati, huquq va erkinligini ta‘minlash uchun kurashishi kerak ekanligini ko‘rsatmoqda.

Bu esa, biz oldimizga qo‘ygan maqsad, xalqparvar davlat va adolatli fuqarolik jamiyatini qurish yo‘lidagi islohotlarimizni amalga oshirishimizda bir talay qiyinchiliklarni tug‘dirmoqda.

Mustaqillik yillarida O‘zbekiston olimlarining samarali tadqiqotlari natijasida milliy tariximizning ilgari noma‘lum bo‘lgan sahifalari ochildi, tarixiy o‘tmishimizning ko‘p jihatlari kashf etildi. Natijada tarix fan – xalqqa jamiyatning ma‘naviy taraqqiyotiga xizmat qilishdek azaliy vazifasini qayta tikladi. Milliy mafkura va ma‘naviy-axloqiy barkamollikni shakllantirishda tarixiy komponentlarni o‘rni beqiyos. Tarix fanining ta‘limiy va tarbiyaviy vazifasi ham aynan mana shu komponentlarni yoshlarda shakllantirishga xizmat qiladi. “Ta‘lim to‘g‘risida”gi Qonun va “Kadrlar tayyorlash milliy dasturi”ga, 2021-2025 – yillarga mo‘ljallangan “O‘zbekiston Respublikasini yanada rivojlantirish bo‘yicha Harakatlar strategiyasi”ga muvofiq ta‘lim bosqichlarining uzluksizligi va izchilligini ta‘minlash, ta‘limning zamonaviy metodologiyasini yaratish xamda ular asosida bo‘lajak tarix o‘qituvchilarini kasbiy kompetentligini oshirishni taqozo etadi. O‘zbekiston Respublikasi Prezidentining Farmoniga ko‘ra 2017-2021- yillarda O‘zbekiston Respublikasini rivojlantirishning beshta ustuvor yo‘nalishi bo‘yicha Harakatlar strategiyasi taraqqiyotning yangi bosqichini boshlab berdi. Unga ko‘ra uzluksiz ta‘lim

tizimini yanada takomillashtirish, sifatli ta'lim xizmatlari imkoniyatlarini oshirish, shuningdek bu borada pedagog va mutaxassislarning malaka darajasini yuksaltirishga katta ahamiyat berilgan.

O'zbekiston Respublikasi Prezidenti Sh.M. Mirziyoyevning "Milliy taraqqiyot yo'limizni qat'iyat bilan davom ettirib, yangi bosqichga ko'taramiz" nomli asarida "Biz yoshlarga doir davlat siyosatini hech og'ishmasdan, qat'iyat bilan davom ettiramiz, balki bu siyosatni eng ustuvor vazifamiz sifatida bugun zamon talab qilayotgan yuksak darajaga ko'taramiz. Yoshlarimizning mustaqil fikrlaydigan, yuksak intellektual va ma'naviy salohiyatga ega bo'lib, dunyo miqyosidan o'z tengdoshlariga hech qaysi sohada bo'sh kelmaydigan insonlar bo'lib kamol topishi, baxtli bo'lishi uchun davlatimiz va jamiyatimizning bor kuch va imkoniyatlarini safarbar etamiz", — degan fikri bugungi kunda ta'lim tarbiyaga davlat siyosati darajasida e'tibor berilayotganidan dalolatdir. Binobarin, mamlakatimizning taraqqiy etishi, rivojlanishi, jahon hamjamiyatida tutgan o'rni, kelajagining kafolatlari bugungi kundagi yoshlarimizning qay darajada tarixiy bilimdonligi, milliy ongining yuksakligi va tarixiy madaniyatiga bog'liqdir. Shuningdek, Prezidentimiz Sh.M. Mirziyoyevning "Milliy taraqqiyot yo'limizni qat'iyat bilan davom ettirib, yangi bosqichga ko'taramiz" asarida O'zbekiston o'qituvchi va murabbiylariga tabrigida, " ... ayni paytida bugungi kunda oldimizda yanada muhim va dolzarb vazifalar turganini hammamiz yaxshi tushunamiz. Shu borada ilm-fan va ta'lim – tarbiya sohasining moddiy texnik bazasini yanada mustahkamlash, uning nafaqat davr bilan hamohang bo'lishini, balki zamondan oldinda yurishini ta'minlash, pedagog kadrlarni tayyorlash va qayta tayyorlashning ilg'or usullaridan keng foydalanish, bu ishlarni xorijdagi nufuzli markazlar bilan hamkorlikda olib borish, sohaga zamonaviy texnologiyalarni joriy etish, o'qituvchi va domlarning mashaqqatli va mas'uliyatli mehnatini har taraflama rag'batlantirish bilan bog'liq vazifalarni amalga oshirish, qisqa qilib aytganda, hayotimizga katta kuch bilan kirayotgan yangi avlodimizni kamol toptirish uchun davlatimiz tomonidan barcha imkoniyatlar safarbar etiladi"

Tarixni o'rgatish yoshlarga milliy g'oyani singdirish va ularda ilmiy dunyoqarashni shakllantirish, hozirgi zamon taraqqiyotining asosiy tendensiyalari va ziddiyatlari mohiyatini to'g'ri tushunishga tayyorlashning muhim vositasidir. Ushbu masalani yanada takomillashtirish, nafaqat o'sib kelayotgan yoshlarni, balki yurtimizdagi barcha fuqarolarning ham tarixiy qadriyatga ega bo'lishini ta'minlovchi tizimni yaratish maqsadida 23-sentyabri 2020-yildagi O'zbekiston Respublikasining Ta'lim to'g'risida qonuni qabul qilindi. Ushbu qonunni qabul qilishdan maqsad, avvalo yoshlar o'rtasida tarixiy ta'lim va tarbiya tizimini yaxshilash, o'quvchi yoshlarni yurtimiz tarixiga hurmat bilan munosabatda bo'lishlariga erishish, yoshlarimizning milliy qadriyatlari va madaniyatini oshirishdan iborat. Tarix o'qitish jarayoni ikki yo'l bilan oshiriladi.

Birinchisi – kuzatish metodidir. Bu metoddan foydalanganda, turli xildagi o'quv-metodik adabiyotlar, o'quvchilarning yozma ishlari, ma'ruzalari, ularning javoblari, o'qitishga berilgan baho va xulosalar bilan tanishib chiqiladi, darslar kuzatiladi, o'quvchilarning bilimi va malakalari o'rganiladi. Shunday qilib, kuzatish metodidan foydalanganda, tadqiqotchi tarix o'qitishning mavjud tajribasi doirasidan chetga chiqmaydi, uni tabiiy kuzatadi va o'rganadi.

Ikkinchisi – tajriba metodi. O'qituvchi o'qitish jarayonini o'zi xohlaganicha uyushtiradi. Xullas, ijodiy ish qiladi va uning bu ishi ilmiy tajribaga o'xshab ketadi. Biroq, o'qituvchi qilgan ijodiyizlanishlarning ilmiy tajribadan farqi, shundaki o'qituvchi darsda amaliy vazifani hal qiladi, uning xulosalari esa o'z faoliyatining natijasi bo'ladi. Ilmiy tajribada aksariyat o'qituvchilarning ishi uchun umumiy bo'lgan qonuniyatlar tadqiq etiladi, chiqarilgan xulosalar ilmiy asosda rasmiylashtiriladi. Shuning uchun xam, tarix o'qitish jarayonini tadqiq etishdagi kuzatish metodini eksperimental tadqiqotdan farq qila bilish kerak. Tarix o'qitishda o'quvchilarning yoshi, bilimi, fikrlash qobiliyati va umuman psixik faoliyatini e'tiborga olmasdan turib, ularning o'quv faoliyatiga samarali ta'sir etib bo'lmaydi. Shu sababli metodika psixologiya fani bilan chambarchas bog'liqdir. Tarix o'qitish jarayonida ustoz va shogirdlar o'rtasida ma'naviy yaqinlik, sog'lom va estetik kayfiyat vujudga keltirilishi

o'quvchilarning o'quv faoliyatini faollashtiradi, darsning samaradorligini oshiradi. Tarix fanini o'qitish milliy ongini o'stirishda, ijtimoiy faol va ma'naviy barkamol shaxsni, yurtini sevib ardoqlaguvchi fuqaroni, haqiqiy vatanparvar insonni tarbiyalab yetishtirishda nihoyatda katta ahamiyatga egadir.

Shunday qilib, tarix fanini o'qitish talabalar milliy ongini o'stirish, ularni milliy g'urur va iftixor, vatanparvarlik, insoniylik, yuksak ma'naviyat kabi olijanob an'analar ruhida tarbiyalashda bitmas-tuganmas imkoniyatlarga egadir. Demak, ta'lim va o'qitish sifatini baholashning xalqaro standartlarini joriy etish asosida ta'lim muassasalarining sifati hamda samaradorligini oshirish bugungi kunning davlat siyosati darajasida turgan asosiy masalalardan biridir. Yoshlarga oid davlat siyosatini takomillashtirishda mustaqil fikrlashga katta e'tibor berilishi – davlatning ustuvor vazifalaridir.

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ДАВЛАТ ФУҚАРОЛИК ХИЗМАТЧИЛАРИНИ ЖИСМОНИЙ МАШҚЛАРГА  
ЖАЛБ ЭТИШ ОРҚАЛИ ДАВЛАТ ФУҚАРОЛИК ХИЗМАТЧИЛАРИ  
ОРАСИДА ОММАВИЙ СПОРТНИ РИВОЖЛАНТИРИШ ВА УЛАРНИНГ  
ТАНА ВАЗНИНИ КАМАЙТИРИШ

**М.Қ.Саидова**

Магистрант Қарши давлат университети

Қарши шаҳар, Ўзбекистон.

**АННОТАЦИЯ.**

*Мақолада давлат фуқаролик хизматчиларинг гимнастик машқлар орқали тана вазнини камайтириши, иш самарадорлигини ошириши ва оммавий спортга жалб этиши бўйича ўтказилган тадқиқот натижасида баён этилади.*

**Калим сўзлар:** оммавий спорт, килокалория, гимнастик машқлар.

*В статье описаны проведенные исследования по снижению массы тела, повышению работоспособности и вовлечению государственных служащих в общественный спорт посредством занятий гимнастикой.*

**Ключевые слова:** массовый спорт, килокалория, гимнастические упражнения.

*The article describes studies conducted on reducing body weight, increasing performance and involving government employees in public sports through gymnastics.*

**Key words:** mass sports, kilocalorie, gymnastic exercise.

Мамлакатимизда соғлом турмуш тарзини тарғиб этиш, аҳолининг барча қатламларини жисмоний тарбия ва оммавий спортга кенг жалб этишга алоҳида эътибор қаратилмоқда. Бу аҳолининг барча қатламларини саломатлиги, кучи ва имкониятларига бўлган ишончини мустаҳкамлашда муҳим аҳамият касб этади.

Хусусан, жаҳонда коронавирус пандемиясининг юзага келиши дунё мамлакатлари қатори Ўзбекистонда ҳам аҳолининг соғлиғи, саломатлиги, соғлом ҳаёт кечириш даражаси заиф эканлигини кўрсатди. КОВИД-19 инфекцияси,

аввало, юрак-қон томир ва нафас олиш йўллари ҳамда семизлик (ортиқча вазн) касаллигига чалинган фуқароларимизнинг соғлиғига салбий таъсир кўрсатди. Натижада пандемия кўплаб фуқароларимиз, давлат фуқаролик хизматчиларининг бевақт дунёдан кўз юмишига сабаб бўлди.

Шунингдек, АҚШдаги Майо клиникаси тадқиқотчиларининг ёзишича, кунига тўрт соатдан ортиқ доимий равишда ўтириб ишлаш ҳар қандай сабабга кўра ўлим хавфини 50%га оширади. Бундан ташқари, юрак-қон томир касалликлари хавфи 125%га ошишини аниқлашган.

Шу сабабли, давлат органлари ва ташкилотлари ҳамда маҳаллий давлат ҳокимияти органлари ходимлари ўртасида соғлом турмуш тарзини тарғиб этиш ва соғлиғини мустаҳкамлашга қаратилган тадбирларни амалга ошириш юртбошимиз ва ҳукумат олдидаги долзарб вазифалардан бири этиб белгилаб қўйилган.

Президентимизнинг 2020 йил 30 октябрдаги “Соғлом турмуш тарзини кенг татбиқ этиш ва оммавий спортни янада ривожлантириш чора-тадбирлари тўғрисида”ги фармони, 2021 йил 5 ноябрдаги “Юриш, югуриш, мини-футбол, бадминтон, стритбол ва “Workout” спорт турларини янада ривожлантириш чора-тадбирлари тўғрисида”ги 5282–сонли, “Маҳалла ёшларини оммавий спортга жалб этишни янги босқичга олиб чиқиш чора-тадбирлари тўғрисида”ги 201-сонли қаролари ва Давлат хизматини ривожлантириш агентлиги ҳамда Жисмоний тарбия ва спорт вазирлиги ўртасида ўзаро англашув меморандумларининг қабул қилиниши мамлакатимизда жисмоний тарбия ва оммавий спортнинг ривожига муҳим аҳамиятга эга бўлди.

Қабул қилинган норматив-ҳуқуқий ҳужжатлар ижроси натижасида барча давлат ташкилотларида спорт тарғиботчиси вазифаси киритилди ва ташкилотларда ходимлар жисмоний машқлар ва спорт билан мунтазам шуғулланишлари учун шарт-шароитлар яратилди. Аммо шунга қарамай кўзланган мақсадга эришилмади ва бу соҳада аниқ дастур ишлаб чиқиш долзарблигини кўрсатмоқда.



**Тадқиқотнинг мақсади:** гимнастик машқларни турган жойда бажариш орқали давлат хизматчиларини тана вазнини камайтириш, соғлигини яхшилаш ва оммавий спортга жалб этиш дастурини ишлаб чиқиш ва тажрибада асослаш.

Таклиф этилаётган машқларни ҳар куни 5 дақиқадан 2 марта ўтказиш тавсия этилади. Бизнинг тажриба Қашқадарё вилоят ёшлар сиёсати ва спорт бош бошқармасининг 25-40 ёш атрофидаги, турли вазндаги давлат хизматчилари иштирокида олиб борилди (1-жадвал).

Бажарилиши осон бўлган, 500 килокалорияни эритадиган спорт гимнастикаси машқлари йиғиндиси ишлаб чиқилди ва таклиф қилинди (2-жадвал). Дастлабки 1 ҳафтада 2 кун, соат 9.15 дан 9.20га қадар 5 дақиқа 1 марта машқ қилиниши лозим бўлади. Сўнгра бир кундан мунтазамлик ва такрорийлик ошириб борилади. Яъни ҳар куни 2 марта (соат 9.15-9.20, 17.25-17.30). Бунда, ягона талаб овқатланиш рационидан ёғли, зарарли углеводларга бой (хамирли таомлар, ширинликлар) чиқариб ташланади. Натижада бажарилган машқлар ўз натижасини тезда бера бошлайди.

**1 – жадвал. Давлат хизматчиларининг тана вазнлари (тадқиқот бошида).**

№	Тадқиқот гуруҳи		Назорат гуруҳи	
	Исми ва шарифи	Вазни, кг	Исми ва шарифи	Вазни, кг
1	З.Низомова	65	С.Абдужабборова	60
2	М.Зубайдуллаева	50	М.Мардонова	51
3	Ж.Авазов	75	А.Авазов	79
4	Ф.Тошев	86	А.Қахрамонов	89
5	Х.Алмосов	76	Ф.Суннатов	79

**2-жадвал. Бажарилиши лозим бўлган гимнастик машқлар.**

№	Машқнинг номи	Бажарилиш сони	Эрийдиган ккал миқдори
1	Ўтириб туриш	30 марта	35
2	Жойда сакраш	40 марта	60
3	Жойда югуриш	15 марта	40
4	Стулча холатда туриш	1 дақиқа	25

5	Жойда юриш	1 дақиқа	35
6	Выпад машки	20 марта	30
7	Стулга суяниб отжимания қилиш	5 марта	75
8	Енгил отжимания қилиш	15 марта	70
9	Ўтирган ҳолатда оёқ букиш ва очиш	20 марта	50
10	Қўлларни ўнг ва чапга ёйиш	30 марта	60

6 ой давомида тадқиқот гуруҳида махсус дастур асосида иш олиб борилди, назорат гуруҳидагилар фақат тўғри овқатланиш орқали натижалари текшириб борилди.

Тажрибада тадқиқот гуруҳидаги давлат хизматчиларининг вазни, соғлиги ва иш самарадорлиги сезиларли даражада яхшиланганлиги кузатилди (3-жадвалга қаранг).

№	Тадқиқот гуруҳи		Назорат гуруҳи	
	Исми ва шарифи	Вазни, кг	Исми ва шарифи	Вазни, кг
1	З.Низомова	56	С.Абдужабборова	59
2	М.Зубайдуллаева	48	М.Мардонова	53
3	Ж.Авазов	70	А.Авазов	78
4	Ф.Тошев	78	А.Қаҳрамонов	92
5	Х.Алмосов	68	Ф.Суннатов	81

Тадқиқот якунида ўтказилган текширишлар натижаси шуни кўрсатдики, махсус жисмоний машқлар (МЖМ)ни тадқиқот гуруҳида тўлақонли ўзини оқлади, ходимларнинг тана вазнлари сезиларли даражада пасайди, назорат гуруҳида эса аксинча ҳеч қандай ўзгариш бўлмади. Натижаларни ўрганиб чиқиб хулоса этиш мумкинки тавсия қилган машқларимиз муваффақиятли натижа берди.

**Хулоса.** Тадқиқотлар таҳлилидан қуйидаги фикрларни бериш мумкин:

- давлат фуқаролик хизматчилари МГМ (махсус гимнастик машқлар) орқали ортиқча вазндан осон халос бўлишди;

- иш вақтлари ва юкламаларига сезиларли таъсир этмаган ҳолда бир кунда 5 дақиқадан 2 марта махсус гимнастик машқлар бажариш орқали давлат фуқаролик хизматчиларинг меҳнат самарадорлигини янада яхшиланди;

- тадқиқот гуруҳидаги ходимларнинг барчаси ўзлари танлаган спорт турлари билан мунтазам шуғулланишни йўлга қўйди;

- давлат ташкилотида оммавий спортни энгил усулда ривожлантиришга эришилди.

### **Адабиётлар:**

1. Ўзбекистон Республикаси Президентининг 2020 йил 30 октябрдаги “Соғлом турмуш тарзини кенг татбиқ этиш ва оммавий спортни янада ривожлантириш чора-тадбирлари тўғрисида”ги 6099-сонли фармони.

2. Ўзбекистон Республикаси Президентининг 2021 йил 5 ноябрдаги “Юриш, югуриш, мини-футбол, бадминтон, стритбол ва “Workout” спорт турларини янада ривожлантириш чора-тадбирлари тўғрисида”ги 5282–сонли қарори.

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4. Давлат хизматини ривожлантириш агентлиги ҳамда Жисмоний тарбия ва спорт вазирлиги ўртасида ўзаро англашув меморандуми.

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## YARIM O‘TKAZGICHLAR FIZIKASINI O‘QITISHDA QATTIQ JISMLAR DASTURLARINI QO‘LLASH BO‘YICHA TADQIQOTLAR

**O‘rinboyev Kumushoy Sultonbek qizi**

Andijon davlat pedagogika inistuti infarmatika

va aniq fanlar kafedrası o‘qituvchisi

**Foziljonova Mahliyo**

Fizika va astranomiya yo‘nalishi 1-bosqich talabasi

***ANNOTATSIYA:** Yarimo‘tkazgichli fizikasi kursining o‘qitilish mazmuni qattiq jismlarda kimyoviy bog‘lanish, amorf, va kristall jismlar va ularning mexanik xossalari hamda mexanik kuchlanishlari o‘rganiladi. Qattiq jismlar aniq ega bo‘lgan va uni tashkil etgan atomlar o‘zining muvozanat holati bilan tebranish xususiyatiga ega. Shu jumladan ushbu maqolada qattiq jismlarning atom tuzilishiga ko‘ra turlarini tabiat bilan bo‘lagan holda batafsil ma‘lumot berib o‘tilgan. Shunga ko‘ra, bu jismlar tabiatda qanday ahamiyatga ega ham yoritilgan. Bu jismlar asosan nimalarda kerak bolishi. Ular : Monokkristal, Polikristal hamda Amorf kristaldir, qattiq jismlar va ularning mexanik xossalari haqida ma‘lumotlar beriladi. Amorf jismlar Kristal jismlar va ularning xossalari bizning hayotimizda juda ko‘p uchraydi.*

***Kalit so‘zlar:** qattiq jismlar, amorf, kristal jismlar va mexanik xossalari.*

Hammamizga ma‘lumki hozirda texnologiya juda rivojlangan payt hisoblanadi. SHu bilan birgalikda ilm-fan ham rivojlanishiga juda katta e‘tibor qaratilmoqda. Biz yoshlar bunday sharoitda umumli foydalanishimiz zarur. Hozirda biz yoshlarda aniq va tabiiy fanlarda bo‘layotgan o‘zgarishlar barchani e‘tiborini tortmoqda. Shu jumladan biz bunday o‘zgarish bo‘layotganiga befarq qolmasligimiz juda ham muhim. Hozirda ko‘plab fanlar o‘z o‘rniga ega bo‘lishi bilan birgalikda, fizika fani ham o‘z o‘rnini

topmoqda. Bu faning yuksalishiga sabab o'z ichiga juda ham qiziqarli ma'lumotlar va inson hayoti davomida kerak bo'ladigan majmualar mujjasam. Shuning uchun fizika fanida turli xil ixtirolar mavjud hisoblanadi. Fizika fanida hamma bo'limlar o'ziga yarasha ma'no mazmuniga ega. Bo'limlarda turli xil qiziqarli mavzular jamlanmasi mavjud .Shu jumladan bu fanni asosan poydevori bizga qadimda ma'lum bo'lgan buyuk bobolarimiz bizga qadirli bo'lgan kitoblarda qoldirgan.Bu fanni yuksalishiga bizga me'ros bo'lib qolgan ma'lumotlar o'z dalili hisoblanadi. Mamlakatizmda faolyat olib borayotgan soha mutaxassislarining fikricha. O'quvchilarni o'qitish, o'rgatish va ularning har tomonlama rivojlantirish qonun-qoidalarini o'z ichiga olgan pedagogika sohasi hisoblanadi. Drsni uslubiy yo'nalishlarini izlash va ualrni darsga qiziqtirib o'tishlari zarur. Dars mobaynida turli xil ko'rgazmalardan seminar va turli xil darsga oid majmualardan foydalanish maqsadga muvofiq. O'qitishning an'anaviy usulda eng jiddiy kamchilik-talabalarning dars mashg'ulotlardagi passivligi va bundan kelib chiqadigan pas samaradorlik va natija hisoblanadi. Fizika faning eng qiziqarli va juda ma'lumotlarga boy bo'lgan bo'limi olingan. Fizika bo'limi hisoblangan yarimo'tkazgichlar va ularning mexanik xossalari haqida ma'lum qiladi. Yrimo'tkazgich fizikasi bo'limini yoritilishida undagi mexanik hodisalar,mexanik kuchlanishlar va tabiatda kerak bo'ladigan ma'lumotlar yoritlgan.Shu jumladan yarimo'tkazgichlarda qattiq jismlar haqida ma'lumot berilgan. Qattiq jismlar yarimo'takzgichlar bizning hayotimizda ahamiyatga ega hisoblanadi. Qattiq jismlar, bu-mettalar va dialektriklar bo'lib, ularsiz elektrotexnikani, hayotimizda kerak bo'lganligi uchun tasavvur qilib bo'lmaydi. Qattiq jismlarga o'z navbatida amorf jismlar, kristal jismlar va ularning xossalari kundalik hayotimizda ishlatiladigan materiallardir. Qattiq jismlar o'z holatini doim saqlay oladi.Bular qattiq jismlar bo'lsa ham bir biridan fizik va mexanik xossalari orqali farq qiladi.Biz qattiq jismlarning yer sharining,sirtida qattiq jismlardan yasalgan inshooatlarda uylarda yashaymiz. Qattiq jismlar o'zining muvozanat holatini doim saqlab qoladi. Siz kristallarni noyob va chiroyli mineral yoki qimmatbaho deb hisoblarsiz.Lekin hamma kristallar ham kamyob va chiroyli emas. Atrofimizdagi ko'p narsalar keng tarqalgan moddalarning aksaryati

kristaldan. Bu mavzuni yoritish ekanmiz o'zimizga ham kerakli ma'lumotlarni olamiz. Suv muz yoki qor parchalari kristallariga aylanadi. Shu bois tabiatda juda ko'p kristallar mavjud hisoblanadi. Shuningdek kristallar turli o'lchamlarga ham ega bo'lishi mumkin. Kristal bu-moddaning qattiq holati hisoblanadi. U o'zidagi atomlarning joylashuviga ko'ra bir shakilga va qirraga ega. Kristal hosil qiluvchi yuzlab moddalar mavjud Eng ko'p foyda olishingiz mumkun bo'lgan Kristal yoki toshni tanlash uchun avval turli xil Kristal yoki toshlarning xususiyatlarini tekshiring va ma'lum bir ehtiyojni qondira oladigan kishiga boring. Hozirgi payitda yer qobig'ida erigan tog' jinslarining massalari mavjud bo'lib ular asta sekin sovub har xil kristallarni hosil qiladi. Dunyoda ma'lum bo'lgan barcha kristallarni 32 turga bo'lish mumkun. Bu qattiq jism ham fan o'qitish tizmda kerak bo'ladi. Mineral kristallar ham ma'lum tosh hosil qiluvchi jarayonlar tufayli hosil bo'ladi. Yer qarida juda ko'p miqdordagi qaynoq va erigan tog' jinslari aslid mineral eritmalardir. Mexanik kuchlanish faqat shu jismga boshqa jismlarning bevosita tasiri natijasida emas balki o'zgarishi elektr yoki magnit maydon tasiri jismning bir fazadan ikkinchi fazaga o'tish va boshqa tufayli vujudga kelishi mumkin. Xulosa: men hulosa qilib etamanki bu mavzuga doir narsalar bizni hayotimizda juda ko'p kuzatilar ekan. Ularni mexanik kuchlanishlari ham kuzatilar ekan. Bu mavzuni yoritilganda, ularda kuzatilayotgan narsalarni bilib oldim. Har doim dars o'tishda turli xil dars qo'llanmalardan foydalanishimiz maqul. yarimo'tkazgichlar va qattiq jismlardan olgan bilimlarni amalyotda qo'llay bilish kerak. Bu borada juda ko'p tajriba ham bo'lishi zarur.

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## MOLEKULAR FIZIKANI O'RGANISHNING FIZIK VA PEDAGOG ASOSLAR

**O'rinboyeva Kumushoy Sultonbek qizi**

Andijon davlat pedagogika instituti o'qituvchisi

**Avaxonova Mohinisobonu Oybek qizi**

Andijon davlat pedagogika instituti talabasi

*Annotatsiya.* Mazkur maqolada Molekulyar fizikani o'rganishning fizik va pedagogik asoslari yoritib berilgan. Maqola davomida xulosa va takliflar berib o'tilgan.

*Kalit so'zlar:* Molekulyar fizika, moddaning tuzilishi, molekula massasi, Avagadro doimiysi, tabiatshunoslik, mexanika.

Molekulyar fizikani o'rganish tabiatshunoslik fanlari nuqtai nazaridan olamning bugungi manzarasiga bo'lgan ilmiy qarashlarni shakllantirishda katta ahamiyatga ega. Moddaning tuzilishi va turli xususiyatlarining bunga bog'liq ekanligi-butun fizika kursiga singdirilgan masalalardir. R.Feynman ta'kidlaganidek, "...barcha jismlar uzluksiz harakatda bo'lgan, uncha katta bo'lmagan masofalarda o'zaro tortishuvchi, ammo ulardan biri ikkinchisiga jips joylashgan bo'lsa, itarishuvchi atomlardan va mayda jismchalardan iboratdir". Birgina shu jumlada haddan ortiq ma'lumot jamuljamdir.

Mexanikani o'rganishdan molekulyar fizikani o'rganishga o'tish o'quvchilar bilimlarining oshishida, ularning fizik fikrlashlari shakllanishi va kamol topishida ham ilmiy dunyoqarashlar boyishida butunlay yangi bosqichdir. Mexanik xususiyatlardan farqli o'laroq issiqlik hodisalaridagi yangi xususiyatlar ikki omil: moddaning uzlukli tuzilishi hamda o'zaro ta'sirlashuvchi zarralar (molekulalar, atomlar, ionlar) sonining

ulkanligi bilan izohlanadi. Shu sababli issiqlik hodisalarini tushuntirish uchun mexanikada ko‘rilmagan, yangi, eng avvalo harorat, molekulalarning o‘rtacha kvadratik tezligi, ideal gaz, gazning hajmi va bosimi, ichki energiya, issiqlik muvozanati, kvazistatik jarayon, issiqlik jarayonlarining yo‘nalganligi hamda termodinamikaning birinchi qonuni kabi fizik tushunchalarni kiritish talab etiladi.

Molekulyar fizikani o‘rganish katta tarbiyaviy ahamiyatga ega bo‘lib, issiqlik texnikasi va ma‘lum texnik xususiyatlarga ega bo‘lgan materiallarni yaratish sohasidagi fan va texnikaning ulkan yutuqlarini namoyish etish; issiqlik hodisalarini bilish mumkinligi va ularning o‘ziga xos xususiyatlari haqidagi materialistik tasavvurlarini shakllantirish; mexanik hodisalar bilan solishtirish; makro va mikrokattaliklar orasidagi sabab va oqibatli bog‘liqliklarning ehtimoliy statistik xarakterini ochib berish; o‘rgani-layotgan nazariya, qonun va tushunchalarning tadbiiq etish chegaralarini aniqlash; olamning hozirgi zamon tabiiy-ilmiy manzarasining vujudga kelishi va rivojlanishida molekulyar-kinetik nazariyaning ulkan rolini ko‘rsatib berishni o‘z ichiga oladi.

Ideal gaz qonunlari termodinamik va statistik metodlar o‘rganilish natijasida qanday fizik kattaliklarga e‘tibor qaratamiz.

"Molekulyar fizika" bo‘limini o‘rganishning mazmuni va izchilligi. "Kadrlar tayyorlash milliy dasturi"ga ko‘ra fizika ta‘lim davlat standartlari ishlab chiqildi. DTS ga ko‘ra, molekulyar fizika bo‘limi quyidagi masalalar turkumini qamrab oladi.

1.Molekulyar-kinetik nazariya asoslari (molekulyar-kinetik nazariyaning asosiy qonuniyatlari molekulalar haqida asosiy ma‘lumotlar, ideal gaz molekulyar-kinetik nazariyasi).

2.Ichki energiya va ish, issiqlik miqdori, (issiqlik dvigatel-lari ishlashining fizik asoslarini ko‘rib chiqishda foydalanuvchi issiqlik haqidagi tushuncha va qonunlar).

3. Bug‘, suyuqlik va qattiq jismlarning xossalari.

Molekulyar fizikaning o‘quv materialida molekulyar-kinetik nazariya asoslari va ularning tajribada tasdiqlanishi asos qilinib olingan. Bunda o‘rganilishi va izohlanishiga alohida diqqatni jalb etish lozim bo‘lgan klassik hamda fundamental



tajribalar katta va ma'rifiy-tarbiyaviy rol o'ynaydi. Unga molekulalar o'lcham-larining yuqori chegaralarini aniqlash bo'yicha Reley tajribalari, Broun harakati va og'irlik kuchi maydonida zarralar taqsimotini aniqlash borasidagi Perren tajribalari, molekulalar tezligini aniqlash bo'yicha Shtern tajribalari kiradi. Molekulyar fizika va issiqlik hodisalari haqida to'g'ri tasavvur hosil qilmoq uchun tajriba, kuzatishlar, andozaviy tajribalar, miqdoriy misollar, sodda hisob-kitoblar, mikro va makro olamdagi kattaliklarni solishtirish, o'quv kinofilmlarini namoyish etish butun kursni o'rganish davomida qo'shib olib borilmog'i lozim. Ba'zi bir fizik tushunchalar va qonunlar ustida qisqacha to'xtalib o'tamiz.

Molekula massasi. Molekula massasini aniqlashning Perren tajribasiga asoslangan metodlaridan birini qarab chiqish mumkin. Perren yaxshilab aralashtirilgan aralashmalarda "begona" moddaning molekulalari o'zini gaz qonunlariga binoan tutishlaridan kelib chiqqan. Buning asosida u, gaz qonunlari ko'p molekuladan tashkil topgan broun zarralari uchun ham o'rindir. Gaz molekulalarining atmosfera bo'ylab ikki sababga ko'ra: barcha molekulalarning yerga "qulab tushishi" ni taqozo etuvchi tortish kuchi hamda molekulalarning turli yo'nalishlarda yerdan «sochilib» ketishini taqozo etuvchi xaotik harakat sababli yuzaga keluvchi taqsimoti tushuntiriladi. Bu ikkita o'zaro zid bo'lgan sabablar atmosfera balandligi bo'yicha gaz molekulalarning barqaror taqsimlanishini ta'minlaydi. Perren tajribalariga asoslangan holda shuni ta'kidlab o'tmoq lozimki, zarralar massasi qancha kichik bo'lsa, shuncha katta balandlikda ularning konsentratsiyasi ikki barobar kamayadi. Shuning uchun gaz molekulalarining atmosferadagi taqsimoti bilan emulsiya zarralarining balandlik bo'yicha taqsimotini solishtirish mumkin.

Avagadro doimiysi. Avagadro doimiysini aniqlashning ko'plab usullari mavjud: Broun harakati bo'yicha, zarralarning tortishish kuchi maydonidagi taqsimoti bo'yicha va boshqalar. Ammo bu usullar asoslangan qonuniyatlar o'quvchilarga hali ma'lum emas. Shuning uchun o'qitishning bu bosqichida quyidagi usullardan foydalanish mumkin. Suyuqlikning monomolekulyar qatlami bilan o'tkaziladigan tajribadan molekulalar chiziqli o'lchamlarining yuqori chegaralari aniqlanadi:  $d = V$ .

Demak, bu qonuniyatlarning mohiyati fizikani o'rganishning birinchi bosqichidayoq moddalar molekulalardan, molekular atomlardan, atomlar yadro va elektronlardan, yadro esa proton va neytronlardan tuzilishini bilib oldik.

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## ЗАЖИВЛЕНИЕ МЯГКИХ ТКАНЕЙ И КОСТНАЯ РЕГЕНЕРАЦИЯ ПОСЛЕ УДАЛЕНИЯ РЕТИНИРОВАННЫХ ТРЕТЬИХ МОЛЯРОВ НИЖНЕЙ ЧЕЛЮСТИ С ИСПОЛЬЗОВАНИЕМ БОГАТОГО ТРОМБОЦИТАМИ ФИБРИНА

**Тожиев Ф.И.**

**Шодиев С.Н.**

**Мукимов И.И.**

Ташкентский государственный стоматологический институт

Кафедра хирургической стоматологии

***Введение.** Хирургическое удаление ретенированных третьих моляров нижней челюсти является одной из наиболее часто выполняемых зубоальвеолярных операций хирургами-стоматологами во всем мире. Известно, что это связано с клинически значимой послеоперационной заболеваемостью, включая отек, боль, тризм, лихорадку и инфекцию. Кроме того, остаточному костному дефекту требуется от 7 месяцев до 1 года для постепенного заполнения костью и реоссификации.*

***Ключевые слова:** костное заполнение, лунки экстракции третьих моляров нижней челюсти, богатый тромбоцитами фибрин, обогащенная тромбоцитами плазма, реоссификация.*

**Актуальность.** Хирургическое удаление ретенированных третьих моляров нижней челюсти является одной из наиболее часто выполняемых зубочелюстных операций челюстно-лицевых хирургов и хирургов-стоматологов во всем мире. Известно, что это связано с клинически значимой послеоперационной заболеваемостью, включая отек, боль, тризм, лихорадку и инфекцию. Хирургическое удаление третьего моляра нижней челюсти включает в себя

отведение слизисто-надкостничного лоскута для доступа, удаление вышележащей кости, рассечение зуба (одонтэктомия), удаление зуба, санацию лунки и закрытие лоскута мягких тканей. Это приводит к значительному хирургическому поражению, приводящему к послеоперационной воспалительной реакции в диапазоне от боли и отека до острого тризма, лихорадки и т.д. В некоторых случаях также сообщалось о других менее частых осложнениях, например инфекции, повреждении нерва. Кроме того, остаточному костному дефекту требуется от нескольких месяцев до года для постепенного заполнения костью и реоссификации.

Обогащенный тромбоцитами фибрин (PRF) относится к новому поколению иммунных и тромбоцитарных концентратов, собирающихся на одной фибриновой мембране, содержащей все составляющие образца крови, способствующие заживлению и иммунитету.[1] Хотя цитокины тромбоцитов и лейкоцитов играют важную роль в биологии этого биоматериала, поддерживающий их фибриновый матрикс, безусловно, является определяющим элементом, ответственным за реальный терапевтический потенциал PRF. Было показано, что четыре основных события рубцевания, а именно ангиогенез, иммунный контроль, захват циркулирующих стволовых клеток и эпителизация раны, ускоряют и усиливают заживление благодаря развитию эффективной неоваскуляризации, ускоренному закрытию раны с быстрым ремоделированием рубцовой ткани, и почти полное отсутствие инфекционных событий. Тромбоциты, выделенные из периферической крови, являются аутологичным источником факторов роста, доставляемых в высоких концентрациях к месту костного дефекта или области, требующей аугментации.[1,2] Факторы роста, хранящиеся в  $\alpha$ -гранулах тромбоцитов, включают фактор роста тромбоцитов (PDGF), инсулиноподобный фактор роста, фактор роста эндотелия сосудов и трансформирующий фактор роста- $\beta$  (TGF- $\beta$ ). Когда тромбоциты в концентрированной форме добавляют к материалам трансплантата, результат становится более предсказуемым. PRF был впервые описан Choukroun et al. [1].

во Франции в качестве агента, стимулирующего хемотаксическую миграцию мезенхимальных стволовых клеток человека к месту повреждения. [2,3] Некоторыми из применений PRF в стоматологической хирургии были костная пластика для зубных имплантатов, трансплантаты накладок и вкладок, направляемая кость / ткань. методы регенерации, процедуры синус-лифтинга, процедуры увеличения гребня и закрытие расщелин, дефектов губы и неба. Доказано, что он имеет огромное значение для восстановления костных дефектов, вызванных небольшими кистами, костных дефектов после удаления ретенированных клыков, восстановления свищей между полостью пазухи и ртом и т. д. Хотя было проведено несколько исследований эффективности богатая тромбоцитами плазма (PRP) при реоссификации костных дефектов, образовавшихся в результате удаления зубов, существует лакуна при использовании PRF на мягких тканях и заживлении костей после удаления ретенированных третьих моляров.

**Цели и задачи:** Провести проспективное исследование для оценки различий в заживлении мягких тканей и костной регенерации в местах удаления ретенированных третьих моляров нижней челюсти с включением и без включения аутологичного богатого тромбоцитами фибрина (PRF) в хирургические раны. Также сравнить частоту краткосрочных и долгосрочных осложнений после лечения в обоих случаях.

**Материалы и методы.** Шестьдесят пациентов были случайным образом разделены на две группы по 30 человек в каждой. Первую группу, которая служила основной, составили пациенты, у которых свежий аутологичный PRF помещали в область экстракции сразу после хирургического удаления ретенированного третьего моляра нижней челюсти, до ушивания слизисто-надкостничного лоскута. Во вторую группу, которая служила контролем, вошли те пациенты, у которых слизисто-надкостничные лоскуты были ушиты без включения PRF в область. Обе группы оценивали и сравнивали по

послеоперационной боли, отеку, тризму, заживлению мягких тканей, а также заполнению костной лунки экстракционной лунки.

**Результаты:** Было обнаружено, что в группе исследования, в которой аутологичный PRF был включен в операционное поле, наблюдалось быстрое и без осложнений заживление мягких тканей, а также гораздо более быстрая реоссификация и костное заполнение лунки экстракции по сравнению с контрольной группой в котором не использовался PRF.

Ввиду того, что использование PRF, помещенного в лунку для удаления, привело к снижению послеоперационной заболеваемости и улучшению рентгенологического заживления кости, рекомендуется исследовать больший образец в сочетании с подробными и более объективными рентгенологическими параметрами и протоколами. проверить результаты этого исследования и, возможно, включить использование PRF как часть стандартной процедуры удаления, особенно для сложных удалений или для удаления тех зубов, которые должны быть заменены с помощью зубных имплантатов.

**Вывод:** включение PRF в лунки ретинированных третьих моляров оказалось полезным для пациентов, обеспечив более быстрое послеоперационное восстановление с меньшим количеством осложнений, таких как послеоперационный отек и отек, боль и тризм; лучшие общие послеоперационные результаты с точки зрения более быстрого заживления мягких тканей, а также более ранней регенерации костей.

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## PROFESSIONAL TA'LIMDA RAQAMLI TA'LIM RESURSLARINI ISHLAB CHIQUARISHNING MOHIYATI VA AFZALLIKLARI

**Yusufali Moloshov, Saidaxon Kaxxorova**

To'rao'rg'on Agrotexnologiyalari  
texnikumi maxsus fan o'qituvchilari

***Annotatsiya:** Maqolada ta'lim sohasini tubdan isloh qilish, bozor iqtisodiyotida mehnat bozoriga malakali, zamon talabidagi yetuk kadrlarni yetkazib berish muhim vazifa hisoblanadi.*

***Kalit so'zlar:** Zamonaviy ta'limda ta'lim berish uchun ta'lim texnologiyasi, yetuk kadrlarni yetkazib berish, professional ta'lim tizimini.*

Barchamizga ma'lumki Respublikamizda ta'lim sohasini tubdan isloh qilish, bozor iqtisodiyotida mehnat bozoriga malakali, zamon talabidagi yetuk kadrlarni yetkazib berish masalasi xozirgi professional ta'lim tizimini bo'g'inlariga qo'yilgan muhim talablardan hisoblanadi.

Zamonaviy ta'limda ta'lim berish uchun ta'lim texnologiyasi makonini yaratish, boyitish, ta'limda raqamli ta'lim resurslarini ishlab chiqish orqali ta'lim tendensiyalarini o'zgartirish bugungi ta'lim talablaridan biri hisoblanadi.

**Xo'sh Raqamli ta'lim resurslari o'zi nima?**

**Raqamli ta'lim resurslari (RTR)**, boshqa so'zlar bilan aytganda, "virtual o'qish resurslari", "onlayn o'qish resurslari", "onlayn ta'lim resurslari" kabi atamalarda ham ishlatilishi mumkin. RTR, ta'lim va o'qish jarayonlarini raqamli vositalar orqali olib borishni yoki ularga qaraganda tashkil etishni ifodalaydi. RTR, o'qish va o'qitishni, ilmiy tadqiqot va o'quvchilarning o'zlashtirilishi va yaxshilashini yaxshi samaraga aylantirishni maqsad qilgan modern texnologiyalardan biridir.



**RTR ning turli xil turlari** mavjud, masalan:

**Interaktiv ta'lim dasturlari:** Bu dasturlar, o'quvchi va o'qituvchilarning o'qitish va o'rganish jarayonlarini avtomatlashtirgan dasturlardir. Masalan, Learning Management Systems (LMS) kabi platformalar.

**Videolar:** Video darsliklar, o'qituvchilar tomonidan yaratilgan va o'quvchilarning o'zining rejalari bo'yicha ta'lim oladigan onlayn darsliklar.

**Batafsil dasturlar:** Ushbu turlar, foydalanuvchilarni o'qishni o'rganishlari uchun interaktiv dasturlar bilan ta'minlaydi.

**Mo'ljallangan ta'lim dasturlari:**

Bu dasturlar, mahsulotlarning, turli fanlar va ko'nikmalar uchun mo'ljallangan ta'lim dasturlaridir



**Professional ta'limda Raqamli ta'lim resurslarini ishlab chiqish**

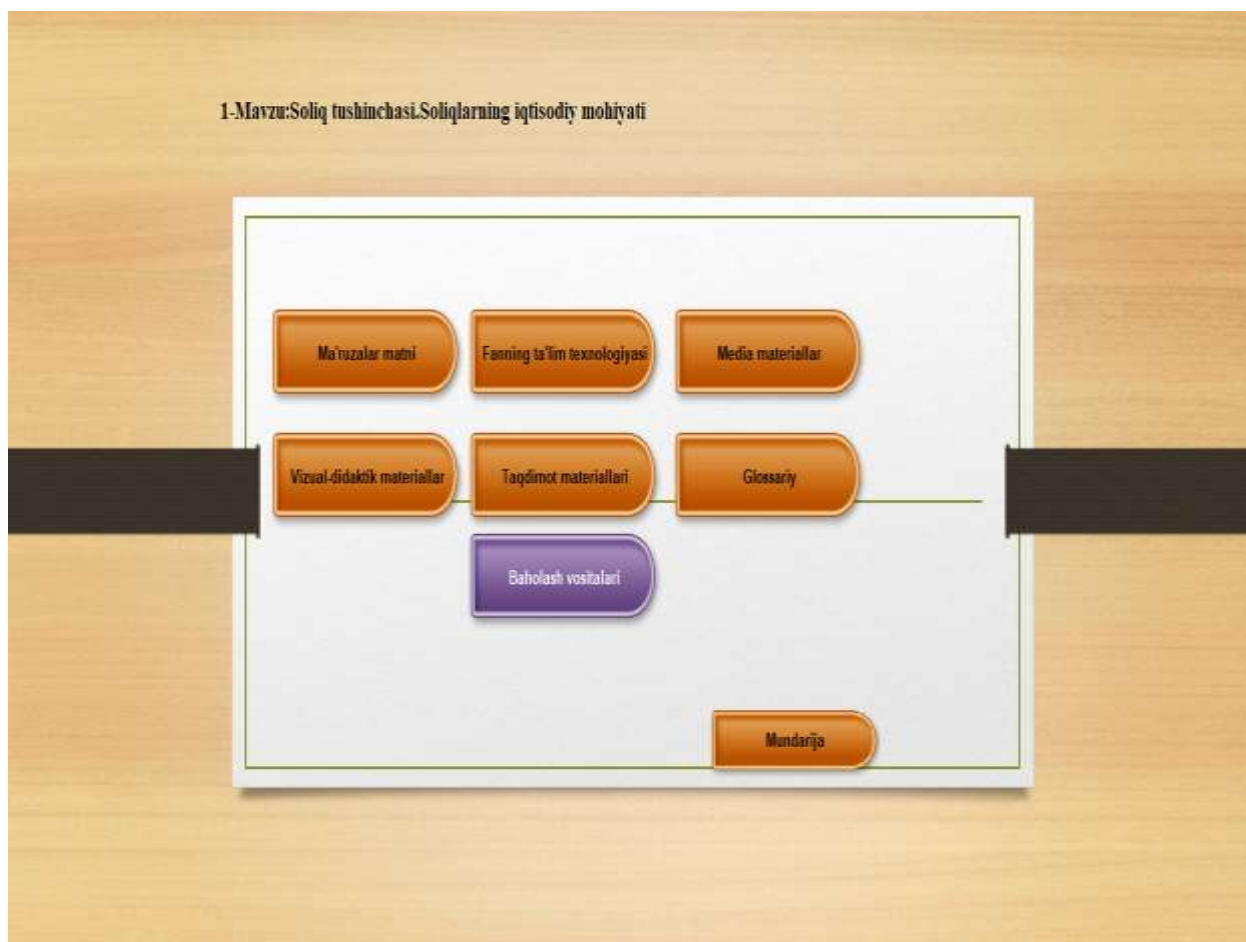
- bu o'qitishning yangicha yondashuvi ya'ni zamonaviy o'qitish texnologiyalari resurslarini ishlab chiqish, o'qitish uslublari va tadqiqotlar qilish ,tegishli uslubiy vazifalar va ta'lim berish muammolarini hal etishga;-Professional ta'limda Raqamli ta'lim resurslari orqali kasb-hunar berishda natija uchun ishlashga, ta'lim sifati va uning

natijalarini yaxshilashga, o'qitish metodikasi orqali bilimlarni yanada sifatli o'zlashtirilib, ta'lim berishga ta'siri va qaytishiga ijobiy ta'sirini ko'rishimiz mumkin;-

Mundarija	
1-Mavzu	1-Mavzu: Soliq tushunchasi. Soliqlarning iqtisodiy mohiyati
2-Mavzu	2-Mavzu: O'zbekiston Respublikasi soliq tizimining shakllanishi, rivojlanishi
3-Mavzu	3-Mavzu: Soliq to'g'risidagi qonun hujjatlari. Soliq kodeksi va uning ahamiyati
4-Mavzu	4-Mavzu: Yuridik shaxs tushunchasi. Yuridik shaxslardan olinadigan soliqlar
5-Mavzu	5-Mavzu: Yuridik shaxslarning daromadiga (foydasiga) soliq, QQS va boshqa soliq turlari
6-Mavzu	6-Mavzu: Yuridik shaxslardan olinadigan daromad solig'ini hisoblash va to'lash tartibi
7-Mavzu	7-Mavzu: O'zbekiston Respublikasining norezidentlarning daromad (foyda) sig'a soliq solishning o'ziga xos xususiyatlari.
8-Mavzu	8-Mavzu: O'zbekiston hududida chet el yuridik shaxsini soliqqa tortiladigan bazasini hisoblash
9-Mavzu	9-Mavzu: Chet el yuridik shaxsining daromadiga soliq hisobi va to'lov muddati
10-Mavzu	10-Mavzu: Egri soliqlarni hisoblash va budjetga to'lash tartibi

Raqamli ta'lim resurslari orqali amaliy natijalarga erishish, o'qitish usullarini zamonaviylashtirish, bilim almashinuvi vaqt me'yori doirasida tejalishi, zamonaviy voqelikni bilim oluvchi tomonidan to'laqonli va tez anglanishi, o'qitish usullarini sifati oshishini ko'rishimiz mumkin. -Raqamli ta'lim resurslarini ishlab chiqish orqali pedagog va ishlab chiqarish ta'limi ustalarini zamonaviy ta'lim berishda pedagogik mahorat va tajribalarini oshishi, o'qitish natijalari chinakamiga yaxshilanishi, kasbiy malakaviy ko'nikmalardan samarali foydalanishga va natija ustida ishlashga olib keladi; Zamonaviy ta'limda konstruktiv yondashuv, ya'ni ta'limni aktallashtirish, o'qitishda talabalar mavjud ra'qamli ta'lim resurslari orqali bilim va ko'nikmalarga ega bo'lishlari, kasbiy ko'nikmalarini rivojlantirish, ta'lim bo'yicha ma'lumotlarni to'plash va almashish tizimini tashkil etiladi;

-O'qituvchilar uchun Raqamli ta'lim resurslarini ishlab chiqish ta'lim sifatini qo'llab –quvvatlash tizimini yaratish,fan dasturlari mavzularini loyihalash,bilim berishda maqsad va vazifalarni belgilab beradigan maxsus dastur hisoblanadi.



-Ta'lim sohasida Elektron o'qitish zamon talabiga xos ravishda ommalashmoqda,bu o'z navbatida Raqamli ta'lim resurslarini ishlab chiqish orqali ta'limda yangi texnologiyalardan oqilona foydalanish,offline o'qitishda vaqt doirasida yetkaza olinmagan bilimlarni online o'qitish orqali raqamli resurslardan foydalanib yetkazish qulayligi bildiradi.

Shu bilan birga talaba bilimni baxolash, uni tushinish orqali tahliliy ko'nikmalarni rivojlantirish,talabalar har doim biror bir dars yoki alohida darsni yuklab olishi va istalgan paytda Raqamli ta'lim resurslaridan foydalanishi mumkin.

### Foydalanilgan adabiyotlar

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**TARIXIY OBIDALAR BILAN TANISHTIRISH ORQALI  
TARBIYALANUVCHILARDA MILLIY G'URURNI  
SHAKLLANTIRISH TEHNOLOGIYASI**

**Xasanova Shaxnoza Toxtasinovna**

Nizomiy nomidagi TDPU

Maktabgacha ta'lim metodikasi kafedrası dotsenti (PhD)

**Qayumova Dilsora Nurali qizi**

Nizomiy nomidagi TDPU

Maktabgacha ta'lim metodikasi kafedrası v.b.dotsenti (PhD)

**Ramozonova Baxoroy Sadriddinovna**

Nizomiy nomidagi TDPU

Maktabgacha ta'lim metodikasi kafedrası o'qituvchisi

*Annotatsiya. Mazkur ilmiy maqolada tarixiy obidalar bilan tanishtirish jarayonida tarbiyalanuvchilarda milliy g'ururni shakllantirish mazmuni yoritib berilgan.*

*Tayanch tushunchalar: milliy qadriyat, milliy g'urur, tarixiy me'moriy obida, milliy iftixor, madaniy-tarixiy meros.*

Tarix saboqlaridan ma'lumki, inson qalbiga bunyodkor g'oyalarni singdirish ma'naviy barkamollikni ta'minlaydi. Bu kabi bunyodkorlikga da'vat umuminsoniy va diniy qadriyatlarimizga hurmat, ularni sevib o'qish va uqishda ham mujassam. Bunday tarbiya bolalarga milliy qadriyatlarimizning sarchashmalari, Qur'onu karim, Hadis shariflari, ajdodlarimizning boy madaniy merosi, tarixiy yodgorliklar, obidalar orqali singdirib kelingan. O'tmishni, tarix tajribasini o'rganish, ajdodlar yaratgan betakror moddiy va ma'naviy merosni asrash va targ'ib etishda, istiqloq yo'lidagi maqsadlarimizni aniqlashda Vatanimiz boy madaniy merosi, obidalari, tarixiy yodgorliklari va mustaqillik inshootlari bilan tanishtirish yosh avlod ongida Vatanga,

milliy qadriyat va an'analarga hurmat va bilimga intilish hislari, yangicha e'tiqod va dunyoqarash asoslari shakllanadi.

Tarixiy obidalar vositasida bolalarda milliy g'urur hissini tarbiyalash jarayoniga kompleks yondashish talab etiladi. Jumladan, maktabgacha ta'lim yoshidagi bolalar bilan o'tkaziladigan tadbirning birinchi, tayyorgarlik bosqichida tanishtiriladigan me'moriy obida haqida qisqacha ma'lumot beriladi. Ikkinchi bosqichda esa bevosita obidaga maqsadli sayohat uyushtiriladi. Uchinchi bosqichda olingan taassurotga munosabat bildiriladi, ya'ni bolalarni ushbu tabarruk joylar bo'ylab sayohatlari ularni tasviriy faoliyat mashg'ulotlarida mustahkamlanadi. Shuningdek, bu tadbir bolalarning taassurotlari asosidagi hikoyalari tarzida bo'lishi ham mumkin. Yakunlovchi bosqichda esa tarbiyachi tomonidan tasvirlangan rasmlar, bolalarning hikoyalari sharhlanadi va umumlashtiriladi. Shubhasiz shunday didaktik tizim asosida amalga oshirilgan tadbir tarbiyaviy samara beradi.

Tarixiy obidalar bilan tanishtirish jarayonida tarbiyalanuvchilarda milliy g'ururni shakllantirish jarayonida o'tilgan mashg'ulot mavzusi, maqsad va vazifalariga monand tarzda o'tkaziladigan faoliyat turlari ta'limiy va tarbiyaviy tizimning ustuvor yo'nalishi bo'lishi lozim. Bu omil mazkur dissertatsiyada tadqiq etilayotgan asosiy muammo - bolalarda milliy g'urur elementlarini tarkib toptirish bilan bir qatorda ularning dunyoqarashini rivojlantirish, shu tariqa ularni maktab ta'limiga tayyorlash muammolari ham parallel tarzda hal etib boriladi.

Sharq me'morlik obidalarining asosiy elementlari – peshtoq, gumbaz, minora kabilarning shakli, shuningdek, ularning ranglari (gumbazlar, odatda moviy rangda bo'ladi), bezaklari (minoralar, peshtoqlar turli naqshinkor bezaklar, arabiy yozuvlar bilan ziynatlanadi)ning shakllari va ranglari turli didaktik o'yinlar vositasida tushuntirilishi ularni o'zlashtirish darajasini yuqori bo'lishiga zamin yaratadi. Bu turdagi mashg'ulotlar birinchi navbatda bolalarning ranglar va shakllarning sensor etalonlarini anglashga undaydi va bolalarda rivojlantiruvchi ta'lim vazifasini o'taydi. Bu jarayonda bolalarning e'tiborini me'moriy obidaning u yoki bu elementi nima uchun shu ko'rinishda, shaklda (masalan, gumbaz), shu rangda bunyod etilganligiga

qaratadigan bo‘lsak, unga qo‘shimcha tarzda ajdodlarimizning bu boradagi qarashlari, yondashuvlari tushuntirib o‘tilsa bolalarning sensor rivojlanish jarayoni, unga hamohang tarzda ko‘rgan, idrok etgan hamda anglagan ob‘ektlaridan milliy moddiy va ma‘naviy qadriyat sifatida g‘ururlanish hislarini shakllanish jarayoni samarali kechadi.

Maktabgacha ta‘lim tashkilotida ta‘lim-tarbiya jarayonini kuzatish natijasida ma‘lum bo‘ldiki, kompleks mashg‘ulotlarda bolalarda malaka va ko‘nikmalarning sifatini oshirish asosida samarali yutuqlarga erishish mumkinligi isbotladi.

Maktabgacha ta‘lim tashkilotlarida tarixiy obidalar bilan tanishtirish jarayonini tashkil qilish shakllaridan quyidagilar aniqlandi:

- tarixiy yodgorliklar, ma‘rifiy maskanlar, san‘at koshonalari hamda mustaqillik davrida qad ko‘targan inshootlar bo‘ylab ekskursiyalar tashkil etish;
- «Vatan tarixini bilmay turib, uni to‘la sevib bo‘lmaydi», «Vatan ostonadan boshlanadi» mavzusida suhbatlar o‘tkazish;
- tarixiy obidalarimiz – faxrimiz mavzusida tadbirlar o‘tkazish;
- «Ajdodlarimiz merosini asrab avaylaymiz» mavzusida mujassam mashg‘ulotlar, suhbatlar tashkil etish;
- me‘morlar va hunarmand ustalar bilan uchrashuvlarni muntazam uyushtirib borish.

Bularning barchasi ta‘lim va tarbiyaviy ishlarning mazmuni va yo‘nalishini anglatuvchi tadbirlardir. Bolalar bilan tarixiy me‘moriy obidalarga sayohat uyushtirish, san‘at asarlarining go‘zalligidan ta‘sir lanish orqali milliy g‘urur elementlarini tarkib toptirishga hamisha ham birdek e‘tibor qaratilayotgani yo‘q. Ajdodlarimizning ulkan mehnatlari evaziga qad rostlagan ushbu osori atiqalar, tarixiy me‘moriy obidalar ta‘lim-tarbiyaning nihoyatda kuchli vositalaridir, ular bolaning estetik olamiga, ruhiy dunyosiga benihoya kuchli ta‘sir ko‘rsatadi. Bunday sayohatga borgan bolalar undan olgan go‘zal taassurotlarini bir umr unutmaydilar.

Maktabgacha ta‘lim tashkilotida bolalarni tarixiy obidalar vositasida milliy g‘urur elementlarini shakllantirishni yuqori darajada ta‘minlash bolalarning tarixiy

obidalariga bo'lgan qiziqishlarini kuchaytirishga xizmat qiladi, bu esa ta'lim-tarbiya jarayonida samarali natijalarga erishishga olib keladi.

Maqsadga muvofiq biz quyidagi vazifalarni belgilaymiz:

Badiiy vazifalar:

- bolalarni me'morchilik asarlari bilan tanishtirish, ularning qiymatini aniqlash va badiiy va obrazli tuzilishini ta'kidlash;

- bolalarning o'z shahri, qishlog'ining me'moriy merosi haqidagi bilimlarini kengaytirish, qishloqning tarixiy o'tmishi va bugungi kuniga hurmatni tarbiyalash;

- O'zbekistonning mintaqaviy madaniyati bilan tanishtirish, me'moriy yodgorliklar bilan tanishtirish, vatandoshlarning vatanparvarlik tuyg'ularini va badiiy iste'dodidan faxrlanishni tarbiyalash;

- me'morchilik kasbiga oid elementar bilimlar va tushunchalarni shakllantirish uchun kompleks faoliyatlar tizimidan foydalanish.

Badiiy va vizual vazifalar:

- maktabgacha katta yoshdagi bolalarga vizual ijodning har xil turlarida badiiy va tasviriy vositalarni o'zlashtirishga ko'maklashish;

- badiiy va ijodiy ishlab chiqarish faoliyatining har xil turlari: rasm chizish, modellashtirish, applikatsiya ishlari, badiiy asarlar va turli xil materiallardan qurishda badiiy materiallar bilan ishlashning boshlang'ich ko'nikmalarini rivojlantirishga ko'maklashish.

- arxitektura san'atiga estetik, hissiy va qadriyatli munosabatni rivojlantirishga ko'maklashish: bolalarni jamoaviy tadbirlarda ishtirok etishga va ongli, mustaqil badiiy va me'moriy obraz yaratishga undash, unga adekvat baho berish va o'ziga xoslikni yaratish. Vazifalarga muvofiq, biz bolalarda shakllanishi kerak bo'lgan Vatanimiz haqida quyidagi fikrlar:

- o'z shahri tarixini bilish: uning yaratilishi va tashkil etilishi, shahrida sodir bo'layotgan muhim tarixiy voqealar, shuningdek, o'z shahrining rivojlanishiga hissa qo'shgan tarixiy shaxslar va mahalliy aholi haqida;



- shaharning tarixiy yodgorliklari va diqqatga sazovor joylari: yodgorliklar, muzey majmualari, arxitektura, bog'lar va xiyobonlarni bilish;

- tabiiy xususiyatlar haqidagi bilimlar.

Shundan kelib chiqib, "bolalarning o'zlarining tug'ilgan shahri haqidagi bilimlari" tushunchasini aniqlash mumkin - bu bolalar xotirasida paydo bo'lgan mahallasining ilgari qabul qilingan diqqatga sazovor joylari va xususiyatlarining hissiy rangdagi tasviriy ishlari.

O'z shahrini o'rganish orqali bolalarni o'zlarining tug'ilgan shahri, qishlog'i haqidagi bilimlarini shakllantirish bo'yicha ishlarni bosqichma-bosqich va ketma-ketlikda tashkil qilish, dastur bilimlarini o'zlashtirish, shuningdek, diqqatga sazovor joylarni va me'moriy xususiyatlarni chuqur o'rganish jarayonida amalga oshiriladi. Bolalarni o'zlarining shaharlari bilan tanishtirishning eng samarali shakllari, uning me'moriy xususiyatlari:

- shaharning unutilmas tarixiy joylariga, unutilmas diqqatga sazovor joylariga, istirohat bog'lari va maydonlariga ekskursiyalar, shuningdek muzeyga ekskursiyalar;

- virtual ekskursiyalar (bu xususiyat bolalarga tarixiy ravishda yo'qolgan xususiyatlar va diqqatga sazovor joylarni ko'rsatish imkoniyatidir);

- shahar aholisining jasoratlari, ularning shahar tarixiga qo'shgan mehnat hissalarini to'g'risida taqdimotlar, video va foto materiallarni ko'rish;

- taniqli madaniyat va san'at arboblari, shahar faxriylari bilan, iloji bo'lsa, zamonaviy me'morlar bilan uchrashuvlar;

- badiiy-estetik yo'naltirilgan bolalarning samarali faoliyati.

Tarixiy obidalarni o'rganish orqali maktabgacha katta yoshdagi bolalarda milliy g'urur tuyg'usini shakllantirishga yo'naltirilgan asosiy qism bolalar bog'chasidan chiqmasdan, qiziqarli tarzda, bolalardagi ona shahri haqida keng tasavvurni shakllantirishga imkon berganligi sababli interaktiv ekskursiyalar shaklida amalga oshirilishi mumkin.

Bolalarda me'morchilik kasbining xususiyatlari va tushunchalarini idrok etish va tushunishni rivojlantirish, o'zlarining tug'ilgan shahar, qishlog'iga hurmat va e'tiborli

munosabatni rivojlantirish asosida tarbiyachilar ta'lim jarayonini tashkil qilishda quyidagi mavzularda taqdim etilishi mumkin bo'lgan kompleks mavzuli yondashuvdan foydalanadilar:

- mavzu bo'yicha dastlabki ishlar (o'lkashunoslik materiallarini yig'ish va tanishtirish, me'moriy ekskursiyalar bilan tanishish);
- Tarixiy obidalarga virtual ekskursiyalar + evristik suhbat;
- maktabgacha katta yoshdagi guruhda tarixiy obidalar bilan tanishtirish yuzasidan loyiha ishlab chiqish;
- didaktik o'yinlar;
- eksperimentlarni o'z ichiga olgan badiiy va ijodiy vazifalarni bajarish.

Ota-onalar bilan ishlash bolalarning o'z shaharlari haqidagi bilimlarini shakllantirishda muhim o'rin tutadi. Birgalikda ekskursiyalar, shaharning ko'chalari va esda qolarli joylari bo'ylab ota-onalar bilan sayr qilish, sayohat qilish qobiliyatini rivojlantiradi. Ular olingan ma'lumotlar va taassurotlarni samarali faoliyatda ifoda eta oladilar.

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## FIZIKA FAN SIFATIDA RIVOJLANISHI VA ILM-FANDAGI YANGILIKLAR

**O‘rinboyeva Kumushoy Sultonbek qizi**

Andijon davlat pedagogika instituti

Aniq va tabiiy fanlar fakulteti

Fizika va astronomiya fani o‘qituvchisi

**Ibrohimjonova Zuhra Ikromjon qizi**

102-gurux talabasi

***Annotatsiya:** Fizika fanining jamiyatdagi o‘rni. Ta’lim sifatini oshirish va ilmiy taraqqiyotlarni rivojlantirish, oquvchi va talabalarni fizika faniga qiziqtirish, erkin fikrlari, qobiliyatlarini oshirish va shu bilan bir qatorda mavzu bo‘yicha bilim va ko‘nikmalarini rivojlantirishga erishiladi.*

***Kalit so‘zlar:** Rentgen nurlari, UZI, EMRT, EKG, fizika, ekologik muammolar, arxitektura, transport, texnika va texnologiyalar, IT.*

Fizika bu – qiziqarli hayotiy fandır. Fizikani bilgan odam mashina, uy, zavod, fabrikalar, insonlarni ishini yengillashtiruvchi texnika va texnologiyalar yaratish mumkin.

Bir necha asrlar davomida aniq va tabiiy fanlar dunyo va O‘zbekiston zaminida keng rivojlanib, O‘rta Osiyo hududi butun jahon intellektual markazi bo‘lib kelgan.

Fizika elementar zarrachalardan to‘gallaktikagacha bo‘lgan obyektlar va turli tuman hodisalarni o‘rganadi. Fizikani o‘rganish, insonlarni bilish va mantiqan fikrlash qobiliyatlarini rivojlantiradi. Fizika ilmiy-texnika taraqqiyoti va tabiiy-ilmiy bilimlarning asosi hisoblanadi.

Fizika va texnikaning rivojlanishi o'zaro chambarchas bog'liq. Fizika kashfiyotlar texnikaning rivojida muhim ahamiyatga ega, yana texnika taraqqiyoti fizikaning rivojlanishida muhim omil hisoblanadi.

Fizika fani barcha tabiiy fanlarning rivojlanishi uchun zarur bo'lgan tadqiqot uslublarini ishlab chiqadi. Masalan: hozirgi kunda yadroviy tadqiqotlarni zamonaviy texnika qurilmalarisiz tasavvur qilib bo'lmaydi.

Tabiiy va ko'plab fanlarning asoslari fizikadir.

Boshqa fanlar qatori fizika fani ham uzluksiz rivojlanib boradi. Oldingi

XX asr fizika texnologiyalar asri deya e'tirof etilgan. Zamon kun sayin rivojlanib bormoqda, bundan ko'rinib turibdiki, fizika hayotimizni har bir javhasiga asta-sekin kirib kelmoqda.

Fizika fanini hozirgi yoshlar formulalardan iborat deb o'ylashadi. Aytganimizdek, fizika har bir sohaga o'z ta'sirini ko'rsatmay qo'ymaydi. Masalan: tibbiyot sohasini olaylik, bu sohada insonni jismoniy holatini tahlil qilish hamda shu natijalar orqali to'g'ri tashxis qo'yish muhimdir. Bunda tibbiyot hodimlari tekshiruv asboblari masalan EKG, EMRT, UZI, RENTGEN qurilmalari va boshqa shu kabi asboblarga tayanadilar. Bu asboblarning ishlashida esa albatta fizika fani yotadi.

Agar tarixga nazar tashlaydigan bo'lsak, dunyodagi deyarli barcha kashfiyot va texnologiyalarni yaratishda fizika fani fundamental asos bo'lganini ko'ramiz. Haqiqatdan ham, fizika qonuniyatlarini chuqur egallasdan turib, mashinasozlik, elektrotexnika, IT, suv va energiyani tejaydigan texnologiyalar kabi bugun zamon talab qilayotgan sohalarda natijaga erishib bo'lmaydi. Shuning uchun ta'limda shu fanlarni o'qitishni tubdan oshirish, ixtisoslashgan maktablar ochish, malakali pedagoglarni jalb etish kabi ishlar amalga oshirilmoqda.

Chunki fizika olis o'tmishdan to hozirgi kungacha hayotimizni osonlashtirish, og'irimizni yengillashtirish uchun xizmat qiladi. Fizika qonun qoidalarga asoslangan holda texnika va texnologiyalar ishlab chiqiladi, atrofimizdagi barcha qurilmalar, qo'limizdagi telefon, noutbook, soat va boshqa narsalar ham fizika fani mahsulidir.

Hozirda biz bularsiz, ovqat pishirish, uy tozalash, musiqa tinglash kabilarni tasavvur qilolmaymiz.

XX asrning 40-yillaridan boshlab O'zbekistonda fizika fanini rivojlantirish jarayonida nufuzli ilmiy maktablar tashkil etildi. Hattoki davlat qabul komissiyasining bakalavr uchun jami ta'lim yo'nalishlari soni 471 ta belgilangan bo'lsa, shulardan 143 tasi ya'ni 30% aynan fizika va matematikani tashkil qilmoqda. Fizika matematika ta'lim yo'nalishlari boshqa sohalarga nisbatan ancha ko'p talab borligi ayni haqiqatdir. Aynan fizika va matematika sohasiga kiruvchi IT sohasi, sun'iy intellekt va robototexnika, giolog, energetika, transport, arxitektura va boshqa muhim sohalarni o'z ichiga oladi.

Texnika va texnologiyaning rivojlanishida fizikaning o'rni kattadir.

Hozirgi kunda fizikaning elektron darsliklari ishlab chiqilmoqda. Biz bulardan umumli foydalanishimiz kerak. Agar biz fizikani bilmasak, elektrni qanday tuzatamiz, uyimizdagi gaz plita, duhofka va boshqa narsalarni tuzatish uchun ham fizika fani kerak bo'ladi.

Mamlakatimizning XXI asrdagi muvaffaqiyoti tabiat resurslaridan samarali foydalanish, ekologik muammolarni yechish, kosmosni o'zlashtirish, mudofaa salohiyati, texnika va energetikaning rivojlanishi, fan manbalari uchun materiallar, hamda zamonaviy texnologiyalarni yaratish kabi barcha yo'nalishlar fizika fani va fizika ta'lim darajasiga bog'liq.

Bugungi kunda ta'lim muassasalarida fizika fanini o'qitish sifatini oshirish, ta'lim jarayoniga zamonaviy o'qitish uslublarini joriy qilish, iqtidorli o'quvchilarni saralash, mehnat bozoriga raqobatbardosh mutaxassislarini tayyorlash, ilmiy tadqiqot va innovatsiyalarni rivojlantirish hamda amaliy natijadorlikka yo'naltirishga e'tibor qaratilmoqda.

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## GALAKTIKALAR MAVZUSI ORQALI TALABALARNI ASTRANOMIYAGA QIZIQTIRISH

**O‘rinboyeva Kumushoy Sultonbek qizi**

Andijon davlat pedagogika instituti  
Informatika va aniq fanlar kafedrası o‘qituvchisi

**Toshpo‘latova Gulnoza Fayzullo qizi**

**Nasvaliyeva Gulbahor Oribjon qizi**

Fizika va astronomiya yo‘nalishi 3-bosqich talabalari

***Annotatsiya:** Maqolada astronomiyaga talabalarni qiziqtirish uchun birgina mavzu orqali pedagogik mahoratini oshirish shu asnoda metodikasini o‘stirish va shu orqali o‘quvchilarning bilim darjasini, Ta’lim sifatini oshirish uchun ko‘rsatmalar berib o‘tilgan.*

***Kalit so‘zlar:** Pedagogik mahorat, astronomiya, galaktika, metodika o‘qituvchi, talaba, munosabat, ta’lim, o‘qitish sifati.*

Bugun ta’lim iqtisodiy va ilmiy-texnik taraqqiyotning hal qiluvchi omili, jamiyatning ijtimoiy tuzilmasini shakllantirish, unda ijtimoiy maqomlarni taqsimlash mexanizmi hisoblanadi. Muhtaram Prezidentimiz Sh.M.Mirziyoyev ta’lim va fan sohasini rivojlantirishga alohida e’tibor qaratib “Uzluksiz Ta’lim tizimini yanada takomillashtirish yo‘lini davom ettirish, sifatli Ta’lim xizmatlariga imkoniyatlamini oshirish, mehnat bozorining zamonaviy ehtiyojlariga muvofiq yuqori malakali kadrlarni tayyorlash” bugungi kunning dolzarb vazifalaridan ekanligini alohida ta’kidlab o‘tdilar. “Hammamizga ayonki, taraqqiyotning tamal toshi ham, mamlakatni qudratli, millatni buyuk qiladigan kuch ham bu — ilm-fan, Ta’lim va tarbiyadir. Ertangi kunimiz, Vatanimizning yorug‘ istiqboli, birinchi navbatda, ta’lim tizimi va



farzandlarimizga berayotgan tarbiyamiz bilan chambarchas bog‘liq.” Zamonaviy hayotni bugun ilm- ma’rifat va Ta’limning taraqqiyotisiz tasavvur etib bo‘lmaydi, insoniyat fan o‘qi atrofida aylanayotgandek go‘yo. O‘zbekiston uchun istiqbolli, davlat talablariga mos keladigan Ta’lim tizimini yaratish porloq kelajakka yo‘naltirilgan yagona yo‘ldir. Mamlakatimizda xalqning boy intellektual merosi va umumbashariy qadriyatlar asosida kadrlar tayyorlash tizimini shakllantirish, ta’lim oluvchilarning ma’naviy va axloqiy fazilatlarini rivojlantirish borasida olib borilgan islohotlar Ta’limni insonparvarlashtirishga yo‘naltirilgan pedagogik yondashuvlardan foydalanish imkoniyatini oshirdi.

Yuqoridagi ma’lumotlardan ham ko‘rishimiz mumkinki yurtimizda ilm, fan, Ta’lim sohasiga alohida e’tibor berilmoqda. Bununng yaqqol misoli sifatida hurmatli yurtboshimiz muhtaram prezidentimiz Sh.M.Mirziyoyev ham juda katta e’tibor bermoqda. Bu imkoniyatlarga munosib javob qaytarish uchun yetuk kadrlarni yetishtirib chiqarish kerak. Talabalarni o‘z sohasining ustasi, kasbining yetuk mutaxassisi bo‘lib yetishib chiqishi uchun o‘qituvchilardan juda katta mashaqqatli mehnatni talab etadi. Albatta buning uchun o‘qituvchilardan yaxshi metodika hamda psixologik jihatdan yaxshi pedagogik mahoratni talab etadi.

Ma’lumki, uzluksiz Ta’lim oldiga qo‘yilgan vazifalar, yangi qabul qilingan “Ta’lim to‘g‘risida”gi Qonunda ko‘rsatilgan muammolarni hal etish o‘qituvchupedagog tomonidan hal qilinadi. Avvalo, o‘qituvchidan fani doirasida ma’lumotlarni, axborotlarni fan yangiliklarini o‘zlashtirishda va Ta’lim oluvchilarda yetkazadi. Bu albatta muloqot orqali hal etiladi. Buning uchun o‘qituvchi pedagogik mahorat, pedagogik texnika, pedagogik madaniyat kabi qirralarini mukammal o‘zlashtirishi bilan birga pedagogik muloqot va uning zamonaviy usullaridan to‘liq xabardor bo‘lishi talab etiladi. Shuni unutmaslik kerakki, pedagogik faollik pedagogik ijodkorli, pedagogik natijaviylik, pedagogik muloqot bilan chambarchas bog‘langan. Shu bois pedagogik muloqot usullari zamon talablari, Ta’lim-tarbiya ehtiyojlari pedagogik vazifa xususiyatlariga qarab takomillashtirib, mukammallashtirib boriladi.

XX asrgacha koinot yagona bizning Gallaktikamizdan iborat deb qaralgan fikr hukumronlik qilar edi. Keyinchalik bizning Gallaktikamizdan tashqarida juda ko'p bizning Gallaktikamizga o'xshash Gallaktikalar mavjudligi aniqlandi. Uzoqdagi bunday yirik yulduzlar sistemalari tumanlik shaklida ko'ringanligi sababli ularga tumanliklar deb ataganlar. Tumanliklardan kelayotgan nurlanish spektrlarini, olish va analiz qilish shuni ko'rsatdiki tumanliklarning spektri yulduzlar sistemalarini spektriga juda o'xshashdir. Ya'ni tumanliklar bizdan juda uzoqda joylashgan yulduz sistemalari Gallaktikalardan iboratdir. Tumanliklarning tipik vakili Andromeda tumanligidir. Bu tumanligi tashqi Gallaktikalardan biri ekanligi hozirgi vaqtda uzul kesil isbotlangandir.

Tunda qorong'u osmonga qarasak osmon yulduzlarini va osmon sferasining o'rtasida butun osmon bo'ylab cho'zilgan yulduzlar tasmasi, somon yo'lini ko'ramiz. Somon yo'li bizning Gallaktikamizni ya'ni Quyosh sistemasini o'z ichiga olgan yulduzlar sistemasini, yulduzlar nisbatan zich joylashgan belbog' qismini tashkil etadi. Belbog'ning o'rtasida o'tkazilgan tekislik osmon ekvatori tekisligi bilan 62 gradusli burchak tashkil etadi.

Tashqi Galaktikalar o'lchamlariga ko'ra turlicha kattaliklarda ucharaydi, eng kattalari milliardlab yulduzlardan tashkil topgan bo'lsa, kichiklari bir necha millionlab yulduzlardan tashkil topgan. Gigant Gallaktikalarning o'lchamlari 50ming parsekgacha (ya'ni diametri 150 ming yorug'lik yiliga teng) bo'lgani holda eng kichiklari yuz parsekdan oshmaydi. Hozirgi zamonda qayd etilgan Gallaktikalarning soni bir necha milliardni tashkil etadi. Biroq ularning juda kichik qismi o'rganilgan va kataloglashtirilgandir. Bunday kataloglardan biri Voronsov Velyaminov katalogi bo'lib uni kattaligi 10,1 dan ravshan 30000 Gallaktikalarni o'z ichiga oladi. Gallaktikalar tashqi ko'rinishiga ko'ra turli tuman bo'lsa ham o'xshash tomonlariga ko'ra 3ta sinfga bo'inadi. Elliptik (E), spiral - (S), Noto'g'ri - (Igch) Gallaktikalar. Elliptik Gallaktikalar tashqi ko'rinishiga ko'ra ellips yoki doira shakliga ega bo'lgan Gallaktikalardir. Bunday Gallaktikalarning asosiy xususiyati shundan iborat bo'ladiki ularning ravshanligi markazidan sirtiga tomon bir tekis kamayib

boradi. Spiral Gallaktikalar juda ko'p tarqalgan Gallaktikalar bo'lib, kuzatilgan Gallaktikalarning qarib yarmi shu sinfdagi Gallaktikalardir. Boshqa Gallaktikalardan farqli ularning strukturasi aniq spiral yenglardan iborat bo'ladi. Andromeda va bizning Gallaktikamiz spiral Gallaktikalarning vakllaridandir. Spiral Gallaktikalar yana ikkiga bo'linadi, markaziy yadrodan boshlanuvchi (SA) Gallaktikalar va spiral shaxobchalaridan yadro o'rnida diametri bo'ylab cho'zilgan ko'priksimon strukturaning uchlaridan boshlanuvchi (SB) Gallaktikalar. Noto'g'ri Gallaktikalarda yadro bor yo'qligi bilinmaydi va ular aylanma simmetriyali strukturaga ega emas. Bunday Gallaktika vakili katta va kichik mogelon bulutlidir. Noto'g'ri Gallaktikalarda shuningdek pekulyar gallaktikalar ham kiradi. Bundan gallaktikalarda umumiy ko'rinish strukturasi mavjud bo'lmaydi. Tashqi gallaktikalarni spektri yulduzlar spektrini eslatib, yutilish chiziqlaridan tashkil topadi. Ular tarkibiga ko'ra yulduzlarning spektridan faqat ayrim gaz tumanliklarini spektrlariga uchraydigan emission chiziqlari borligi bilan farq qiladi. Bundan gallaktikalar, yulduzlar sistemasi va diffuzmateriyadan tashkil topganligi ayon bo'ladi. Noto'g'ri gallaktikalarning spektri A va F spektral sinflarga, spiral gallaktikalariniki F va G sinflarga va nihoyat elliptik gallaktikalariniki G va K sinflariga kiruvchi yulduzlarning spektrini eslatadi. Bundan spiral va noto'g'ri gallaktikalarda boshlang'ich spektral sinflarga kiruvchi qaynoq va yosh yulduzlarning ko'pligi elliptik gallaktikalar esa nisbatan yoshi o'tgan keyingi spektral sinflariga mansub yulduzlarga boyligidan darak beradi.

Bu mavzuni bunday usulda o'tsa albatta talabalarga biroz zerikarli bo'ladi shuning uchun ushbu maqolada o'z sohamizdagi ya'ni pedagogikadagi yangiliklarga yangi texnologiyalarga biroz to'xtalib o'tamiz.

Pedagogik mahorataing umumiy asoslarini yoritishda eng muhim tayanch tushuncha "mahorat" atamasi sanaladi.

Mahorat ("mahorat" - mohirlik, ustalik, epchillik) - bir ish yoki faoliyatni yuksak darajada, hech bir qiyinchiliksiz, o'ta mohirlik bilan bajarish; biror ish, kasbiy faoliyatni samarali, yuksak darajada bajarish uchun ko'nikma, malakalarning zaruriy yoki muayyan ko'rsatichilarda orttirilishi, ustalik, mohirlikdir.

Pedagogik mahorat 1) pedagogning pedagogik jarayonni tashkiliy, metodik, ruhiy va sub'ektiv jihatdan o'ta mohirlik, ustalik bilan tashkil etish va bosbqarish qobiliyati, ko'nikma-malakasiga egaligi;

2) Ta'lim- tarbiya jarayoniga ongli, ijodiy yondashuv, metodik bilimlami samarali qo'llay olish qobiliyati, yuksak pedagogik tafakkur.

Metodika tushunchasi yurtimizda ilmiy doirada keng qöllanib kelinadi. Bundan tashqari u bilan yonma-yon usul, uslub kabi özbekcha muqobillari ham ishlatiladi. Bizning nazarimizda ilmiy doirada xalqaro söz bölgan metodika atamasi qöllangani maqsadga muvofiq. Shu nuqtai nazardan qarashlarimizda metodika sözidan foydalanamiz.

Metodika tushunchasini örganishdan avval uning negizini tahlil qilib körsak. Metod özi nima?

Metod bu biror maqsadni amalga oshirish uchun foydalaniladigan yöl, usuldir.

Metod (yun. "metodos" — bilish yoki tadqiqot yo'li, nazariya, ta'limot) — vo-qelikni amaliy va nazariy egallash, o'zlashtirish, o'rganish, bilish uchun yo'lyo'riklar, usullar majmuasi, falsafiy bilimlarni yaratish va asoslash usuli.

Metodika—pedagogik fanlar, shuningdek, ijtimoiy tizim talab qiladigan, pedagogika fani ko'rsatgan umumiy o'rta va oliy Ta'limning maqsad vazifalariga mos ravishda ishlab chiqiladi.

Ushbu ta'riflar orqali metodika, pedagogik mahorat haqida bilib oldik. Biz metodlar haqida o'rganayotgan ekanmiz interfaol metodlar haqida qisqacha quyida qisqacha ma'lumot bermoqchiman.

Interfaol metodlar - o'zaro fikr almashishga, o'zaro fikrlami to'ldirishga, goh noverbal, goho verbal ta'sir o'tkazishga qaratilgan harakatlar majmuasidir. Interfaol metodlarni qo'llashda o'zaro ta'sir asosiga qurilgan intellektual harakatlar shunchaki ta'sir yoki turtki vazifasini bajarish bilan cheklanib qolmaydi va hamkorlik subyektlarini ijodiy izlanishga yo'naltirish, noma'lum holatni ochishga (kashf etishga) nazariy-aqliy mulohazalarni yaratish funksiyalarini ham bajarishi mumkin.

Pedagogik mahoratni oshirish metodikani yaxshilash uchun quyida asosiy nuqtalarga e'tibor qaratishi tavsiya etiladi:

❖ Professional rivojlanish: O'z mahoratingizni oshirish uchun pedagogikda rivojlanishni davom ettiring. Yangiliklarni o'rganing, ilmiy tadqiqotlarga qiziqing, konferentsiyalarda, seminarlarda va o'qituvchilar jamiyatlari bilan ishlash imkoniyatlaridan foydalaning.

❖ O'qitish texnikalarini o'rganing: Bir nechta o'qitish texnikalarni o'rganib, ularni o'quvchilarga mos keladigan usullarda qo'llashingiz mumkin. Misol uchun, amaliy mashg'ulotlar, o'yinlar, vizual asboblari, baho sistemalari va boshqalar.

❖ Individual ravishda o'qitish: O'quvchilarning har biri farqli o'rganish stili va talablarga ega bo'lishi mumkin. Buning uchun, har bir o'quvchi bilan aloqani oshirib, ularning xohishlarini, qobiliyatlarini va talablari ni aniqlashingiz kerak. Shuningdek, o'quvchilarga bire bir yordam bera olasiz va ularni shaxsiy ravishda ko'rib chiqish uchun yaratuvchi muhit yaratishingiz mumkin.

❖ O'quvchilarning qatnashishini ko'paytirish: Mashg'ulotlarda o'quvchilarni faol ravishda qatnashishiga imkoniyat berish uchun interaktiv usullar qo'llashingiz kerak. Guruh ishlarida, guruh ishlari va ijtimoiy fikr almashishlar orqali o'quvchilar o'rtasidagi hamkorlik va muloqotni oshirish mumkin.

❖ O'quvchilar bilimlari va talablari haqida ma'lumot to'plash: O'quvchilarning o'zlarining talablarini, bilim darajalari va o'rganish usullarini tushunishingiz muhimdir. Ular bilan muloqotda bo'lib, ularning qanday o'rganishdan zavqlanadiganligini, qaysi usullardan foydalanishlarini va qanday o'quv jarayonlaridan ko'proq foydalanishlarini bilib olishingiz kerak. Bunda, o'quvchilar bilimini sinovdan o'tkazish, anketa va muloqotlar orqali ma'lumot to'plashingiz mumkin.

❖ Innovatsion usullarni o'rganing: Pedagogik metodikada yangiliklarni qabul qilib oling. Innovatsion usullar, interaktiv darsliklar, onlayn o'quv resurslari, o'yinlar va ilmiy tadqiqotlar pedagogik usullarini oshirishga yordam berishi mumkin.

Konferentsiyalarda, seminarlarda va pedagogik jamiyatlar bilan hamkorlikda yangiliklarni o'rganing va ulardan foydalaning.

❖ Birlashtirilgan darsliklarni ishlatish: Birlashtirilgan darsliklar, turli fanlar orasidagi bog'lanishlarni ko'paytirish va o'quvchilarga amaliyotga asoslangan bilim olish imkoniyatini beradi. Darslarda yangi bilimlar va o'quv jihozlari o'quvchilar.

❖ Refleksiya va baholash: O'quvchilar va o'qituvchilar uchun refleksiya va baholash muhimdir. O'quvchilarga baholar berish va ular bilan birlashib o'qish jarayonini baholash yordamida o'quvchilarning mustaqil o'rganish va shaxsiy rivojlanishlarini oshirishingiz mumkin. O'qituvchilar ham o'z faoliyatlarini baholash orqali o'zlarini yanada rivojlantirishlari mumkin.

❖ Hamkorlik va maslahatlashish: Pedagogik mahoratni oshirish uchun hamkorlik va maslahatlashish muhimdir. Boshqa o'qituvchilar, ota-onalar, o'qituvchilar va talabalar orasida o'zaro ko'rsatmalardan, tajribalardan, yaxshi amaliyotlardan foydalanishingiz kerak.

Yuqorida sanab o'tilgan usullardan tavsiyalardan foydalanib ko'rilsa ta'lim sifati o'sishiga va o'qituvchilarimizni pedagogik mahorati oshishiga metodikasi o'sishiga yaxshi yordam beradi degan umiddaman.

## XULOSA

Xulosa qilib shuni aytish mumkinki, Ta'lim tizimida o'qituvchilarning pedagogik mahorati metodikasi talabalarni fanga bulgan munosabatini bildiradi. Bizni kelajakda yetuk mutaxassislar kadrlar bilan muammolarga uchramasligimiz uchun o'qituvchilardan o'tayotgan fanini o'quvchilarga yetkazib berishi uchun albatta ulardan mahorat talab etiladi. Pedagogik mahorat o'qituvchilar uchun asosiy qobiliyat va bilimlar to'plamidir. Bu mahoratga ega bo'lgan o'qituvchilar o'quvchilarning rivojlanishlarini kengaytirish, ularga qiziqish va sevgi bilan o'rganish imkonini berish bilan birga, ularni samarali va yaratuvchanlikka yo'l qo'yishda muvaffaqiyatga olib kelishadi. Pedagogik mahoratni oshirish o'quvchilarning ma'lumot va rivojlanishini ta'minlashda katta muhim ahamiyatga ega. Ushbu usullar o'rganganligimizni amalga

oshirish va Ta'lim jarayonlarini o'zlashtirishga erishishimizga yordam beradi. Pedagogik mahoratni oshirishning shaxsiy rivojlanish va talabalarning mustaqil fikrlash va ishlash qobiliyatlarini rivojlantirishga muhim ta'siri bor. Bu esa o'quvchilarning Ta'lim olgan bilim va bilim larini amalda qo'llab-quvvatlaydigan va ijodiylikni rivojlantiruvchi fuqarolar sifatida yashashiga yo'l ochadi. Meni yana bir narsa quvontiradiki ushbu maqolam orqali men Ta'lim sifatini oshirishni o'z sohamdagi o'z fanimdagi bir mavzu orqali yoritishga harakat qildim. Umid qilamanki bu usullardan har bir pedagog o'z faoliyatida amalga tatbiq etib ko'radi.

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## METHODS OF USING DEVELOPING TECHNOLOGIES IN PRESCHOOL EDUCATION

**Maxmudova Diyora Akmalovna**

Nizomiy nomidagi TDPU

Maktabgacha ta'lim metodikasi kafedrası o'qituvchisi

[maxmudova\\_diyora@tdpu.uz](mailto:maxmudova_diyora@tdpu.uz)

***Abstract:** the rapid expansion of technology into the worlds of young people has created a new generation which can use computers, mobile devices and other digital technologies as easy as winking. Nevertheless, in the context of early childhood settings there are some influences that may differentiate the technology use behaviors of preschool children which are generally constructed at home or school environment. This study seeks to define the possible influences, effects and praxis of technology use in early childhood settings, and also intends to explore the current research trends about technology use in the field of early childhood education. Data were gathered from several scientific databases.*

***Keywords:** Preschool education, early childhood education, technology use, preschool technologies.*

Technology plays a positive role in children's development and learning. Through the use of technology, teachers have access to more innovative and improved teaching methods that allow them to promote learning and create an active learning environment for children. A new survey examined how teachers use technology in their early childhood classrooms. The researchers found that a majority of teachers integrate technical devices in their everyday teaching but that there is a need for support to use the devices more effectively.



During the preschool years, young children are developing a sense of initiative and creativity. They are curious about the world around them and about learning. They are exploring their ability to create and communicate using a variety of media (crayons, felt-tip markers, paints and other art materials, blocks, dramatic play materials, miniature life figures) and through creative movement, singing, dancing, and using their bodies to represent ideas and experiences. Digital technologies provide one more outlet for them to demonstrate their creativity and learning

With the development and high availability of technology, the number of technology users is increased exponentially. The reports of Ofcom showed that the ownership and the use of touch screen technologies such as smartphones and tablets are rapidly increasing and the age of technology users is decreasing. Children have become technologically literate in early ages. In other words, children are accessing to variety of technologies and internet more at younger ages. For instance, in U.S in 2013, 38% of children at or under age 2 used mobile technological devices whereas 10% of them used in 2011. Similarly, a study showed that in 2014, 83% of the children aged between 2 and 10 used high speed internet, 76% played with game console, 71% used smartphones and 41% accessed educational gaming device. Children aged 5 and under use internet once a week if there is at their home and play games on variety of mobile devices such as laptops, smart phones and tablet PCs frequently.

Most of the parents of children between 4 and 7 years old gave their iPhones to their children and allowed them to play games on this device. The report of European Union in 2013 demonstrates that in worldwide children go online in younger ages. In US, 25% of 3 year old children and 50% of 5 year old children connect internet in daily basis and 70% of 3-4 year old children use internet sometimes in Sweden. In another study conducted by Ofcom showed that in U.K, 28% of the 3 and 4 years old children used tablet PCs at their home and 12% were allowed to access Internet via tablets. Additionally, 14% of their parents believed that their children knew Internet more than they do. The average age of Australian children who use internet first time is under 8.

The touch screen devices offers interaction to the young children since it is very easy to use them compared to computers. Unlike computers which requires mouse or keyboard skills, young children can use this device easily due to its touch screen. According to Radich by using tools that become user-friendly, kids are doing a variety of activities such as playing a game, making a picture, recording a story or taking a photo. Additionally, mobile devices such as smartphones and tablets are more available to the children compared to computers in nearly 50% of which children are forbidden to use. Holloway et al. state that there is an increase in the availability of tablet computers for the young children age 6 and under by citing a report which demonstrates that in Sweden 50% of the 3 and 4 age-year-old children use tablets and in Norway, 23% of the children at 6 and under use them<sup>1</sup>.

In 2011, 38% of the children under eight used mobile devices whereas in 2013 72% used it. This situation also takes the interest of the companies and inspired them to develop special technologies for the young children. They designed technology in order to develop specific skills such as literacy skills of the young children and encourage their parents to buy them in order to develop the skills of their children. As stated by Gutnick et al. point out, educators and media developers state that as prices drop, more families will use these devices. Further, they note that if iTunes is not a market for children, an essential proportion of the pre-eminent 100 educational apps on iTunes involved in children's content. But the ease of their use brings an important question about how and when these technologies should be served to the young children.

This issue poses a modern-day dilemma to the parents since their affordances and availability is increasing at homes of young children. Hence it calls researchers to investigate when and how these technologies should be used in early education context.

The little empirical evidence available suggests that teachers are increasingly incorporating technology and media into the classroom. Vanderloo (2014) conducted

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<sup>1</sup> Aubrey, C., & Dahl, S. (2014). The confidence and competence in information and communication technologies of practitioners, parents and young children in the early years foundation stage. *Early Years*, 34(1), 94-108.  
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a systematic review of eight international studies that reported daily screen-viewing in early childcare settings. Results showed relatively high levels of daily screen time, with studies of center-based childcare reporting rates of up to 1.3 h of screen time per day. However, this report may significantly underestimate current technology and media use, as many of the included studies focused solely on TV before the rise of mobile devices. A 2015 report found that over half of United States preschool teachers reported using tablets in class at least once a week (Northwestern University, 2015), and in a 2019 report, preschool teachers' access to technology in the classroom was rising, such that, most had access to the internet (89%), computers (81%), and tablets in the classroom (71%; Pila et al., 2019). A 2016 study from New Zealand shows that over 60% of public kindergartens reported using tablets and computers in the classroom at least weekly (Gerritsen et al., 2016).

In sum, technology and media use is increasingly prevalent during the early childhood years, yet little is known about its use in preschool classrooms. The current study is unique in that it goes beyond prevalence to examine the purposes and contexts of preschool classroom technology and media use, as well as the extent to which the characteristics of teachers, classrooms, and programs may be related to technology and media use. Most prior studies have focused solely on prevalence without examining the extent to which teachers use technology and media for instructional purposes and in teacher-supported contexts. It is vital to fill this gap because technology and media use may be either detrimental or beneficial to children's learning, depending on how it is used. Furthermore, many prior studies are from 2015 and earlier, whereas the availability and accessibility of technology has changed drastically in the last 5 years, potentially increasing technology and media use in preschool classrooms and leading to shifts in the characteristics of teachers, classrooms, and programs that may predict use. Thus, the current study addresses three exploratory aims:

1. Establish the frequency, purposes (instructional or non-instructional), and contexts (teacher-supported or not teacher-supported) for which preschool teachers report using technology and media.

2. Identify whether and to what extent preschool teachers' classroom technology and media use can be represented by distinct classes, and
3. Examine demographic and classroom predictors of teachers' technology and media use.

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## O'QUV TARBIYA JARAYONINI SAMARALI TASHKIL ETISHDA INDIVIDUAL YONDOSHUV

**Komilova Aziza Sunatullaevna**

**Pardayev Xumoyun Farhod o'g'li**

O'zbekiston Milliy universitetining Jizzax filiali

**Annotatsiya:** Ushbu maqolada o'quv tarbiya jarayonini samarali tashkil etishda shaxsga individual yondoshish ya'ni shaxsning individual psixologik xususiyatlaridan temperament, xarakter, qobiliyat, iqtidor, iste'dod va salohiyatlari, shaxs psixologiyasi, xulq-atvorining yetakchi omillari, kasb-hunarga moyilligini olimlar tomonidan turli komponentlarga ajratilganligi haqidagi ma'lumotlar yoritilgan.

**Kalit so'zlar:** shaxs, individuallik, psixik jarayonlar, individual psixologik xususiyatlar, xarakter, temperament, qobiliyat, iqtidor, iste'dod, salohiyat.

**Аннотация:** В данной статье индивидуальный подход к человеку в эффективной организации образовательного процесса, то есть от индивидуально-психологических особенностей личности, темперамента, характера, способностей, одаренности, таланта, потенциала, и ведущих факторов психологии личности, поведение, склонность к профессии анализируются учеными по-разному, выделяются сведения о разделении на составляющие.

**Ключевые слова:** личность, индивидуальность, психические процессы, индивидуально-психологические особенности, характер, темперамент, способности, талант, потенциал.

**Abstract:** In this article, the individual approach to the person in the effective organization of the educational process, that is, from the individual psychological characteristics of the person, temperament, character, ability, talent, talent, potential, and the leading factors of personal psychology, behavior, inclination to the profession, are analyzed by scientists in different ways. the information about the separation into components is highlighted.

**Key words:** personality, individuality, mental processes, individual psychological characteristics, character, temperament, ability, talent, potential.

Psixologiya fani insonlardagi psixik jarayonlar, individual psixologik xususiyatlarni o'rganishi bilan boshqa fanlardan ajralib turadi. Asrlar davomida psixologiya tavsifiy bilimlar sohasi sifatida ham shakllanmoqda. Agar psixologik fikr tarixiga nazar tashlansa, uning qadim o'tmishlarga borib taqalishini e'tirof etish mumkin. Ruh haqidagi g'oyalar qadimdayoq Suqrot, Aflotun, Arastularning falsafiy qarashlarida shakllangan. Birlamchi psixologik qarashlar falsafa fani negizida paydo bo'lgan edi. Buyuk allomalar asarlarida jon va ruh haqidagi qarashlardan ta'sirlangan holda faylasuf olimlar tabiat, jamiyat va inson tafakkuri hamda inson ruhiyatiga ham e'tibor qaratib, inson psixologiyasini haqli ravishda falsafa negizida shakllangan fandir deyishmoqda. Keyinchalik boshqa fan sohalari, ayniqsa, tibbiy-biologik izlanishlarda inson va uning murakkab tuzilishi, ruhiy hayotiga qiziqish ortib borgan sari sekin-asta psixik jarayonlar ham yaxlit bir tizimi bo'lishi mumkinligi g'oyasi paydo bo'ladi. Qolaversa, XIX asrning ikkinchi yarmiga kelib, inson ruhiyati to'g'risidagi psixologik hamda falsafiy qarashlar bilan tabiiy-ilmiy qarashlar o'rtasida tafovutlar chiqqani sari uning alohida fan sifatida shakllanishi zarurati ortib boradi. Eramizdan oldingi V asrlarda buyuk olim Gippokrat individual psixologik xususiyatlardan biri bo'lgan temperamentlar haqidagi ta'limotni yaratadi va bu ta'limot odamlar o'rtasidagi individual farqlarni ilmiy ravishda tushuntirib berishda muhim rol o'ynaydi. Eramizdan oldingi asrlarda psixologik fikrlarni yana qaytadan tabiiy-ilmiy asoslab, uni biologiya va tibbiyot bilan bog'ladi. Arastuning "Jon haqida"gi asari o'sha davridayoq psixologiya maxsus fan sifatida maydonga kela boshlaganligidan dalolat beradi. Psixologiya fan sifatida tan olinib, olimlarning qarashlari shakllanib borgan sari, kechinmalar tabiatini negizidan o'rganish ehtiyoji paydo bo'la boshladi. Bu o'z-o'zidan shaxsning individual xususiyatlarini xisobga olishni taqozo etadi deyish mumkin.

Bizga ma'lumki jamiyat hayotida tinimsiz o'zgarishlar natijasida psixologiyaning bir qancha tarmoqlari yuzaga keldi. Psixologiya fanining muhim sohalaridan biri shaxs psixologiyasidir. Bu tarmoq shaxsning individual xususiyatlari – xarakteri, temperamenti, qobiliyati, xulq-atvorining etakchi omillari, kasb-

hunarga moyilligini o'rganadi. Olimlar shaxs individualligini turli komponentlarga ajratadi. Bu komponentlarini umumlashtirgan holda quyidagilarni ko'rsatish mumkin.

1. Ijtimoiy holati va roli
2. «Men konsepsiya» va dunyoqarash
3. Munosabatlar va qadriyatlar ierarxiyasi
4. Aqliy va amaliy qobiliyatlari
5. Xarakter
6. Temperament
7. Yoshi, jinsi

Shaxs individualligi deganda, nima tushuniladi? Individuallik - shaxsning sub'ektiv va ijtimoiy mohiyatini ifodalashdagi o'ziga xos xususiyat bo'lib - temperament, xarakter, qobiliyat, iste'dod va geniylik sifatlariga bo'linadi.

Bola psixik taraqqiyoti tashqi sharoitlarga tashqi ta'surotlarga bog'liqdir. Lekin bu rivojlanishning bevosita tashqi sharoitdan va tashqi vaziyatdan keltirib chiqarib bo'lmaydi. Bu sharoitlar xamda vaziyatlar xamisha odamning xayotiy tajribasi, uning shaxsi, individual psixologik xususiyatlari va psixik qiyofasi orqali ta'sir qiladi. Shu bilan birga odam faol mavjudot sifatida o'zi xam ongli ravishda o'z shaxsini o'zgartirishi, ya'ni o'zi-o'zini tarbiyalash bilan shug'ullanishi mumkin. Lekin o'z-o'zini tarbiyalash jarayoni tevarak atrofidagi muhitdan ajralmagan xolda olib boriladi. O'z-o'zini tarbiyalash muhit bilan moslashgan xolda va muhit bilan aktiv o'zaro munosabatda sodir bo'ladi.

Muayyan jamiyatda asrlar davomida ijtimoiy munosabatlarni yo'lga qo'yishda shaxsning fiziologik, pedagogik-psixologik va jismoniy rivojlanishiga ko'ra yondashish tajribasi shakllangan.

XX-asrning ikkinchi yarmidan boshlab psixologiya fanida shaxs iqtidori, qobiliyatlilik darajasi, qobiliyatni maqsadli rivojlantirish masalalarini tadqiq etishga kirishildi. N.S.Leytes, M.Karne, V.S.Blum, B.Klark, J.Uitmor, A.Sh.Shvedel, R.S.Stounberner, L.Termen kabilar tomonidan qobiliyatlilik va uning darajalarini belgilovchi mezonlarning ishlab chiqilishi, shuningdek, qobiliyatli shaxslarning o'ziga xos pedagogik-psixologik sifatlarining tadqiq etilishi hamda ular bilan munosabatni



to'g'ri tashkil etish yuzasidan tavsiyalarning ilgari surilishi nafaqat soha rivojini ta'minlab qolmay balki, qobiliyatli shaxslarning "cheksiz imkoniyatlari"dan samarali foydalanish mumkinligini ko'rsatib berdi.

J.Uitmor quyidagi omillar bolalarda alohida qobiliyatning namoyon bo'lishiga zamin yaratishini asoslab berdi:

1. Mukammallikka intilish (perfeksionizm). Qobiliyatli bolalar uchun kamolotga intilishning ichki ehtiyojiga egalik xosdir. Ular yuqori natijalarni qo'lga kiritmagunlaricha tinchimaydilar. Buning ilk ko'rinishi juda yoshlikdan ko'zga tashlanadi.

2. Qoniqmaslik tuyg'usiga egalik. O'z-o'ziga bunday munosabatda bo'lish qobiliyatlilar nima bilan shug'ullansa ularning barchasida mukammal bo'lishga intiluvchi bolalarga xos xususiyat sanaladi. Ular shaxsiy yutuqlariga tanqidiy yondashadilar, ko'p holatlarda ulardan qoniqmaydilar, bundan o'z-o'zini noto'g'ri va past baholash hissi yuzaga keladi.

3. Noreal (amalga oshish imkoniyati kam bo'lgan) maqsadlarga egalik. Qobiliyatli bolalar odatda o'z oldilariga yuksak maqsadlarni qo'yadilar. Qo'yilgan maqsadlarga erishish imkoniyatiga ega bo'lmasalar, ular tashvishlana boshlaydilar. Boshqa tomondan qaraganda, mukammallikka intilish yuksak yutuqlarga erishish imkonini beruvchi kuchdir.

4. O'ta sezgirlik. Qobiliyatli bolalar eshitish imkoniyatining yuqoriligi tufayli ular munosabat va aloqalarni yaxshi tushunadilar, ular nafaqat o'zlariga, shu bilan birga atrofdagilarga nisbatan ham tanqidiy munosabatda bo'ladilar. Qobiliyatli bolalar juda ta'sirchan bo'lib, ular atrofdagilardan o'zlariga nisbatan bildirilayotgan yoqimsiz so'z yoki so'zsiz harakatlarning paydo bo'lishi bilan oq qabul qiladilar. Doimiy ravishda turli ko'rinishdagi salbiy ta'sirlarga javob beraverish oqibatida bunday bolalar ko'p hollarda giperfaol va tez chalg'iydigan bo'lib qoladilar.

5. Kattalarning e'tiborlariga ehtiyoj sezish. Tabiatan qiziquvchanliklari va bilishga bo'lgan intilish ko'p hollarda o'qituvchilar, ota-onalar va boshqa katta yoshli

kishilarning e'tiborlari o'zlarigagina qaratilishini xohlaydilar. Bu boshqa bolalar bilan munosabatlarda bunday istakni keskinlashtiruvchi ziddiyatni keltirib chiqaradi.

6. Sabrsizlik. Qobiliyatli bolalar ko'p holatlarda aqliy jihatdan o'zlariga nisbatan past salohiyatga ega bolalarga nisbatan sabrsizlik bilan munosabatda bo'ladilar. Shu sababli ular toqatsizlik va sabrsizlikni ifodalovchi tashqi tanbehlariga duch keladilar. [2]

Bugungi kun barkamol shaxsi ma'naviyatini shakllantirishda, o'quvchilarni komil inson qilib tarbiyalashda psixologlar va pedagoglar xamkorligida bir qancha ishlar amalga oshirilmoqda. Bunda ular o'quvchilarga tarbiya berishning saviyasini ko'tarishga yordam berishi mumkin bo'lgan psixologik muammolar echimini topish yuzasidan samarali yutuqlarga erishilmoqda. Psixologlarimizning fikrlariga tayangan xolda aytish mumkinki, bugungi kunda ta'lim tarbiyaning muvaffaqiyati o'quv materialining mazmunigagina, ta'lim-tarbiyaning metodlarigagina bog'liq emas. Balki xar bir o'quvchining faqatgina o'ziga xos bo'lgan individual psixologik xususiyatlarini ya'ni temperament, xarakter va qobiliyatlarini xisobga olish va shu asosida ularga topshiriq va vazifalar berib borish lozim.

O'quvchilarning qobiliyat va iqtidorini rivojlantirishda ular uchun maxsus dasturlarni ishlab chiqish muhim omillardan biri sanaladi. 1980 yillarda amerikalik olimlar M.Karne, A.Shvedel va S.Minnemayerlar o'quvchilar qobiliyati va iqtidorini rivojlantirish maqsadida maxsus dasturlarni ishlab chiqishda quyidagi tamoyillarning inobatga olinishi muhim ekanligini alohida qayd etib o'tganlar:

1. Har bir bola takrorlanmas, o'ziga xos xususiyatlarga ega.
2. Qobiliyatli bolalar o'zlariga nisbatan nihoyatda tanqidiy yondashadilar va ko'p hollarda u qadar ijobiy bo'lmagan "Men" obraziga egaliklari bilan ajralib turadilar.
3. Oila qobiliyatli bolalarga ta'lim berishda yetakchi o'rinni egallashi lozim.
4. Qobiliyatli bolalar uchun ishlab chiqiladigan dasturda ularning qiziqish va ehtiyojlariga muvofiq keluvchi turli-tuman o'quv materiallari o'rin olishi kerak.
5. Qobiliyatli bolalar uchun ishlab chiqiladigan dastur uning har tomonlama – harakat, hissiy, shuningdek, muloqot malakalarini shakllantirishdagi o'zaro mutanosiblikni ta'minlashi hamda ularni rivojlantirishga yordam bera olishi zarur.

6. Qobiliyatli bolalar “bilimlarni o‘rtacha o‘zlashtiruvchi” o‘quvchilar bilan bir guruh (sinf)da o‘qitilganda xuddi o‘zlari singari qobiliyatli bolalar bilan muloqot qila olish imkoniyatlariga ega bo‘lishlari kerak.

7. Bu kabi dasturlarni amalga oshirishga maxsus tayyorgarlik va qobiliyatli bolalar bilan ishlash tajribasiga ega mutaxassisning rahbarlik qilishi yuqori natijalarni qo‘lga kiritishga imkon beradi.

8. Qobiliyatli bolalar uchun namunaviy dasturlar o‘quvchilarni bir ta’lim muassasasida uzluksiz o‘qitishni talab etadi.

9. Ota-onalar va mutaxassislar uchun bola oldiga qo‘yiluvchi maqsadlar va ularni amalga oshirish yo‘llarini aniqlashga bo‘lgan munosabatlarda hamkorlik qilish muhim sanaladi.

10. Dasturning ajralmas qismi bola muvaffaqiyatlarini baholovchi tizim bo‘lishi lozim.

11. Dastur o‘zida ota-onalar ham muhim rol o‘ynaydigan qobiliyatlilikning namoyon bo‘lishini ta’minlovchi yaxshi tashkillashtirilgan, samarali va doimiy harakatdagi tizimni qamrab olishi lozim.

12. Dastur bolaning rivojlanishini ta’minlovchi hamda bir darajadan ikkinchi darajaga samarali va izchil o‘tishi uchun zarur imkoniyatga ega bo‘lishi zarur.

13. Dastur maqsadlariga erishishga bo‘lgan intilishni rivojlantira olishi kerak.

14. Ijodiy qobiliyatni rivojlantirish – dasturning muhim maqsadlaridan biri sanaladi.

15. Qobiliyatli rahbarlarni iqtidorli bolalarga ta’lim berishga jalb etishning zaruriy yo‘llarini topish maqsadga muvofiqdir.[3]

Manbalarda “qobiliyat”, “iqtidor”, “iste’dod” va “salohiyat” tushunchalarining garchi yagona negizga ega bo‘lsa-da, biroq turli darajadagi xususiyatlarni ifodalashi alohida ta’kidlab o‘tiladi. Jumladan, qobiliyat “shaxsning muayyan faoliyati yuzasidan layoqati va uning ishni muvaffaqiyatli bajarishidagi o‘ziga xos imkoniyatlarni ifodalovchi ruhiy xususiyatlar”, “shaxsning ma’lum faoliyatidagi muvaffaqiyatlarini va osonlik bilan biron faoliyatni egallay olishini ta’minlaydigan individual pedagogik-psixologik xususiyatlar” sifatida e’tirof etilsa, “insonning o‘z xatti-harakatlariga nisbatan sub’ektiv munosabati” esa iqtidor deya talqin etiladi.

Mavjud manbalarda shaxsning o‘zgalardan farqli xususiyatlarini anglatishga xizmat qiluvchi individual xususiyatlarga egalik turli darajada bo‘lishiga va darajasiga ko‘ra shaxsga muayyan nisbatlar berilishiga alohida e’tibor qaratiladi.

Shaxsning temperamenti deganda biz ularning tabiiy va tug'ma xususiyatlarini tushunamiz. Ta'lim tarbiya jarayonida biz o'quvchilarning aynan temperament tiplarini yaxshi bilgan xolda va xisobga olgan xolda ular bilan muomala munosabatga kirishishimiz muhimdir. Faoliyat jarayonida xar bir o'quvchida temperamentning qaysidir tipi namoyon buladi va bu narsa o'quvchining muvaffaqiyatiga yordam beradi. SHunday ekan xar bir narsani o'quvchilarga etkazishda, bilim, ko'nikma va malakalarni puxta egallashlarida ularning temperamentining fan o'qituvchisi tomonidan xisobga olinishi ta'lim tarbiya jarayonini to'g'ri tashkil etilishini ta'minlaydi va bolaning muvaffaqiyatga erishishiga yaqindan yordam beradi. O'smirlik yoshiga xos bo'lgan psixologik xususiyatlarni o'rgana turib, o'smirlar shaxsining shakillanib, rivojlanib kamolga etish yoshlarini va unga ta'sir etadigan biologik va ijtimoiy omillarni bevosita ta'sirini xamda ahamiyatini tushunishimiz mumkin. Xar bir temperament o'smirlar o'qish faoliyatida va o'quvchilar orasida o'zlarini tipiga xos tarzda nomoyon etib boradilar. Bu narsaga befarq qarash va xisobga olmaslik o'qituvchi va o'quvchi munosabatlarning buzilishiga, bir-birini tushunmaslikka va ta'lim tarbiya jarayonida orqada qolishga sabab bo'ladi. SHuni xisobga olgan xolda aytish mumkinki biz melanxolik, xolerik, flegmatik, sangvinik tipdagi o'quvchilarning aynan o'ziga xos xususiyatlarini xisobga olgan xolda, yuqoridagilarga amal qilgan xolda muomala o'rnatish qobiliyatiga ega bo'lishimiz va amal qilishimiz lozim.

Xulosa chiqarish mumkinki, bir xil tashqi sharoit, bir xil muhit, turli bolalarga, o'smirlarga, yigit va qizlarga turlicha ta'sir ko'rsatish mumkin. Maktab o'quvchisining psixik taraqqiyoti qonunlari shuning uchun xam murakkabki, psixik taraqqiyotning o'zi murakkab va qarama-qarshi o'zgarishlardan iborat jarayondir. Psixik taraqqiyotning faktorlari, ta'lim va tarbiya sharoitlari xilma-xil va ko'p qirralidir. Biz yuqorida aytib o'tilganidek, bu faktor va sharoitlar turli bolalarga turlicha ta'sir qilishi mumkin.

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**O‘ZBEKISTON VA QIRG‘IZISTONNING ANDIJON (KAMPIROBOD) SUV  
OMBORINI BIRGALIKDA BOSHQARUVI BORASIDAGI YANGI  
KELISHUVINING O‘ZBEKISTON IRRIGATSIYA TIZIMIGA TA’SIRI**

**Xudoyberdiyev Xumoyunbek Xabibulla o‘g‘li**

[xumoyunxudoyberdiyev80@gmail.com](mailto:xumoyunxudoyberdiyev80@gmail.com)

**Ataboyev Javohir Sarvar o‘g‘li**

“Toshkent Irrigatsiya va Qishloq Xo‘jaligini Mexanizatsiyalash Muhandislari  
Instituti” Milliy Tadqiqot Universiteti 2-bosqich talabalari

[javoxirbekjavoxirbek92@gmail.com](mailto:javoxirbekjavoxirbek92@gmail.com)

**ANNOTATSIYA**

*Mazkur maqolada bugungi kunda yurtimiz hayotida suvdan foydalanish bo‘yicha muhim diplomatik kelishuvlardan biri bo‘lgan O‘zbekiston va Qirg‘iziston o‘rtasidagi Andijon (Kampiropod) suv omborining suv resurslarini birgalikda boshqarish to‘g‘risidagi bitimining ijtimoiy va iqtisodiy ro‘lini qiyosiy taxlili asosida yoritilgan. Kampiropod suv omboridagi suv resurslarini birgalikda boshqarish, Qirg‘iziston va O‘zbekiston o‘rtasidagi bir qancha chegaraviy kelishmovchiliklarni hal qilishdagi o‘rni batafsil yoritilgan.*

***Kalit so‘zlar:** suv ombori, suv taqsimoti, transc chegaraviy daryolar, suv oqimi, suv diplomatiyasi, gidrotexnik inshoot, delimitatsiya, demarkatsiya.*

**THE EFFECT OF THE NEW AGREEMENT ON THE JOINT  
MANAGEMENT OF THE ANDIJAN (KAMPIRABAD) WATER  
RESERVOIR OF UZBEKISTAN AND KYRGYZSTAN ON THE  
UZBEKISTAN IRRIGATION SYSTEM**

### ABSTRACT

*In this article, the social and economic role of the agreement on the joint management of water resources of the Andijan (Kampirabad) reservoir between Uzbekistan and Kyrgyzstan, which is one of the important diplomatic agreements on the use of water in the life of our country today. explained on the basis of comparative analysis. The joint management of water resources in the Kampirabad reservoir and its role in resolving several border disputes between Kyrgyzstan and Uzbekistan are covered in detail.*

**Key words:** *reservoir, water distribution, transboundary rivers, water flow, water diplomacy, hydrotechnical structure, delimitation, demarcation.*

**KIRISH (INTRODUCTION).** Barchamizga ma'lumki, bugungi kunda dunyoning 30 foizga yaqin aholisi xavfsiz ichimlik suvidan foydalanish imkoniga ega emas. Tadqiqotchilarning fikricha, 2030-yilga borib, yer shari aholisining yarmi suv tanqis bo'lgan hududlarda yashashga majbur bo'ladi. Ko'p mamlakatlarda ichimlik suvi va sug'orish suvi tanqisligi tobora oshib bormoqda. Shuningdek, yurtimizda ham suv bilan bog'liq ko'pgina muammolar sodir bo'lmoqda. Bular qatoriga ichimlik suvini ifloslanishi, suv tanqisligi va suvdan foydalanish bo'yicha qo'shni davlatlarimiz bilan bo'layotgan muzokaralarni ham kiritishimiz mumkin. Yurtimizda bunday ishlarni oldini olish maqsadida boshqa davlatlar bilan ko'pgina kelishuvlar imzolanmoqda.

O'zbekistonliklar Andijon, qirg'izistonliklar Kampirobod deb biluvchi suv ombori - Farg'ona tog' tizmasining janubiy-g'arbiy qismlaridan boshlanadi va ikki davlat chegara qismida joylashgan. Bu suv ombori O'zbekiston va Qirg'iziston o'rtasidagi chegara hududida joylashganligi sababli shu kungacha jiddiyatli vaziyatlari keltirib chiqarmoqda. 1982-yilda Andijon viloyatidagi Qoradaryo suv oqimida qurilgan **Andijon(Kampirobod) suv ombori** - gidrotexnik inshoot hisoblanib, ko'p yillar davomida daryo suvini tartibga solishga va irrigatsiya-energetika maqsadlaridan foydalanishga mo'ljallangan. Andijon suv ombori balandligi 121 m, uzunligi 1040 m, suv sig'imi 1,9 mlrd. m<sup>3</sup>. Hidrouzel tarkibiga to'g'on, suv o'tkazuvchi inshootlar va

GES kiradi. Andijon(Kampirobod) suv omboriga 4ta daryo – TAR, Qurshab, Yassi va Qoradaryo quyiladi. Suv o‘tkazuvchi inshootlar favqulodda toshqinda 1700 m<sup>3</sup>/s gacha suv o‘tkazishga va umumiy suv sarfi 230 m<sup>3</sup>/s bo‘lgan irrigatsiya kanallariga oqizishga mo‘ljallangan.

GES kanallarga tushayotgan suv hisobiga ishlaydi, 192 m<sup>3</sup>/s suv sarfiga mo‘ljallangan, quvvati 140 MVt. Andijon suv omborining suvi Farg‘ona vodiysida 273 ming gektarga yaqin maydonning suv ta‘minotini yaxshilaydi, qo‘shimcha 35 ming gektar yerni sug‘orish imkoniyatini beradi.

SSSR 1991-yilda parchalanganidan keyin Andijon (Kampirobod) suv ombori ikki mustaqil davlatlar Qirg‘iziston va O‘zbekiston o‘rtasidagi hududiy nizo markazida bo‘lgan. SSSR davrida Andijon suv ombori qurilganida O‘zbekiston chap qirg‘oqdan uzunligi 200 kilometrdan ortiq bo‘lgan kanal qurish majburiyatini olgan, biroq u hali ham qurib bitkazilmagan. Ikki davlat o‘rtasidagi shu paytgacha bo‘lgan muzokaralarga to‘xtaladigan bo‘lsak, 2021-yilning 23-mart kunida bo‘lib o‘tgan Qirg‘iziston—O‘zbekiston Davlat chegarasini delimitatsiya va demarkatsiya qilish milliy qo‘mitasi raisi Qamchibek Tashiev boshchiligidagi hukumat delegatsiyasi O‘zbekistonga tashrif buyurgan. Ikki tomonlama muzokaralardan so‘ng Qamchibek Tashiev Kempirobod suv ombori to‘g‘oni O‘zbekistonga o‘tishiga qaror qilingani, biroq qo‘shnilar bir qancha shartlarni bajarishi shart ekanligi to‘g‘risida muzokaralar olib borildi.

2022-yilning oktabr oyidagi muzokaralar natijasida Qamchibek Tashiev va O‘zbekiston delegatsiya rahbarlari bir necha kelishuvlarga erishishdi: “Chegara chizig‘i bo‘ylab tushgan Kampirobod suv omborining 19 ming gektar yeri Qirg‘izistonda qoladigan, 4485 gektari esa O‘zbekistonga o‘tishi kelishilgan;

Suv omborini, Qirg‘iziston bilan O‘zbekiston o‘rtasida tuzilgan va har ikki tarafdin 12 nafardan vakil kiritilgan qo‘shma korxonaga boshqaradi;

Suv hajmi gorizantal darajasi 908 metrdan 900 metrga tushiriladi, buning ortidan 1246 gektar joy bo‘shaydi va bu yerlar ham Qirg‘izistonga o‘tadi”;



Ushbu muzokara natijasi haqida dunyo maqolalarida ham fikrlar berib o‘tilgan. Ularning bittasiga to‘xtaladigan bo‘lsak: “Qirg‘iziston O‘zbekistonga 429 gektar yer ajratadi, bu chegaralarni belgilash jarayonida kelishilishi kerak. Buning evaziga O‘zbekistonning vodiy hududlaridagi 294 gektar yerni Qirg‘izistonga berish bo‘yicha kelishuvga erishildi. Maydoni qariyb 5 ming gektar bo‘lgan suv ombori uchun O‘zbekiston tomoni 19 ming gektar yer ajratmoqda. SSSR davrida ham O‘zbekiston 4000 gektardan ortiq qolgan yer uchastkalarini kompensatsiya sifatida bergan (1970-yillarda)”. [ Haniya Ali. The Kempirabad Reservoir: Achieving Depth in Kyrgyz-Uzbek Relations article]

2022-yil 3-noyabr kuni bo‘lib o‘tgan muhim yig‘ilishga to‘xtaladigan bo‘lsak, unda O‘zbekiston tashqi ishlar vaziri Vladimir Norov qo‘shni Qirg‘iziston tashqi ishlar vaziri Jeenbek Kulubaev bilan uchrashadi va olib borilgan muzokaralar so‘nggida ikki davlat tashqi ishlar vazirlari o‘rtasida qator kelishuvlar imzolandi.

**O‘zbekiston delegatsiyasining Bishkekga tashrifi doirasida quyidagi hujjatlar imzolandi:**

- O‘zbekiston-Qirg‘iziston Davlat chegarasining ayrim uchastkalari to‘g‘risidagi shartnoma;

- Andijon (Kampirobod) suv omborining suv resurslarini birgalikda boshqarish to‘g‘risidagi Bitim;

- O‘zbekiston Respublikasi Suv xo‘jaligi vazirligi va Qirg‘iz Respublikasi Qishloq xo‘jaligi vazirligi huzuridagi Suv resurslari xizmati o‘rtasida suv xo‘jaligi masalalari bo‘yicha hamkorlik to‘g‘risida Bitim;

- Markaziy Osiyo xalqaro instituti va Qirg‘iz Respublikasi Tashqi ishlar vazirligi huzuridagi Diplomatik akademiya o‘rtasida hamkorlik Shartnomasi;

- "O‘zarxiv" agentligi va Qirg‘iz Respublikasi Raqamli rivojlanish vazirligi o‘rtasidagi hamkorlik Memorandumi. [<https://yuz.uz/uz/news/ozbekiston-va-qirgiziston-ortasida-kampirobod-suv-ombori-boyicha-bitim-imzolandi>]

Shuningdek, tashqi ishlar vazirlarining Qo‘shma bayonoti hamda 2023-2024 - yillarda O‘zbekiston Respublikasi va Qirg‘iz Respublikasi tashqi siyosat idoralari

o'rtasida hamkorlik dasturi ham qabul qilindi. Qirg'iziston bilan imzolangan bu kelishuv kelajakda yaxshi qo'shniçilik aloqalarini olib borilishiga imkon yaratadi.

Keyinchalik, Prezident Shavkat Mirziyoyev 30-noyabr kuni O'zbekiston Respublikasi bilan Qirg'iziston Respublikasi o'rtasidagi davlat chegarasining alohida uchastkalari to'g'risidagi shartnoma hamda Andijon (Kampirobod) suv omborining suv resurslarini birgalikda boshqarish to'g'risidagi bitimni ratifikatsiya qilishga oid qonunlarni imzoladi.

Bu muhim hujjatlarning imzolanishi, davlat rahbarlarining siyosiy irodasi bilan ikki qardosh xalq o'rtasidagi hurmat va yaxshi qo'shniçilik mustahkamlanishi, 30 yildan beri hal bo'lmayotgan masalalarni hal etishda muhim qadamlardan biri bo'ldi.

Mazkur xalqaro shartnomalar O'zbekiston tashqi ishlar vaziri V.Norov boshchiligidagi delegatsiyaning 2022 yil 3 noyabrda Bishkek shahriga tashrifi chog'ida imzolangan.

O'zbekiston Respublikasi bilan Qirg'iziston Respublikasi o'rtasidagi davlat chegarasining alohida uchastkalari to'g'risidagi shartnoma 13 ta moddadan iborat. **Ushbu shartnoma natijasida** o'zbek-qirg'iz Davlat chegarasining 35 ta uchastkadagi umumiy uzunligi 302,29 km bo'lgan chizig'i belgilandi.

O'zbekistonga 4957 gektardagi Andijon suv ombori hududi hamda to'g'onga xizmat ko'rsatish va uni muhofaza qilish uchun qo'shimcha 19,5 gektar yer maydoni o'tkazilishi, Qirg'izistonga esa kompensatsiya tarzida 1019 gektar yaylov yerlari berilishi belgilandi.

Shuningdek, Qirg'izistonga Andijon suv omborining qurilmay qolgan Kampirobod chap qirg'oq kanali uchun "G'ovasoy" uchastkasidan 12 849 gektar yer maydoni kompensatsiya tarzida beriladi. Bunda Qirg'iziston tomoni "G'ovasoy" daryosining tabiiy oqimiga to'sqinlik qiladigan gidrotexnik va boshqa inshootlarni qurmaslik, suvning texnik ifloslanishiga yo'l qo'ymaslik majburiyatini oladi.

Andijon suv omborining suv resurslarini birgalikda boshqarish masalalasi va So'x tumanidagi "Chashma" bulog'i joylashgan uchastka alohida shartnomalar bilan tartibga solinishi kelishib olindi.

Andijon (Kampirobod) suv omborining suv resurslarini birgalikda boshqarish to'g'risidagi bitim 11 ta moddadan iborat. Unda Andijon suv ombori suv resurslarini birgalikda boshqarish bo'yicha Qo'shma komissiya tuzildi va uning faoliyati to'g'risidagi nizom tasdiqlandi.

**Ushbu shartnomani imzolash orqali** chegara bilan bog'liq barcha nizolar to'liq hal qilindi, chegaralarning yaxlitligi kafolatlandi va chegarada yuzaga kelishi mumkin bo'lgan keskin qarama-qarshiliklarning oldi olindi. Suv resurslaridan foydalanish bo'yicha uzoq muddatli mintaqaviy kelishuv bo'yicha muzokaralar olib borishdan tashqari, noroziliklarni bartaraf etish va ikki davlat o'rtasidagi do'stlik aloqalarini yanada mustahkamlash tiklash imkonini berdi.

**Bundan tashqari, 8000 ga yaqin fermerlar doimiy suv ta'minoti bilan ta'minlanadigan bo'ldi. Transport va aloqa bilan bog'liq muammolar bartaraf etilib, avvalgi yer olish bilan bog'liq bo'lgan vazifalar to'liq bajarildi.**

Andijon suv omborining suv resurslarini birgalikda boshqarish bo'yicha Bitimda ikkala tomonlarining o'zaro majburiyatlari aks ettirilgan.

O'zbek tomoni suv omboridagi suv sathini 900 gorizontaldan yuqori bo'lmagan sathda ushlab turish, Qirg'iziston fuqarolarining suv ombori suviga erkin kirishi va undan foydalanishini (hayvonlarga suv berish, sug'orish, baliq ovlash) ta'minlash, atrofida muhandislik-texnik inshootlarni o'rnatmaslik majburiyatlarini olgan. Qirg'iziston tomoni suvni muhofaza qilish zonalari o'rnatilishi, undan foydalanish rejimiga rioya etilishini ta'minlash majburiyatlarini olgan.

[\[https://yuz.uz/uz/news/ozbekiston-va-qirgiziston-ortasida-kampirobod-suv-ombori-boyicha-bitim-imzolandi\]](https://yuz.uz/uz/news/ozbekiston-va-qirgiziston-ortasida-kampirobod-suv-ombori-boyicha-bitim-imzolandi)

Muzokaralar davomida Andijon suv omborining xavfsizligini ta'minlash bo'yicha O'zbekiston va Qirg'iziston tomonidan amalga oshirilishi lozim bo'lgan chora-tadbirlar ham kelishib olindi. **Unga ko'ra**, O'zbekiston tomoni suv omborining xavfsizligini ta'minlaydi, ekspluatatsiya qiladi, texnik xizmat ko'rsatadi, Qirg'iziston tomoni bilan kelishilgan limitlar doirasida suv chiqaradi.

Qolaversa, Andijon suv ombori suv resurslarini birgalikda boshqarishning huquqiy asoslari yaratilishi ikkala davlat uchun ham foydali bo‘ladi va buning natijasida 2,5 million tonna qishloq xo‘jaligi mahsulotlarini yetishtirish va 500 million dollar miqdoridagi mahsulotlarni eksport qilish uchun 8 mingga yaqin fermer xo‘jaliklarini suv bilan uzluksiz ta‘minlash imkoniyati paydo bo‘ladi deb hisoblayman.

Bundan tashqari, ushbu kelishuvlarning qabul qilinishi transchegaraviy suv resurslaridan oqilona va foydali foydalanishni osonlashtirishi hamda ikki tomonlama hamkorlikni yangi mukammallik darajasiga ko‘tardi.

**Xulosa qilib shuni aytadigan bo‘lsak**, chegara chizig‘ini delimitatsiya qilishni yakuniga yetkazish orqali mamlakatlarimiz o‘rtasidagi aloqalar yanada mustahkamlanib, kelishmovchiliklar bartaraf etildi.

O‘ylaymizki, yurtimizda olib borilayotgan bunday ishlar natijasida O‘zbekistonda aholining suv bilan ta‘minlanganlik darajasi yanada yaxshilanadi va suvdan foydalanuvchi sohalar uchun ham bir qancha qulayliklar mavjud bo‘ladi.

Andijon suv ombori kabi nizoli masalalar yechimini faqatgina o‘zaro izchil integratsiyalarda ko‘rishimiz mumkin. Ushbu integrasiya chegaralarga qo‘shimcha sim to‘siqlar o‘rnatish emas, balki chegaradagi cheklovlarni yumshatish, aholi qatnovini erkinlashtirish, aholiga o‘zaro savdo, iqtisodiy, madaniy aloqalarni erkin qurish imkonini berish orqali chegara chizig‘i va chegara oldi hududidagi aholi punktlaridagi tarangliklarni yumshatish orqali erishimiz mumkin.

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## ИЗУЧЕНИЕ СТРОЕНИЯ КОМПЛЕКСА МЕДИ (II) С ДНДОКС-S, S-3,6 С ПОМОЩЬЮ ИК-СПЕКТРОСКОПИИ

Тураев Х.Х, Назиров Ш.С

Термезский государственный университет

**Аннотация:** Спектрофотометрическим методом исследовано комплексообразование ионов меди(II) с 2,7-динитрозо-1,8-диоксинафталин-3,6-дисульфокислотой ( $H_2R$ ). Проведена идентификация реагента с помощью элементного анализа и ИК-спектроскопии. Комплексообразующей формой меди является  $Cu^{2+}$ . Соотношение компонентов в комплексе ( $Cu:R$ ) составляет 1:2.

**Ключевые слова:** Медь, 2,7-динитрозо-1,8-диоксинафталин-3,6-дисульфокислота, квазиароматический цикл, цветные соединения, спектрофотометрические исследования, ИК-спектроскопия.

Нафталиновый нитрозореагент 2,7-динитрозо-1,8-диоксинафталин-3,6-дисульфокислота как анабазиновые лиганды содержит в составе полифункциональные -ОН-, и -NO группы. Нафталиновый азокрасители отличаются от анабазиновых наличием нафталинового радикала в составе оксинитрозореагента, которые в случае реакций комплексообразования с металлами заметно влияет на аналитические возможности лиганда. При относительно одинаковых: рабочей кислотности контрастности определений, молярном соотношении  $Me:R$ , величины коэффициентов молярного светопоглощения комплексов, однозначно характеризующих чувствительность реакций сильно различаются.

ДНДОКС-S,S-3,6 является оксинитрозопроизводным, который с некоторыми металлами образует цветные соединения с хелатными циклами, включающие -NO и Me-O-. При этом возникают квазиароматический цикл из-за

слабой делокализации электронов вдоль образуемой координационной связи. Высокий энергетический барьер вращения около -C-NO связей обеспечивается за счёт делокализации и геометрии  $\sigma$ -связей хелатного цикла. Благодаря этому полосы переноса заряда в реагенте смещаются в видимую область по сравнению со спектрами протонированных форм нитрозореагентов.

Комплексообразование с атомами кислорода оксигруппы происходит за счёт обобществления  $\sigma$ -неподеленных пар и перехода  $\pi$ -электронов на d-орбитали металла. Второй лигандный нитрозо нафталина может взаимодействовать по второй координате с металлоионом. При изучении аналитических реагентов органического происхождения основным вопросом является установление структурных факторов, обуславливающих чувствительность, селективность, экстрагируемость и другие факторы влияющие на комплексообразование. Для выявления общих структурных закономерностей, связанных со свойствами комплексных соединений элемента необходимо исследование однотипных комплексов с возможно большим варьированием отдельных фрагментов в различных условиях.

Строение реагента ДНДОКС-S,S-3,6 и его комплекса с медью (II) доказано ИК-спектроскопией. ИК-спектр сняли на приборе Avatar System 360 FT-ИК Pratege 460 Magna-IR technology фирмы "Nicolet Instrument corporation" (США), используя образцы в твёрдом виде, с помощью таблетки KBr, диаметром 7 мм и с разрешением -  $4 \text{ см}^{-1}$  в интервале частот  $400\text{-}4000 \text{ см}^{-1}$ . Спектры приведены на рисунках 1-2.

В ИК спектре реагента (Рис.1) обнаруживаются следующие характеристические частоты по литературе:  $3404\text{-}3477 \text{ см}^{-1}$ -валентное колебание гидроксильной группы,  $1645 \text{ см}^{-1}$ -валентное колебание C=C ароматического кольца,  $1180\text{-}1319 \text{ см}^{-1}$ -симметричное и ассиметричное валентное колебание сульфогруппы (-SO<sub>3</sub>H),  $638\text{-}667 \text{ см}^{-1}$  валентное колебание -S-O группы,  $1361\text{-}1435 \text{ см}^{-1}$  валентное колебание нитрозогруппы (-NO),  $638\text{-}667 \text{ см}^{-1}$  валентное

колебание  $-S=O$ ,  $777-1041\text{ см}^{-1}$  деформационные колебания нафталинового кольца.

В ИК спектре комплексного соединения (Рис.2) основное изменение происходит в области валентного колебания гидроксильной группы, так как в отличие от реагента в ИК спектре комплекса наблюдается уширенная в области  $439\text{ см}^{-1}$ . Уширение в этой области связано образованием валентной связи между ионом металла и с гидроксильной группой за счет вытеснения иона водорода. Кроме того частота валентного колебания нитрозогруппы обозначены  $1361\text{ см}^{-1}$  изменяется очень значительно на  $1338\text{ см}^{-1}$ , это указывает на координационной связи нитрозогруппы. Остальные функциональные группы почти одинаковы в ИК спектре комплекса (табл.1).

По данным ИК-спектроскопии, квантово-химических расчетов и по результатам изучения мольных отношений металл : реагент (Cu:R=1:2) окрашенного комплексного соединения меди(II) с реагентом ДНДОКС-S,S-3,6 можно следовать следующему предложению о строение данного комплекса (рис. 3).

*Таблица 1*

Частоты поглощения в ИК спектрах реагента ДНДОКС-S,S-3,6 и его комплекса с меди (II)

ИК спектры, $\text{см}^{-1}$	
ИК-спектроскопический результат реагента ДНДОКС-S,S-3,6	ИК-спектроскопический результат комплекса меди (II)
$\nu_{OH}=3404$	$\nu_{OH}=3304$
$\nu_{OH}=3477$	$\nu_{O-Me}=439$
$\nu_{C=C}=1645$	$\nu_{C-C}=1633$
$\nu^s_{SO_3}=1180$	$\nu^s_{SO_3}=1163$
$\nu^{as}_{SO_3}=1319$	$\nu^{as}_{SO_3}=1265$
$\nu_{S=O}=685$	$\nu_{S=O}=692$
$\nu_{S=O}=685$	$\nu_{S=O}=685$
$\nu_{NO}=1361$	$\nu_{NO-Me}=1338$
$\nu_{NO}=1435$	$\nu_{NO}=1454$



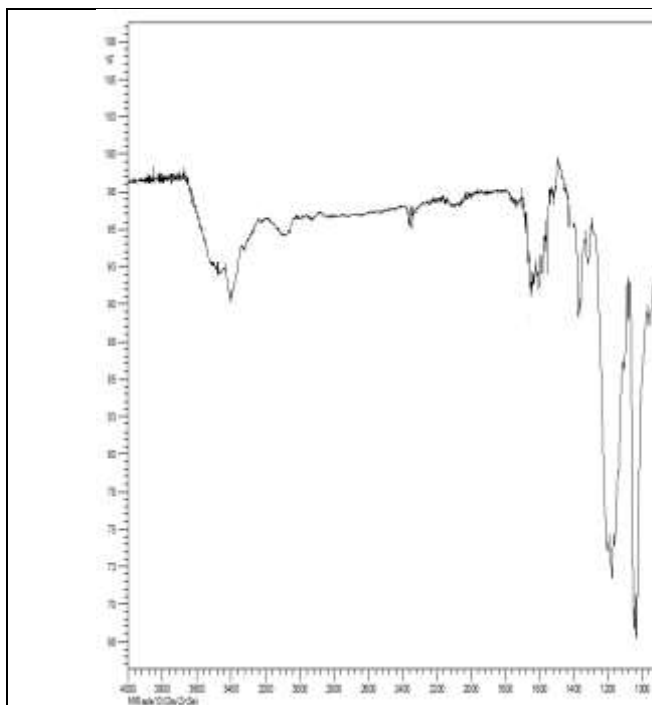


Рис.1. ИК спектр 2,7-динитрозо-1,8-диоксинафталин-3,6-дисульфокислоты.

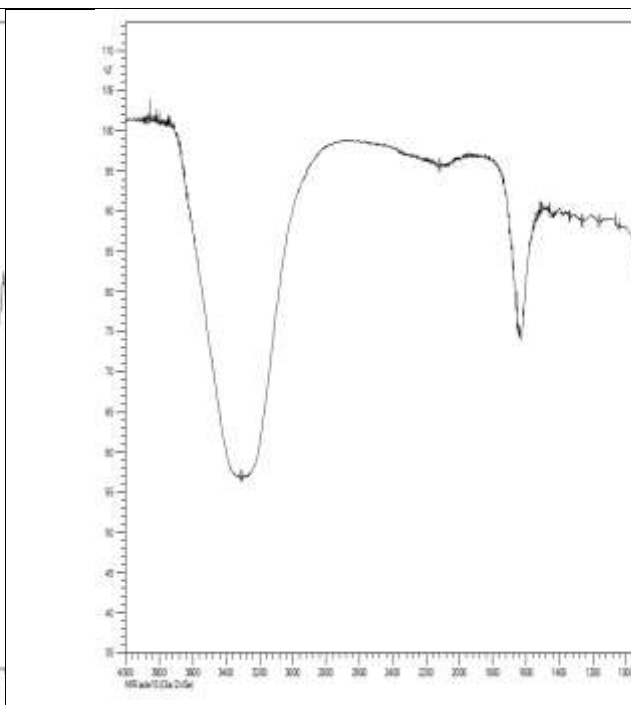


Рис.12. ИК-спектр комплекса меди (II) с 2,7-динитрозо-1,8-диоксинафталин-3,6-дисульфокислоты

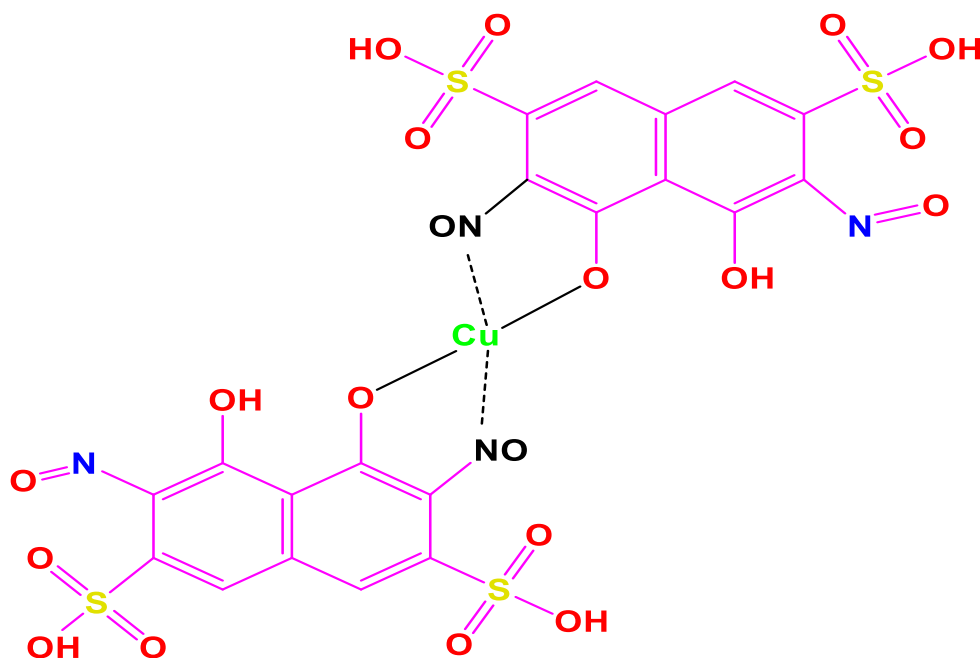


Рис. 3. Предполагаемое строение комплекса меди (II) с реагентом ДНДОКС-S,S-3,6.

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## INCLUSIVE EDUCATION: TERMINOLOGY, DEFINITIONS, AND IMPLEMENTATION

**Uralova Oysulov Poyon qizi**

Termiz State Pedagogical institute, PhD, docent,

**Bekmuratova Dilbar Xushmamatovna**

Termiz State Pedagogical institute, 1<sup>st</sup> year master's student

[dilbar.bekmuratova89@gmail.com](mailto:dilbar.bekmuratova89@gmail.com)

***Abstract:** Inclusive education is a widely discussed topic in the field of education, as it aims to meet the diverse needs of all learners. However, the terminology surrounding inclusive education often muddled, leading to confusion and hindered implementation efforts. This article reviews the various terms used in inclusive education, offering clarifications and exploring their implications for practice.*

***Key words:** inclusive education, mainstreaming, integration, special education, segregated education, differentiation.*

Inclusive education promotes the education and participation of all students, including those with disabilities; special educational needs, and from marginalized groups. Inclusion promotes quality and equitable education for all, without exclusion, including those who may potentially marginalized by learning need or social position. An increasing awareness about the rights of children with disability to have access to the same educational services as children without a disability has led to the idea of inclusive education<sup>1</sup>. Accordingly, the UNESCO (2005) stated that inclusive education is an approach that expresses how to change educational structures and other learning atmospheres to meet the needs of the variety of learners. Inclusion highlights

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<sup>1</sup> UNESCO. (2009). Policy guidelines on inclusion in education.

opportunities for an equal involvement of individuals with disabilities (physical, social and emotional) when possible into typical education, but leaves accessible the probability of individual selections and possibilities for special aid and accommodations for persons who need it and want it<sup>1</sup>. However, terminology associated with this approach often used interchangeably or inconsistently, which can impede effective understanding and implementation. This article aims to provide a comprehensive analysis of the terms commonly used in inclusive education.

A systematic literature review conducted to identify scientific articles, reports, and policy documents related to inclusive education terminology. Only sources published in the last 10 years were included to ensure relevance to current educational contexts. A total of 12 publications were selected for analysis.

The analysis identified twelve key terms commonly used in inclusive education: inclusive education, mainstreaming, integration, Special Educational Needs (SEN), Individualized Education Program (IEP), Universal Design for Learning (UDL), Assistive Technology, Co-teaching, Sensory Integration, special education, segregated education, and differentiation. The definitions, nuances, and implications associated with each term examined.

**Inclusive Education:** Inclusive education refers to the practice of educating all students together, regardless of their diverse needs or abilities. It involves creating a learning environment that accommodates individual differences and ensures equitable access to education for all.

**Mainstreaming:** Mainstreaming generally refers to the process of integrating students with disabilities or special needs into regular classroom settings. It emphasizes the need for accommodations and modifications to support these students' participation and progress.

**Integration:** Integration often overlaps with mainstreaming, emphasizing the assimilation of students with disabilities or special needs into regular classrooms.

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<sup>1</sup> Ontario Ministry of Education. (2013). The Ontario curriculum: Special education.

Unlike mainstreaming, integration may involve temporary removal from mainstream settings for specific teaching interventions or services.

**Special Educational Needs (SEN):** SEN refers to a range of learning difficulties or disabilities that require additional support and special education services. It includes conditions such as autism, dyslexia, and attention deficit hyperactivity disorder (ADHD), and intellectual disabilities.

**Individualized Education Program (IEP):** An IEP<sup>1</sup> is a personalized plan developed for students with special educational needs. It outlines specific goals, accommodations, and support services tailored to meet the student's unique learning requirements.

**Universal Design for Learning (UDL):** UDL<sup>2</sup> is an instructional framework that provides multiple means of representation, expression, and engagement in teaching and learning. It aims to address the individual learning needs of students by offering a variety of options in content, process, and assessment.

**Assistive Technology:** Assistive technology<sup>3</sup> encompasses tools, devices, and software that support students with disabilities in accessing and participating in educational activities. Examples include text-to-speech software, speech recognition software, and communication devices.

**Co-teaching:** Co-teaching<sup>4</sup> involves the collaboration between a general education teacher and a special education teacher in delivering instruction to students with and without disabilities. It promotes inclusive practices by ensuring that all students receive quality education in a mainstream classroom.

**Accessibility:** Accessibility in inclusive education refers to creating physical, sensory, and cognitive environments that can be navigated and used by all students, regardless of their disabilities. It involves making adjustments such as ramps, audio descriptions, or braille materials to ensure equal opportunities for learning.

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<sup>1</sup> Council for Exceptional Children. (2012). What is an IEP?

<sup>2</sup> CAST. (n.d.). Universal Design for Learning guidelines.

<sup>3</sup> Assistive Technology Industry Association. (n.d.). What is assistive technology?

<sup>4</sup> Friend, M., & Cook, L. (2013). Interactions: Collaboration skills for school professionals (7th ed.). Pearson.

**Sensory Integration:** Sensory integration<sup>1</sup> is the process of organizing and interpreting sensory information from the environment. In the context of inclusive education, it recognizes and addresses the sensory needs of students with disabilities to optimize their learning experiences.

**Special Education:** Special education refers to a specialized approach to education that caters to the needs of students with disabilities or special needs. These students may receive individualized support, adapted materials, or specialized instruction to meet their unique requirements.

**Segregated Education:** Segregated education refers to the separate provision of education for students with disabilities or special needs, often within specialized schools or units. This approach isolates rather than integrates students and has been widely criticized for perpetuating exclusion.

**Differentiation:** Differentiation refers to the adaptation of teaching methods, materials, and assessments to address the diverse learning needs and abilities of all students. It encompasses both individualized and flexible approaches to instruction within inclusive classrooms.

This article highlights the need for common understanding and consistent use of inclusive education terminology to foster effective practices. It provides clear definitions and distinctions to assist educators, policymakers, and researchers in navigating the complexities of implementing inclusive education. By promoting accurate and comprehensive terminology, this research contributes to the establishment of inclusive education as a fundamental aspect of contemporary educational systems.

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## COPING BEHAVIOR IN STUDENTS IN THE EDUCATION SYSTEM

**Askarova Gulrukh**

Lecturer at the Department of Practical Psychology

TSPU named after Nizami

**Azimova Umidabonu**

4<sup>th</sup>-year student of the Faculty of Pedagogy and Psychology

TSPU named after Nizami

***Abstract:** This article discusses a theoretical analysis of the concept of “coping”, and also analyzes research by various authors on coping behavior among students in the education system.*

***Key words:** Coping behavior, coping strategies, coping behavior, stress, student, students, modern education system.*

***Аннотация:** В этой статье рассматривается теоретический анализ к понятию «копинг», а также проанализированы исследования различных авторов копинг–поведение у студентов в системе образования.*

***Ключевые слова:** Копинг–поведение, копинг–стратегий совладающее–поведение, стресс, студент, студенчество, современная система образования.*

**Introduction.** A person is exposed to various stressful influences throughout his life, starting from early childhood, when any change can cause stress - new acquaintances, changes in living conditions, and so on. In the process of learning to adapt to new environments, a person observes his relatives, adults and others, developing his own methods of coping with stress. Determining the effectiveness of these methods helps him successfully adapt to the current circumstances.



Thus, it is important to develop adaptive coping mechanisms to cope with stress to ensure a more positive outlook in the future. The concept of “coping” comes from the English “to cope” - “to cope, to overcome.” The term “coping” was first used by L. Murphy in 1962 in a study of ways for children to overcome developmental crises. Subsequently, the study of coping mechanisms was closely related to studies of psychological stress [1].

The concept of “coping” refers to a set of psychological, behavioral and social efforts aimed at coping with difficulties caused by stressful situations. A significant feature is the active interaction of the individual with the environment in order to overcome difficulties.

“Coping” in Russian psychological literature is translated as “adaptive, coping behavior” or “psychological overcoming.” In 1966, Richard Lazarus, in his book *Psychological Stress and the Coping Process*, coined the term “coping” to describe conscious strategies for coping with stress and other anxiety-producing events. Lazarus and Folkman view coping as a dynamic interaction between a person and a situation, expressed in cognitive, behavioral and emotional actions aimed at overcoming external or internal contradictions. It involves a person’s efforts in coping with life’s challenges, which can be either successful or unsuccessful [1].

**Methodology.** V. Bityutskaya emphasizes that coping, unlike defense mechanisms, has plasticity and directionality, also takes into account the characteristics of a specific situation, includes processes of thinking and analyzing the situation, and is also characterized by high differentiation. While defense mechanisms are more rigid and automatic, coping involves a greater number of conscious reactions [2].

According to T.L. Kryukova - coping behavior differs from psychological defense in that it is a conscious strategy of action. It is aimed at eliminating the threat, overcoming interference and better adapting the person to the requirements of the situation. It is important to note that coping helps to transform the situation in accordance with the person’s intentions or, in cases where it is impossible to change circumstances, helps to withstand and endure them [3].

Stressful situations often arise both in everyday life and in the educational and pedagogical process. Therefore, it is important for future teachers and psychologists to master a variety of methods of coping with situations (coping behavior) and use effective strategies to overcome stress. It should be noted that in situations of stress, people resort to coping behavior. Thus, understanding the essence of stress and the ability to effectively use coping strategies is necessary not only for personal needs, but also for helping others overcome stress.

In her definitions of stress, Uzbekistan scientist E.Z. Usmanova refers to the definition of stress given in the transactional model as the most comprehensive:

Stress is an emotional state that always involves a relationship between the environment and the individual. During stress, contradictions arise between the demands of the situation and the resources (biological, psychological, social) of the individual. Stress strains a person's biopsychosocial resources [6].

**Results.** As an example, we present some studies devoted to the study of coping strategies in stressful situations among students. In the work of A.A. Kiseleva, V.V. Kozlov and T.A. Malykh, dedicated to the study of students at the Pedagogical Institute using the Methods of Coping Behavior by R. Lazarus and S. Folkman, differences were identified between future teachers and students of other specialties. According to the results, coping strategies of future teachers turned out to be more effective compared to students of other directions.

In some cases, when faced with a stressful situation, students attempt to solve the problem through the expression of negative emotions, hostility and conflict. Some students, experiencing emotional discomfort and not having a clear solution to the problem, prefer to deny the existence of difficulties, do not take specific actions, go into fantasy worlds, abuse food, drink alcohol, etc. in order to reduce emotional stress [4].

**Discussion.** In the studies of N.A. Sirota and V.M. Yaltonsky examines coping strategies of "problem-oriented" behavior among young people living in different social conditions. For young people from a relatively unfavorable environment, the

main motivation for making decisions is the desire to avoid failure. Research shows that youth preferentially develop a “social support seeking” strategy. Nevertheless, there are differences in the formation of this strategy among people brought up in different social conditions. Young people from a conditionally socially disadvantaged environment are characterized by more passive options for using these methods. They are limited only to accepting the help that the environment actively offers, and the willingness to accept it both from family and from friends and significant others [5].

**Conclusions.** Based on the studies described above, we can conclude that prospects are currently emerging for the development and implementation of programs to teach modern youth adaptive coping behaviors with difficult life situations in the process of receiving vocational education.

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## QUYOSHLI SUV ISITGICH KOLLEKTORLARINING ISSIQLIK ALMASHINUVI HISOBI

**Tillaboyeva Farangiz Shavkatjon qizi**

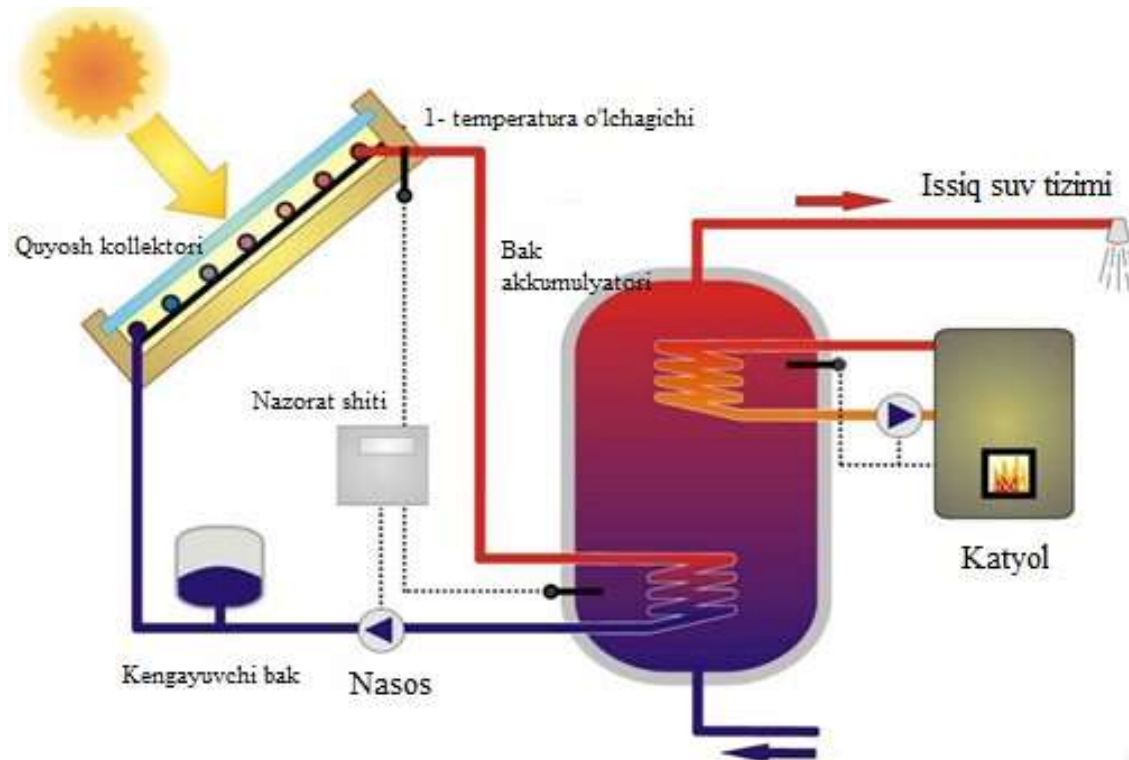
Fargʻona politexnika instituti assistenti

E-mail: [f.tillaboyeva@ferpi.uz](mailto:f.tillaboyeva@ferpi.uz)

***Annotatsiya:** Ushbu maqolada quyoshli suv issitgich kollektori haqida qisqacha maʼlumot, hamda birinchi bor qoʻllanilgani va quyoshli suv isitgich kollektorlarining issiqlik almashinuvi boʻyicha hisoblar keltirilgan.*

***Tayanch soʻzlar:** Quyoshli suv issitgich kollektori, dachik, bak akkumulyator, oʻtkazuvchanlik koeffitsienti, temperaturaviy harakteristikasi, temperatura, absorber, plastina, shaffof oyna, issiqlik almashinuvchi kontur.*

Quyosh kollektorining dastlabki modelini 18 – asrning oxirida Shvetsariyalik olim Goratsion Sossiyur yaratgan boʻlib, ichida isish xususiyatiga ega boʻlgan qatlami mavjud shisha va yogʻoch qutidan iborat qurilma edi. Bunday qurilmalar amaliyotga 19 – asrning oxirida Janubiy Kaliforniyada issiq suvni isitish uchun foydalanila boshlagan edi. Quyoshga qaragan tomoni yopiq shisha bilan qoplanib, yogʻoch qutiga oʻrnatilgan, qora boʻyoq bilan qoplangan suvli bak koʻrinishidagi sodda Quyosh kollektori ishlab chiqarila boshlandi. Bunday kollektorlarda kechqurun suv isimagan, uning qizishi uchun keyingi kunni kutish kerak edi. 1909 – yil Kaliforniyada Vilyam Beyli zamonaviy yassi kollektorni yaratdi. Bunda suv toʻldirilgan bak qurilmadan alohida holda boʻlib, unga borayotgan issiqlik(1-rasm), issiqlik almashinuvchi kontur orqali boʻlgan [2].



**1– rasm. Oddiy Quyosh kollektorining sxematik ko‘rinishi**

Yassi quyosh kollektori – uy-ro‘zg‘orda suvni istishda ishlatiladigan eng ko‘p tarqalgan quyosh kollektorlari hisoblanadi. Kollektorning oldi oyna bilan qoplanganligi sababli issiqlikdan izolyatsiyalangan panel hosil qiladi va uning ichiga nur yutgich plastinasi joylashtiriladi yani absorber. Yutgichning plastinasi mis yoki alyuminiy metalidan yasalgan va u issiqlikni yaxshi o‘tkazadi. Ayniqsa mis zanglashga chidamliligi, issiqlik o‘tkazganligi alyuminiyga nisbatan yuqoriligi sababli kengroq ishlatiladi. Yutgichning plastinasi yutilgan nurni uzoqroq muddatgacha tutib turishi uchun yuqori selektivli maxsus qoplama bilan qoplangan. Suyuqlik (yoki xavo) agregat xolati o‘zgarganda konvektiv issiqlik almashinuvi bir fazali va ikki fazali muxitda kechadi.

Suyuqlik va gazni xarakati turiga ko‘ra konvektiv issiqlik almashinuvi ikki turda bo‘ladi:

a) Suyuqlik yoki gaz majburiy xarakatlangandagi konvektiv issiqlik almashinuvi majburiy konvektiv issiqlik almashinuvi deb nomlanadi.

b) Suyuqlik yoki gaz erkin xaratlangandagi konvektiv issiqlik almashinuvi erkin konvektiv almashinuvi deb nomlanadi.

Tizim ichida suyuqlik xarakati majburiy bo'lsa, ushbu xarakat tizimdan tashqaridagi suyuqlikni kinetik energiyasi xisobiga yoki tizim chegarasida yuza kuchlari bajarayotgan ish xisobiga yoki tizim ichida tashqi massaviy kuchlarning bir jinsli maydon xisobiga amalga oshiriladi.

Qattiq jism ustidagi suyuqlik yuzaga nisbatan xarakatsiz bo'ladi. SHu sababdan issiqlik jism yuzasidagi issiqlik, oqimning zichligi jism va yuvib turuvchi suyuqlik orasidagi konvektiv issiqlik almashinuvlik bilan belgilanadi va Bio – Fure qonuni asosida aniqlanadi:

$$q_c = -\lambda \left( \frac{\partial t}{\partial n} \right) c \quad (1)$$

bunda,  $\lambda$  – suyuqlikning issiqlik o'tkazuvchanlik koeffitsienti;

$\left( \frac{\partial t}{\partial n} \right) c$  – jism yuzasidagi suyuqlikda harorat gradienti;

$n$  – tashqi normalni yuzaga bo'lgan yo'nalishi.

Konvektsiya xisobiga maxalliy issiqlikni berish koeffitsienti quyidagicha ko'rinishda aniqlanadi:

$$\alpha = \frac{q_k}{\Delta t}, \quad (2)$$

bunda,  $\Delta t$  – harorat bosimi, ya'ni jism yuzasining va yuvib turuvchi suyuqlikning haroratlari aro bo'lgan farq.

A qiymatini xisoblashda boshlang'ich harorat bosimi xisobga olinadi:

$$\Delta t = \Delta t_h = t_c - t_0 \quad (3)$$

yoki maxalliy harorat bosimidan foydalaniladi:

$$\Delta t = t_c - t \quad (4)$$

bunda,  $t_c$  – suyuqlik yuvib turadigan devor yuzasining harorati;

$t_0$  – yuvilayotgan jismdan uzoqda suyuqlikni bostirib keluvchi oqimning harorati (yoki suyuqlikni quvurning kirishidagi harorati);

$t$  – quvurning kesim yuzasining belgilangan nuqtasida suyuqlikning o'rtacha massaviy harorati.

O'rtacha massaviy harorati, o'rtacha massaviy entalpiyasidan aniqlanadi:

$$h = \frac{\int p w_x h df}{\int p w_x df} \quad (5)$$

bunda,  $h$ ,  $w_x$  va  $p$  - kesim yuzasi bo'yicha o'zgaruvchilar: entalpiya, tezlikni bo'ylama tashkil etuvchisi va zichlik.

Agar  $p$  va  $c_p$  kesim bo'yicha o'zgarmas bo'lsa quyidagi ifoda xaqli:

$$t = \frac{1}{V} Stw_x df \quad (6)$$

bunda,  $V$  – suyuqlikni xajmiy sarfi.

Yuzasi  $F$  bo'lgan quvur devori yoki jism yuzasi orqali issiqlik oqimi:

$$Q_c = \int_F q_c df = - \int_F \lambda \left( \frac{\partial t}{\partial n} \right)_c \cdot dF \quad (7)$$

Oxirgi tenglamani issiqlik almashinuv apparatlari quvurlarida issiqlik almashinuvini qulay xisoblash ko'rinishi quyidagicha:

$$Q_c = Sq_o dF = G(h_{j2} - h_{j1}) \quad (8)$$

bunda  $G$  – suyuqlik sarfi,  $h_{j1}$  va  $h_{j2}$  – quvur yoki issiqlik almashinuv apparatining kirish va chiqishdagi o'rta massaviy entalpiyasi.

Kenveksiya xisobiga yuzadagi o'rtacha issiqlikni berish koeffitsienti:

$$\alpha = \frac{q_c}{F \cdot \Delta t} \quad (9)$$

bunda,  $\bar{q}_c = \frac{Q_c}{F}$  - yuza bo'lib issiqlik oqimning o'rtacha zichligi yoki issiqlik yuklama.

O'rtacha issiqlikni berish koeffitsienti xissoblashda boshlang'ich harorat bosimi ( $\Delta t = \Delta t_H$ ) va o'rtacha arifmetik harorat bosimidan foydalaniladi:

$$\bar{\Delta t} = \overline{\Delta t_a} - \frac{1}{2}(t_{j1} + t_{j2}) \quad (10)$$

SHuningdek, o'rtacha logorifmik harorat bosimidan:

$$\bar{\Delta t} = \overline{\Delta t_\lambda} = \frac{t_{j2} - t_{j1}}{\ln \frac{t_c - t_{j1}}{t_c - t_{j2}}} \quad (11)$$

Yoki o'rtacha integral harorati bosimdan:

$$\bar{\Delta t} = \overline{\Delta t_u} = \frac{1}{l} \int_0^l (t_c - \bar{t}) dx \quad (12)$$

bunda,  $t_{j1}$  u  $t_{j2}$  ixtiyoriy issiqlik almashinuv tizimining kirish va chiqishdagi suyuqlikni o'rtacha massaviy harorati,  $l$  – quvur uzunligi yoki issiqlik almashinuv tizimining uzunligi.

Harorat bosimini aniqlanishi bo'yicha issiqlikni berish koeffitsienti quyidagilarga ajraladi:  $\bar{\alpha}_H \bar{\alpha}_a \bar{\alpha}_\lambda$  va  $\bar{\alpha}_u$  taoluqli ravishda quyidagilarga keltiriladi:  $\bar{\Delta}t$ ,  $\bar{\Delta}t_a$ ,  $\bar{\Delta}t_\lambda$ , va  $\bar{\Delta}t_u$

Ushbu koeffitsientlar quyidagi nisbatlar bilan bog'langan:

$$\alpha_H \cdot \Delta t_H = \bar{\alpha}_a \cdot \bar{\Delta}t_a = \bar{\alpha}_\lambda \cdot \bar{\Delta}t_\lambda = \bar{\alpha}_u \bar{\Delta}t_u = q_c \quad (13)$$

Konvektiv issiqlik almashinuv jarayoni differentsial tenglamalar tizimi bilan xususiy xosilalar ko'rinishida ifodalanadi.

Ushbu tenglamalar bir jinsli, siqilmaydigan qovshqoq o'zgarmas fizikaviy xususiyatlarga ega bo'lgan energiya tenglamasi:

$$\frac{dt}{dt} = \alpha \Delta^2 t + \frac{q_v}{s_{cp}} + \frac{\mu}{\mu_{cp}} \cdot S \quad (14)$$

Bunda,

$$S = 2 \left[ \left( \frac{\partial w_x}{\partial x} \right)^2 + \left( \frac{\partial w_x}{\partial y} \right)^2 + \left( \frac{\partial w_x}{\partial z} \right)^2 \right] + \left( \frac{\partial w_x}{\partial y} + \frac{\partial w_x}{\partial z} \right)^2 + \left( \frac{\partial w_x}{\partial z} + \frac{\partial w_x}{\partial x} \right)^2 + \left( \frac{\partial w_x}{\partial x} + \frac{\partial w_x}{\partial y} \right)^2 \quad (15)$$

Xarakat tenglamasi:

$$\frac{\partial \omega_x}{\partial x} = -\frac{1}{\rho} \frac{\partial p}{\partial x} + \nu \nabla^2 \omega_x; \quad (16)$$

$$\frac{\partial \omega_y}{\partial x} = -\frac{1}{\rho} \frac{\partial p}{\partial y} + \nu \nabla^2 \omega_y; \quad (17)$$

$$\frac{\partial \omega_z}{\partial x} = g\beta(t - t_0) - \frac{1}{\rho} \frac{\partial \rho}{\partial x} + \nu \nabla^2 \omega_z; \quad (18)$$

Uzluksizlik tenglamasi: (o'z o'qi vertikal yo'nalgan)

$$\frac{\partial \omega_z}{\partial x} + \frac{\partial \omega_y}{\partial y} + \frac{\partial \omega_z}{\partial z} = 0 \quad (19)$$



Yuqorida berilgan tenglamalarning chap qismidagi  $t$ ,  $w_x$ ,  $w_y$  va  $w_7$  larning to'la xosilalari quyidagi ko'rinishda bo'ladi:

$$\frac{d}{d\tau} = \frac{\partial}{\partial \tau} + w_x \frac{\partial}{\partial x} + w_y \frac{\partial}{\partial y} + w_7 \frac{\partial}{\partial \tau} \quad (20)$$

(14–17) tenglamalarda quyidagi belgilar:  $t$  – harorat;  $\tau$  – vaqt;  $w_x$ ,  $w_y$ ;  $w_7$  – to'g'ri burchakli kordinalatal tizimining o'qlarida tezlik vektorini proeksiyalari;  $\alpha$ ,  $\beta$  va  $c_p$  – ta'luqli ravishda issiqlik o'tkazuvchanlik koeffitsienti, zichlik va suyuqlikni issiqlik sig'imi;  $q_0$  – issiqlikni ichki manbalari quvvati;  $p$  – bosim (aniqrog'i oqimning belgilangan nuqtadagi xaqiqiy va gidrostatik bosimlari orasidagi farq);  $\mu S$  – dissipativ funksiyasi;  $\nu$  va  $\beta$  – suyuqlik uchun qovushqoqligini kinematik koeffitsienti;  $t_0$  – jismdan uzoqda bo'lgan suyuqlikni o'zgarmas harorati[4].

Konvektiv issiqlik almashinuvining aniq masalasini yechishda differensial tenglamalarga boshlang'ich va chegaraviy o'z ichiga olgan shartlar o'zgarmlarining qiymatlari ichki manbalar quvvati kiritiladi. Konvektiv issiqlik almashinuv jarayonini ifodalovchi tenglamani yechish harorat maydonini aniqlash imkonini beradi.

**Xulosa:** Quyosh kollektorlarini har doim bir xil modeldagi birliklardan iborat bo'lishi va iloji boricha teng ravishda taqsimlanishi kerak. Konvektiv issiqlik almashinuvining aniq masalasini yechishda differensial tenglamalarga boshlang'ich va chegaraviy o'zgarmlarining qiymatlari ichki manbalar quvvati kirish. Yutgichning plastinasi yutilgan nurni uzoqroq muddatgacha tutib turishi uchun yuqori selektivli maxsus qoplama bilan qoplanishi zarur.

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## THE MAIN FACTORS AND CRITERIA OF QUALITY EDUCATION

**Rakhimov Oktyabr Dustkabilovich**

Professor of Karshi Engineering Economic Institute,  
Karshi, Uzbekistan

**Ashurova Laylo**

Karshi Institute of Engineering and Economics  
"Labor protection and technical safety" department, assistant

***Abstract.** The article presents analytical materials on the criteria for assessing the quality education, their components, groups of quality indicators, the role of the qualified teacher in ensuring the quality of education and the criteria for its assessment, as well as the factors that determine the excellence of students.*

***Key words and phrases:** quality education, criteria, qualified teachers, excellence of students, infrastructure, innovation, demand for graduates.*

### INTRODUCTION

The quality of the educational process is provided by such factors as educational standards, educational programs, the scientific potential of professors and teachers involved in the educational process, the potential of learners, technical means of the educational process, educational technologies, and the quality level of the management of the educational process. World experience shows that the wide penetration of information and communication technologies and the Internet in the field of education opens a great way for the globalization of educational services. Taking into account such positive aspects in the field of education in developed countries, mass use of information and communication technologies to improve the quality of education is becoming a demand of the time.

## RESEARCH METHODS

*In the following article, the analysis of scientific and teaching-methodical literature, pedagogical observation, comparative analysis, generalization, pedagogical experiment-test and foresight methods were used.*

## RESEARCH OUTCOMES AND DISCUSSIONS

Education is an important sphere of public life. Education shapes the intellectual, cultural and spiritual state of society. The content of education and its directions are reflected in educational standards and programs. Considering the quality of education, the following elements must be taken into account:

- owner, disseminator of knowledge;
- knowledge transmitters;
- knowledge transfer technology;
- student;
- level of systematic knowledge;
- necessity and necessity of the acquired knowledge;
- the need and opportunity to obtain new knowledge.

When determining the quality of education, quality indicators can be divided into the following groups:

- quality of teaching staff;
- material and technical base of the educational institution;
- the basis of the teaching staff;
- quality of educational programs;
- quality of students;
- quality of infrastructure;
- quality of knowledge;
- innovative activities of management;
- implementation of innovative processes;
- demand for graduates;

- competitiveness of graduates in the labor market;
- achievements of graduates.

The main focus in the educational process is on the teacher. Therefore, organizing the appropriate education begins with the correct formation of the teaching staff.

**The question arises: *how to determine the qualified teacher?***

The teacher not only educates students, he also plays an important role in shaping the personality, worldview and spirituality of future personnel. Therefore, the quality of a teacher is a complex concept, which can mainly include the following:

- level of competence – have high knowledge and experience in a specific field of science and practice;
- ability and enthusiasm to engage in teaching activities;
- observation – quick study of the abilities and characteristics of students;
- ability to communicate with the external and internal environment;
- recognition, position in working field;
- activeness in the field of scientific research;
- existence of a scientific school.

In MOOC (Massive open online course), the teacher's responsibilities change somewhat. Since open education is based on distance learning, there is a certain distance between the teacher and the student. In this case, the teacher is required to coordinate the educational process, give advice, lead educational projects, improve the educational course, and work to improve their qualifications. The educational process in MOOC is based on high technologies, which widely use the achievements of information and telecommunications.

To assess the quality of a professor-teacher, the indicators recommended above are considered unmeasurable factors. In particular, the level of competence can be assessed by a teacher's basic education, academic degree and title, teaching experience and practical experience in a particular field. It should be said here that often when determining the competence of professors, great importance is attached to their specialization in the subjects taught, and this is where the basic information is taken

into account. In our opinion, when determining the competence of a higher school teacher, it is necessary to take into account not only basic information, but also his specialization by academic level and department (or subject) by academic title. Even if one of the three factors correspond to the subject taught by the teacher, his specialty should be considered relevant.

The material and technical base of a higher educational institution is determined by the cost and availability of fixed assets (buildings and structures, machines and devices, laboratories, workstation stock, etc.) necessary for organizing the educational process, conducting scientific research and development.

The scientific potential of professors and teachers of a particular higher education institution is taken into account when justifying the teaching staff. Academic potential is determined as a percentage by the ratio of the number of teachers with academic degrees and titles to the total number of teachers in the main staff. Also, their average age can be taken into account when evaluating teaching staff.

The quality of educational programs is assessed not only by their compliance with the requirements of the state educational standard, but also by the innovativeness of their content.

The quality of students is the most basic and important indicator that influences the final result. Because at the center of the educational process are the consumers of knowledge - students. It is for them that trainings are conducted, educational literature is written, and new educational technologies are developed. For this reason, it is necessary to pay attention to the quality of students when determining the quality education. Because as a result of the educational process, it is they who must provide the latest high-quality intellectual product (personnel).

The quality of students can be assessed by the following indicators:

level of professional knowledge in the field of study (level of knowledge according to AL or KHK);

- level of knowledge of information (computer) technologies;
- knowledge of foreign language;

- enthusiasm, interest in learning in a certain direction (specialty);
- intelligence (intelligence, perception and intellect);
- spirituality;
- talent;
- memory capacity;
- discipline;
- demand;
- opportunity to work;
- observability;
- planning your position.

The quality of infrastructure, that is, the quality of the structure of an educational institution: management structure (number and composition of the rector, vice-rectors, heads of departments, faculties and departments) and the number of administrative and departments. management staff, professors and assistants, optimal and effective management of the educational process, based on the fact that it is sufficient and economically acceptable.

The quality of knowledge is determined by its fundamentality, consistency and how necessary it is in production.

The innovative activity of management and the implementation of innovative processes in an educational institution are directly assessed by the management of the educational process in accordance with the requirements of the time and indicators of management quality.

Indicators of the quality education management are determined by the following principles:

- understand educational management considering scientific and technological development and international educational standards and achieve full compliance with its requirements;
- knowledge of consumer requirements and the ability to analyze strong competition in the labor market;

- regularly improve the educational process based on monitoring results.

When determining the quality of a leader's activity in the education management system, it is advisable to take into account the following characteristics:

- know consumer demand and take it into account when organizing the educational process;
- taking into account the conditions of the educational services market;
- taking into account labor market requirements;
- leadership of the leader ("leadership");
- able to form the composition of the teaching staff and workers;
- process approach to management;
- systematic approach to management;
- able to make informed management decisions;
- ability to use innovative processes in management;
- able to regularly develop the activities of an educational institution.

Factors such as the demand for graduates, their competitiveness and achievements in the labor market are directly related to each other and complement each other. Therefore, the conclusions of managers of manufacturing enterprises are also important in determining the level of knowledge and qualifications of a graduate. To assess the ranking of a university, it is advisable to create and monitor a database on the position of graduates in production.

## CONCLUSION

The quality education is determined, first of all, by the quality, level and qualifications of knowledge carriers and disseminators. Knowledge carriers are understood as professors and teachers of a certain higher educational institution and their scientific potential. They teach students using various teaching technologies and methods. For this reason, the modernity of knowledge transfer technology, students' level of proficiency with its help, and the thoroughness and validity of the knowledge gained also play an important role. After a graduate gets a job in production, he also needs to know how necessary the acquired knowledge is. This, in turn, requires the



need to develop the integration of education and production. Scientific and technological progress creates new tools and weapons. In order to introduce modern technologies and technical means into production, organize the production of competitive products suitable for the world market, the graduate is required to constantly study new innovative technologies and techniques in his production work, and there is a need to acquire new knowledge. As a result, in addition to transferring knowledge to the student, it is necessary to form and develop his ability to learn independently. Since most of the above indicators that determine the quality of education do not have quantitative characteristics, based on qualimetry it will be possible to determine the overall result about quality.

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## FORMATION OF TERMS USING IZOFA

**Mahkamova Durdona Nematovna,**

Senior Lecturer at Tashkent State University of

Uzbek Language and Literature,

[durdonamahkamova7@gmail.com](mailto:durdonamahkamova7@gmail.com)

### ABSTRACT

*The article discusses the formation of terms using isofet. Types of isofa and terminological examples from terminological systems of the Uzbek language are given. An analysis of this case will be introduced.*

**Keywords:** *terminology, Uzbek terminology, izofa, isophasic compound, terminological systems, adverbial suffix, medicine, physics, algebra.*

It is known that in Turkic languages, in particular, in Uzbek, words of the noun + noun type are combined by izofa [2,34]. Three types of izofa are distinguished: in the 1st type of izofa, both components are completely without grammatical form, that is, the relationship of such words is determined by word order and unifying intonation: *ochiq dengiz, ishchi dastur, intellektual mulk*, etc.

In the 2nd isophasic compound, the first component comes in the form of the main agreement, and the second component comes with a possessive suffix. For example: *seleksiya yutug'i, birja savdosi, birja bitimi, yer huquqi*, etc.

In type 3 izofa, the first component comes in the form of a nominative case, and the second component comes with a possessive suffix. It is in terms of this type that the grammatical indicator belonging to the first component can be used without a sign and a contraction phenomenon can occur.[1,86][7]

Type 1 determining compounds are a more convenient, compact and terminological form. According to the famous terminologist R. Doniyorov, this kind

of terms are clearly visible at first glance due to their terminological nature.[8] They acquire terminological meaning according to their content: because the first part of it can be adjectivized (adjectived), by which an adjectivized compound is formed in practice: *oyoq ulov, chiroq poya, gilbo 'ta g 'isht, shamol parrak, aravamix qolip*. This type of isophatic compounds is very ancient. When a certain concept cannot be expressed in words, the method of realizing it by means of a combination is very useful, especially in terminological systems. In particular, in the technical terminology of the Uzbek language, when it is not possible to make a relative quality from one or another word, the 1st type is characterized by the fact that it is convenient in every way.

The characteristic features of this type of izofa are presented in many scientific literature. A number of features such as its historicity, ease of compounding, full compatibility with language capabilities are listed and explained. The well-known linguist N.A. Baskakov also noted that the tendency to contraction in the morphological construction of Turkic languages is manifested in the presence of grammatical indicators (head agreement) called "zero form" in them. For us, the role of this formation in the formation of compact terms is important.[3, 28] In fact, this is the primary requirement of frugality. The term should be concise, short and, as far as possible, without additions and explanatory indicators. Only in this case, its formal aspect is exactly compatible with other lexical units.

Type 1 izofa is considered an ancient creation, so terms created by this method can be found in the terminology of fields with a long historical origin. For example, in medicine: *oshqozon, oyoqpanja, qontomir, qorinparda, qo 'lpanja, oziq tish, to 'qma parda, ichaktutqich*.

As mentioned, the possibility of the Uzbek language has its historical roots. However, the passage of time and the popularization of the term can also lead to the terms made by other methods in the form of type 1 izofa: *sharnirli mufta –sharnir mufta, po 'kakli qistirma-po 'kak qistirma, po 'latli lenta-po 'lat lenta* , etc.

Type 2 superlative combination is used in Turkic languages in cases where an object, thing, or event is related to a second object, thing, or event. In this type of izofa,

the first component is in indefinite agreement, and the second component takes a relative affix that means ownership (relationship). Such making has the form ot+ot+-i(-si), and the presence of indefinite agreement in the form 0 indicates that the terms specific to this construction are also the object of our research.

In the technique: *havo filtri, moy nasosi, elektr tarmog'i, elektr ta'minoti*

In medicine: *taqim muskuli, lunj mushagi, peshona suyagi, so'lak bezlari, me'da og'zi, umurtqa pog'onasi*

In physics: *yadro izomeriyasi, yadro fotoeffekti, yadro energiyasi*

In jurisprudence: *fuqarolik jamiyati, fuqarolik ishi, jinoyat ishi, mulk huquqi, kafolat vekseli, yosh senzi*

According to linguists, type 2 isopha is very common and has three times more variants than type 3 isopha. According to the classifications, this type of izofa is divided into 21 options from the point of view of ownership. Of these variants, variant 12 exactly matches the word-formation patterns, in which the izofa is used to denote the object-to-subject relation: Chinese (Chinese dictionary).[4]

Professor H. Dadaboev explains [5][7] the specific aspects of this type of izofa on the example of its usage in "Devonu lug'otit turk" work, turning into a type with one affix, i.e. the first component without a demonstrative (genitive) affix, and the second component with a relative affix, i.e. turning into a type with a sign of both components of the phrase or noting that the property of non-reversibility is considered, he notes that most of the one-affix isotypes can easily become two-affix possessive isotypes, while some relative isotype variants did not transfer to the A1+B1 (type 3) affix variant. [7]This situation is typical for today's terminology. The reason is that in the formation of terms, the terms of type 2 izofal are completely different from the terms of izofal of type 3, and in almost no place it is noticed that the second type of izofal has become the third type or that it is used in a parallel way. Even if the third type is artificially moved to isomorphism, the semantics of the term will change and may cause confusion in the meaning of the term.[6]

Comparison:

*Fuqarolik jamiyati(2-tip izofa) –fuqarolikning jamiyati(3-tip izofa), Fuqarolik ishi(2-tip izofa) –fuqarolikning ishi(3-tip izofa),Jinoyat ishi(2-tip izofa) –jinoyatning ishi(3-tip izofa)*

The 3rd type of idiom, which is considered "real idiom", expresses the relation of the referential subject, in which the first component of the term brings the adverbial suffix, and the second component brings the possessive suffix. However, in most cases, for the sake of brevity, the grammatical indicator of the first component is used without a sign.

In medicine: *til ildizi (tilning ildizi), yurak qorinchasi (yurakning qorinchasi), halqum devori (halqumning devori), til tasmasi (tilning tasmasi);*

In physics: *energiya saqlanishi (energiyaning saqlanishi), tovush tezligi (tovushning tezligi), havo bosimi (havoning bosimi), massa zichligi (massaning zichligi);*

In jurisprudence: *davlat hududi (davlatning hududi), xolislar sudi (xolislarning sudi), yuk yig‘imi(yukning yig‘imi), advokat siri(advokatning siri).*

As can be seen, the elements of morphological contraction are more clearly visible in the third type of isotype. This type of izofa is considered to be one of the most effective ways of forming terms in terminology, and it is considered to be both semantically clear and compact in terms of form. In the compactification of multi-component terms, in most cases, the use of this type of addition gives good results.

Morphological economy can also be found in terms based on the relative adjective + noun pattern. In this case, the adjective formative suffix is shortened and thus a new term is formed. There may also be a change in the base mold. That is, the base that remains after the formative is reduced may not belong to a quality, but to another category.[9]

It has been confirmed that the *-simon* affix, which is defined as a passive formative in some literature on linguistics, is quite active in terminological research. There are specific reasons for the popularity of this affix, of course. It is known that in

languages, including the Uzbek literary language, making compounds based on the principle of similarity is one of the important methods that have been developed since ancient times. In order to realize this, in addition to the words *kabi*, *singari*, *o'xshash*, in the form of *-day*, *-dek*, *-namo*, etc., were also used. *-simon* affix is one of them. The fact that a suffix takes the place of a lexeme and takes the semantics of a lexeme and participates in the formation of a word (*nay shaklidagi suyak-naysimon suyak*) first of all indicates that the suffix serves economy.[9] As a result of the development of the compound terms made with the suffix *-simon*, such terms become compound words, and the suffix *-simon* is shortened. As a result, the morphological economy is revealed: *xalqa muskul* (*xalqasimon muskul*), *shohtog'ay* (*shohsimon tog'ay*), *no'xat suyak* (*no'xatsimon suyak*), *ayri bez* (*ayrisimon bez*)

The suffix *-li* is one of the most active additions[10] in the formation of compound terms, and the words related to the noun group to which this affix is added in the compound terms have meanings such as "possession", "existence". Even in compound terms, whose determining component is originally formed with this affix, the affix is shortened in many places as a result of the expansion and popularization of the term's use since the time when the term appeared:

in medicine: *mushakli vena- mushak vena*, *sig'imli tomir –sig'im tomir*, *do'ngli bo'g'im- do'ng bo'g'im*, *chekakli toshma-chekak toshma*;

in algebra: *qiymatli ifoda –qiymat ifoda*, *natijali xulosa-natija xulosa*.

In conclusion, it can be noted that morphological formation is more common in terminology compared to other types of word formation. At the same time, it is prone to change. The form of the created word can change, develop, or shorten based on the modernization of time and industry. However, this does not mean that the way of making the term changes. It is only considered as a formal change.

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## INTERNAL AFFAIRS BODIES AS SUBJECTS OF TORT RELATIONS

**Kuldashev Nuriddin Abduganiyevich**

Professor (DSc) of the Academy of the  
Ministry of Internal Affairs of the Republic of Uzbekistan

***Annotation:** In this scientific article, the characteristics of internal affairs bodies as subjects of delict relations were studied, their participation in these relations as a state body and legal entity, as well as the issues of delict liability from the point of view of civil law were studied in a holistic (complex) way, and the legal documents regulating these relations were scientifically analyzed and their scientifically based conclusions, proposals and recommendations on improvement were developed.*

***Key words:** internal affairs bodies, subject, tort relation, state, legal entity.*

The opinions of civil scientists that the state should compensate not for any damage caused by the internal affairs bodies, but only for the damage caused as a result of illegal actions (inaction) defined by the law, were studied. The author says that it is impossible to define in advance in the laws the complete list of illegal actions that can be committed by state bodies or officials. Accordingly, it was justified that even if the above-mentioned list of illegal actions is not defined in advance by the law, the state will cover the damage caused, and the necessary condition for this is that there is a causal connection between the damage caused and the illegal action (inaction) and that the damage is a consequence of the exercise of the powers of the authorities.

The civil legal status of state bodies is not specified in the civil legislation of Uzbekistan. In court practice, the application of delict liability to internal affairs bodies with a complex structural structure in the system of state bodies causes some difficulties. For example, various problems in the recovery of property damage that arise in the activity of internal affairs bodies as a legal entity (when internal affairs



bodies do not fulfill contractual obligations, cause damage with vehicles or other excessive sources of risk ) there is a high probability that the damage will not be covered. In these situations, the researcher provides a legal justification for the fact that in order to compensate for the damage, the levy can be focused on the funds or property of the internal affairs bodies found in the economic activity.

In the research work, the delict responsibility of internal affairs bodies was analyzed based on its status as a state body (structure) and a legal entity, and its specific aspects were highlighted. also the participation of internal affairs bodies in delict relations in such a manner was studied, and its specific aspects were revealed. As a result, when they participate as a state body (structure), the damage caused to citizens or legal entities will be covered from the state budget in any case, if they participate as a legal entity, the responsibility cannot be assigned to the state, in such a case, the damage will be their property or money. it was justified that it should be covered from the account.

The delict liability of internal affairs bodies as a subject of public law arises due to the damage caused by them in connection with the implementation of power and management activities, while the delict liability as a subject of private law arises due to the damage caused by excessive risk sources that belong to them on the basis of the right of economic management and operational management. came to the conclusion that it will come out.

In addition, the delict liability of the internal affairs bodies as a subject of private law is studied on the grounds established in Article 989 of the Civil Code, in which the damage caused by the employees of the internal affairs bodies, even if they were caused during the service, should not be related to the powers of the authorities (for example, the internal affairs bodies damage caused by an employee to another person during work) and therefore, in such a situation , the internal affairs bodies as a legal entity are justified in delict responsibility.

According to the author, the emergence of delict relations with the participation of internal affairs bodies in the national civil law is related to their establishment as a

legal entity. Of course, internal affairs bodies did not function in their current legal status during the entire period of historical development, but they existed in one form or another at different stages of development. In the past, criminal relations with the participation of internal affairs bodies were not formed as an independent legal institution, but the rules for their regulation can be found in written legal sources. The initial norms expressing the participation of internal affairs bodies as a delinquent party in civil law obligations were narrowly defined in Article 481 of the Civil Code of Uzbekistan adopted on March 23, 1963.

Noting that the rules of the former Union did not respond to the civil legal principles of independent Uzbekistan based on the market economy, in particular, the introduction of the principle that "the state is not responsible for the obligations of a legal entity created by itself" into the civil legislation and its application to social life, the state (internal affairs) bodies in relation to obligations emphasizes the need for recognition as an independent entity. Accordingly, the Civil Code (mm. 15, 990, 991), implemented on March 1, 1997, for the first time indicates that the legal bases of delict liability of state (internal affairs) bodies are defined.

notes that today every country has made certain progress in the field of human rights and freedoms, and at the same time, it has also defined the legal basis for influencing these rights to one degree or another in its legislation. Accordingly, in order to maintain public order and ensure public safety, the internal affairs bodies are empowered to make binding decisions or apply legal measures. Of course, in these processes, unpleasant situations may occur, such as restrictions on the rights and interests of citizens and legal entities, or damage to them in one way or another.

Today, in order to reduce and prevent such negative consequences, all countries have established one or another procedure for complaining about the decisions, actions (inaction) of state bodies and officials, and for compensating the damage caused by such actions. But until now \_\_ \_\_ In this regard, no country has created a single, universally recognized legal mechanism. Nevertheless, some developed countries have made some progress in this area.

In other countries, for example, in Turkey, compensation for damage caused by the police is based on public and private legislation, that is, the responsibility of the employer for damage caused by his employee, but the tort law of England, unlike that of France and Germany, did not provide legal responsibility for damage caused by the decisions of the state authorities. but it can be observed that this damage is compensated voluntarily (*ex gratia*) and is not based on legal responsibility, but only on moral duty.

According to the legislation of the Republic of Uzbekistan, delict relations with the participation of internal affairs bodies, more precisely, their delict liability is defined on the basis of the Civil Code (mm. 15, 990, 991). However, the author says that this relationship is a mixed legal relationship regulated by the norms of public and private law, because the delict responsibility of the internal affairs bodies is also defined in the administrative, criminal, criminal-procedural legislation of the state. Of course, it is necessary to take into account that the regulation of one type of social relations by different areas of law causes various problems in the practice of law enforcement. Based on this, in the dissertation, the necessity of adopting the law of the Republic of Uzbekistan "On the procedure for payment of damages caused by the illegal actions of the bodies conducting pre-investigation, inquiry, preliminary investigation, prosecution bodies and courts" was justified and its draft was developed.

The norm of the Civil Code that "by the decision of the court, damages may be imposed on officials who are guilty of damages" (FK 15, 991 -mm.) was analyzed, and the opinions of legal scholars were studied in this regard. As a result, it was concluded that the state should always guarantee the correct and legal implementation of the powers given to its bodies and officials and undertake the obligation to compensate for the damage caused as a result. In this matter, the author justifies that the obligation to compensate the damage should always be carried out by the state, and in cases where the guilt of the official in causing the damage is proven by the court, it is necessary to introduce a mechanism that ensures the recovery of the paid damage in the recourse procedure.

In conclusion, as one of the practical suggestions, the right to recover damages of a citizen injured or damaged as a result of the illegal activity of investigative bodies, investigation, preliminary investigation, prosecutor's office and court before his death is transferred to his heirs after his death in Article 991 of the Civil Code . believes that its introduction will ensure the unification of the legislation in this field.

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## INTERKULTURALITÄT IM FREMDSPRACHENUNTERRICHT

**Abdunazarov Feruz Kuchkorovich**

Wissenschaftlicher Mitarbeiter (PhD) an der  
Usbekischen Staatlichen Weltsprachenuniversität

***Annotatsiya:** Madaniyatlararo kompetensiya - bu globallashuv va integratsiya maqsadlarining iqtisodiy va siyosiy kontekstlarida tez-tez ishlatiladigan zamonaviy atama. Bu ba'zan noaniq atama, shuningdek, ta'lim tadbirlarining zaruriy sharti va mahsulini tavsiflaydi, ammo kompetentsiyani rivojlantirish jarayoniga kam e'tibor qaratildi.*

***Kalit so'zlar:** madaniyat parametrlari, madaniyatlararo, madaniyatlararo madaniyat, muloqot imkoniyatlari xilma-xilligi, xorijiy madaniyat hodisalari, odamlar, kompetensiya, og'zaki va og'zaki bo'lmagan ifoda vositalari, jamiyat rivojlanishi.*

***Annatotion:** Intercultural competence is a fashionable term that is often used in economic and political contexts of globalization and integration goals. This sometimes-vague term also describes the prerequisite and product of educational measures, but little attention has been paid to the development process of competence.*

***Key words:** intercultural, intercultural culture, multitude of communication possibilities, phenomena of the foreign culture, people, competence, verbal and nonverbal means of expression, community development.*

***Аннатоция:** Межкультурная компетентность – это модный термин, который часто используется в экономическом и политическом контексте целей глобализации и интеграции. Этот иногда расплывчатый термин также описывает предпосылки и результаты образовательных мер, но процессу развития компетентности уделяется мало внимания.*

***Ключевые слова:** параметры культур, межкультурное, межкультурная культура, множество коммуникативных возможностей, явления чужой культуры, народ, компетенция, вербальные и невербальные средства выражения, развитие общности.*

Interkulturalität im Fremdsprachenunterricht akzeptiert man diese Parameter von Kulturen, dann ergibt sich daraus ein vielschichtiges und komplex vernetztes Anforderungsprofil für kulturelle Kompetenzen im Fremdsprachenunterricht. Demnach ist die Vermittlung dieser Kompetenzen eine höchst komplexe und konflikträchtige Aufgabe, die eine entsprechende Steuerungskompetenz (kritische Kompetenz) und besondere Verstehenskompetenzen (hermeneutische Kompetenzen) verlangt. Wenn Kultur ethnozentrisch ist, dann ist sie nämlich prinzipiell außen schwer zu verstehen. Es bedarf also verschiedener Mittel, diesen Ethnozentrismus aufzubrechen, um produktive Prozesse der Annäherung an ein Fremdverstehen zu initiieren. Diese Art von interkulturellem Verstehen ist das pädagogische und didaktische Ziel der interkulturellen Sprachdidaktik und ihrem Teilgebiet der inter- oder transkulturellen Landeskunde. Die /on ihnen entwickelten Methoden schließen die Behandlung von Fremdperspektiven, besonders den „fremden Blick auf das Eigene“ (Levi-Strauss), mit ein. Die interkulturelle oder transkulturelle Landeskunde versucht dabei, ein inter-/transkulturell und inter-/transdisziplinär erweitertes Verständnis von Kultur zu entwickeln und in den Sprachunterricht zu integrieren (siehe auch Althaus 1999; Mog & Althaus 1992; Roche 1994, 2001; Roche et al. 1996; Welsch 1995, 1996; Wormer 2004). In diesem erweiterten Verständnis werden insbesondere die Ausgangsbedingungen und Interessen der Lerner berücksichtigt, aber auch die Lerntraditionen und Methoden ihrer Kultur. Es ist also nicht nur auf die Zielkultur gerichtet, sondern vermittelt zwischen Ausgangs- und Zielkultur (hierzu auch Bredella 2002; Rosier 1988; Beers 2001; Goldman-Segall 1998; Kramersch & Andersen 1999; Roche & MacFadyen 2004 zu interkulturellen Aspekten der Nutzung von Medien in der Lehre). Autoren wie Behal-Thompson et al. (1994), Byram & Fleming (1998), Byram & Morgan (1994), Ehlers (1989), Hog et al. (1984 ff.), Hunfeld et al. (2001) Müller-Jacquier (1981, 1990, 1992), Kramersch (2004), Nolden & Kramersch (1996), Roche (2001), Roche & Webber (1995) und Seelye (1985) sind Vertreter einer kontrastiven, expliziten und Sprache integrierenden Behandlung kulturellen Kontaktes als Bedingung für die Vermittlung interkultureller Kompetenz im

Fremdsprachenunterricht. Das Verfahren ist kontrastiv, weil es gezielt kulturelle Erscheinungen in Kontakt bringt. Es ist explizit, weil es dabei auch kontroverse und potenziell konfliktive Themen und Stereotypisierungen bewusst macht und behandelt. Es integriert Sprache, weil Sprache ein konstitutiver Bestandteil von Kulturen ist und nicht auf strukturelle Elemente reduziert werden kann. Das Verfahren ist darüber hinaus reflexiv und reziprok, weil es nicht unidirektional auf den Erwerb der fremden Sprache und einer Zielkultur gerichtet ist, sondern diese gleichzeitig als Katalysator für das bessere Verstehen des eigenen Be- 425 Zugs Systems und der eigenen Sprache verwendet. Somit handelt es sich um ein hermeneutisches, das heißt prozessorientiertes Verfahren, das im Sinne von Gadamer zu einer Horizontverschmelzung führt. Der Begriff transkulturell reflektiert diese Prozessorientierung besser als interkulturell, ist aber bisher noch zu wenig verbreitet. Der Sensibilisierungsprozess für das Fremd- und Eigenverstehen durchläuft auf dem Weg zur interkulturellen Kompetenz eine Reihe von Entwicklungsphasen, die vom Ethnozentrismus - das heißt der Verleugnung, Abschwächung oder Abwehr von kulturellen Differenzen - über entsprechendes Bewusstwerden und Verstehen, Akzeptanz, Respekt, positive Bewertung und selektive Übernahme zur Anpassung, Assimilation und schließlich zur Integration unterschiedlicher Verhaltensweisen in Form von Bi- oder Multikulturalismus führen (Bennet 1993: 23). Auf der Grundlage von Bennets Modell können diese Phasen folgendermaßen definiert und dargestellt werden:

- Die Verleugnung kultureller Differenzen bedeutet die Unfähigkeit, kulturelle Differenzen nachzuvollziehen. Sie drückt sich durch gutmütiges Stereotypisieren und oberflächliche Toleranzbekundungen aus. Krassen Außenseitern wird dabei unter Umständen aber auch die „Menschlichkeit“ abgesprochen. Der Widerstand gegen kulturelle Unterschiede kann als Anerkennung kultureller Unterschiede verstanden werden, die allerdings mit negativen Bewertungen all dessen gekoppelt ist, was als abweichend empfunden wird: Je größer die Unterschiede, desto schlechter die Bewertung. Repräsentativ für diese Phase oder Auffassung ist das dualistische Wir/Die-Denken, das häufig von negativen Stereotypisierungen geprägt ist. Aus



evolutionärer Sicht betrachtet, gilt die eigene Kultur als die am weitesten entwickelte. Ausgedrückt wird diese Einstellung zum Beispiel in Äußerungen wie „aber wir haben zuerst .../aber bei uns...“

- Die Abschwächung von Differenzen umfasst die Anerkennung und das Akzeptieren oberflächlicher kultureller (folkloristischer) Unterschiede bei gleichzeitiger Betonung der Gleichheit aller Menschen. Das Schwergewicht wird auf die Ähnlichkeiten der Menschen und die Gemeinsamkeiten der Grundwerte gelegt. Allerdings wird die Grundlage der Gemeinsamkeiten weitgehend in ethnozentrischen Begriffen definiert.

- Die Akzeptanz kultureller Differenzen umfasst die Anerkennung und das Schätzen von divergierenden Verhaltensweisen und Werten. Unterschiede werden im Sinne kultureller Relativität als mögliche Lösungen in der Organisation der menschlichen Existenz angesehen. Differenzkategorien werden bewusst weiterentwickelt und bei der Interpretation von kulturellen Phänomenen angewendet.

- In der Anpassungsphase werden kommunikative Fertigkeiten für interkulturelle Kommunikation entwickelt. Einfühlungsvermögen und das Wechseln des Bezugsrahmens werden als effektive Strategien des Verstehens und Verstandenwerdens über kulturelle Grenzen hinweg eingesetzt.

- Die Integration kultureller Differenzen in Bennets Modell betrifft die Internalisierung bikultureller oder multikultureller Bezugsrahmen. Die Definition der eigenen Identität hängt nur lose mit einer bestimmten Kultur zusammen. Vielmehr ergibt sich eine 3. Perspektive, in der das Individuum sich als im Prozess befindlich versteht (Chase & de Silva 1995).

Die interkulturelle Kompetenz ist (zumindest in Teilbereichen) ausgeprägt. Durch verschiedene empirische Verfahren lässt sich dieser Entwicklungsprozess messen, auch wenn es bisher keine allgemein akzeptierten Testmethoden gibt. Fallstudien, Einstellungsmessungen und Rollenspiele können besonders dann sinnvoll eingesetzt werden, wenn sie in der Lage sind, (graduelle) Verhaltensänderungen festzuhalten.

Da Sprache und Kultur in einem sich gegenseitig bedingenden Verhältnis stehen, können auch bestimmte sprachliche Diagnoseverfahren zur Bestimmung interkultureller Kompetenz dienen. Ausgeglichene oder additive Mehrsprachigkeit als am weitesten entwickelte Form des Spracherwerbs ist ohne die nötigen interkulturellen Kompetenzen nicht denkbar. Umgekehrt ist auch interkulturelle Kompetenz ohne ein profundes Verständnis der fremden und eigenen Sprachen kaum möglich. Diese Erkenntnis drückt sich in der Schwellenhypothese der Mehrsprachigkeitsforschung aus. Sie besagt, dass für das Erreichen von fortgeschrittener und ausgeglichener Mehrsprachigkeit bestimmte Schwellen erreicht und überschritten werden müssen. Die Interdependenzhypothese geht sogar noch einen Schritt weiter. Sie besagt, dass mit zunehmendem Grad der Sprachbeherrschung die in einer der Sprachen erworbenen Kenntnisse übertragbar sind und darüber hinaus zunehmend positive Effekte auf die allgemeinen kognitiven Fertigkeiten haben. Dieses Konzept von Mehrsprachigkeit entspricht dem hermeneutischen Konzept vom Dritten Ort, der erweiterte 426 Perspektiven über die Summe der Einzelperspektiven hinaus ermöglicht. Wenn man von dieser engen Beziehung zwischen Sprache und Kultur ausgeht, dann ergibt sich daraus, dass sich kulturelle Aspekte besonders in den lexikalischen, semantischen, pragmatischen, aber auch syntaktischen und morphologischen Bereichen der Sprache ausdrücken. In der realen Kommunikation interagieren diese Bereiche jedoch, und zwar in sprach spezifisch unterschiedlichen Gewichtungen. Das führt unter anderem zur Ausprägung von Tabubereichen in der Kommunikation und von bestimmten Textsorten und Diskursmustern (vgl. auch Esser 1997). So kommt es, dass in interkultureller Kommunikation - auch trotz internationaler Standardisierungen und Normierungen - Kontextbezüge, Konnotationen und Ritualisierungen das gegenseitige Verstehen erschweren oder unmöglich machen. Das ist für einzelne Kulturen dokumentiert: in sprachspezifischen und kontrastiven linguistischen Studien, teilweise auch im Bereich der Anthropologie, der Ethnologie und der vergleichenden Kulturforschung (zum Beispiel Senft 1997), im Bereich der interkulturellen Kommunikation (Bausinger 1988; Herringer 2004; Roche 2001; Szalay & Fisher 1987;

Wygotski 1964) und - oft stereotypisierend und trivialisierend - im Bereich des interkulturellen Trainings (Hofstede 1991; Storti 1990; Thomas 2003 und kritisch Hansen 2003). Wie weitgehend selbst elementare Begriffe und Strukturen sich auswirken, veranschaulicht das folgende Beispiel. So lässt sich der grammatisch einfache Slogan der nordamerikanischen Volkswagen Werbung *You are following the leader* - als Aufkleber am Heck von VWs angebracht - zwar strukturell einfach ins Deutsche übersetzen (etwa als „Sie folgen dem Führer/Führenden“), aber nur schwer lexikalisch und pragmatisch angemessen in deutschsprachige Marketingkontexte integrieren, nicht nur wegen der Gründungsgeschichte der Firma. Zu einer funktional angemessenen, das heißt interkulturell adäquaten Übertragung von Sprache gehören zudem auch phonetische, intonatorische und außersprachliche Parameter der Gestik, Mimik und Proxemik. Eine Verletzung entsprechender Konventionen bei der Kommunikation in der Fremdsprache, zum Beispiel durch Übertragung von Intonationsmustern aus der Ausgangssprache der Lerner, abweichende Aussprache, zeitliche Verzögerungen (Pausen) beim Sprecherwechsel, irritierende Gesten und Mimik oder ungewöhnliche Konstellationen der Sprecher zueinander, kann leicht zu Fehl Interpretationen der Sprechintentionen des Gegenübers führen, die die Kommunikation in Gefahr bringen können (hierzu auch Basso 1990; Roche 2001; Sakamoto & Natsuki 1982; Scollon & Wong-Scollon 1990; Steiner 1993).

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## СОВЛАДАЮЩЕЕ ПОВЕДЕНИЕ СТУДЕНТОВ: ОПТИМИЗАЦИЯ СТРАТЕГИЙ ДЛЯ УСПЕШНОГО ОБУЧЕНИЯ

**Аскарова Гулрух**

преподаватель кафедры «Практическая психология»  
ТГПУ им. Низами

**Жураева Мафтуна**

Студентка 4-го курса  
факультета «Педагогика и психология» ТГПУ им. Низами

***Аннотация:** Статья представляет собой обзор и анализ совладающего поведения студентов в контексте образовательной среды. Освещаются различные стратегии копинга, их влияние на обучение и академическую успеваемость.*

***Ключевые слова:** Совладающее поведение студентов, образовательный процесс, влияние совладающего поведения на академическую успеваемость, проблемное совладание.*

***Abstract:** The article is a review and analysis of students' coping behavior in the context of the educational environment. Various coping strategies and their impact on learning and academic performance are covered.*

***Key words:** Coping behavior of students, educational process, influence of coping behavior on academic performance, problem coping.*

Современная учебная среда ставит перед студентами множество вызовов, требуя от них эффективного справления со стрессом и напряжением. В этой статье мы рассмотрим, как различные стратегии совладающего поведения влияют на обучение и успеваемость студентов.

Совладающее поведение, или копинг-поведение, представляет собой множество психологических и поведенческих стратегий, направленных на справление с трудностями, стрессом или негативными эмоциями. Это активный процесс адаптации к сложным ситуациям или вызовам, который включает в себя усилия по пониманию, принятию и преодолению стрессоров [1].

Основные черты совладающего поведения включают в себя:

1. Оценка ситуации: Люди оценивают стрессоры или трудности, с которыми они сталкиваются. Это включает в себя понимание значимости событий для личности.

2. Выбор стратегии: На основе оценки ситуации, человек выбирает конкретные стратегии справления. Эти стратегии могут быть активными (например, поиск поддержки, постановка целей) или пассивными (например, избегание, самоутешение) [3].

3. Внутренняя адаптация: Это внутренний процесс, который включает в себя изменение своего эмоционального, когнитивного и поведенческого состояния для более эффективного справления с трудностями [2].

4. Приспособление к изменениям: Совладающее поведение направлено на приспособление к переменам и стрессорам, а не на их полное устранение.

Совладающее поведение является важной частью психологии и помогает людям эффективно справляться с стрессом в повседневной жизни [4].

Совладающее поведение представляет собой существенный аспект психологии студентов, влияющий на их обучение и успеваемость. Этот процесс охватывает множество стратегий, которые студенты используют для справления с разнообразными вызовами учебы, стрессом и повседневными трудностями. Исследования в этой области выявляют различные аспекты взаимосвязи между совладающим поведением и образовательным процессом [2].

Студенты, освоившие эффективные стратегии совладающего поведения, часто обладают более стабильным эмоциональным состоянием. Это может положительно сказаться на их способности сосредотачиваться, поглощать информацию и успешно решать учебные задачи.

Использование эффективных стратегий копинга, таких как планирование и постановка целей, может значительно улучшить организацию учебного процесса. Студенты, умеющие эффективно справляться со стрессом, могут более осознанно подходить к учебе, что содействует успешному усвоению материала [2].

Социальная поддержка играет важную роль в совладающем поведении студентов. Те, кто имеет поддерживающее окружение, обычно более успешно справляются с учебными трудностями. Поддержка друзей, семьи и образовательных сообществ может способствовать позитивной образовательной динамике.

Студенты, использующие стратегию позитивного переосмысления, могут видеть вызовы в учебе как возможности для роста и развития. Это влияет на их мотивацию к учебе и способность преодолевать трудности [3].

Стресс может оказывать негативное воздействие на когнитивные функции, включая способность к концентрации и запоминанию информации. Эффективные стратегии совладания могут смягчить этот негативный эффект и поддерживать когнитивные функции студентов [1].

В целом, совладающее поведение студентов играет ключевую роль в формировании их образовательного опыта. Понимание этого влияния может помочь создать более поддерживающую образовательную среду, способствующую не только успешному обучению, но и развитию студентов в целом. Дальнейшие исследования в этой области необходимы для более глубокого понимания механизмов взаимосвязи между совладающим поведением и академическим успехом.

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## ANALYSIS OF INVESTMENT PROJECT MANAGEMENT METHODS AND STAGES OF ITS PRACTICAL APPLICATION

**Djurayev Xolmurod Akramovich**

Student of Project Management master's degree at the  
Graduate School of Business and Entrepreneurship

**Abstract:** *The development performance literature has traditionally focused on post-project analysis. Although this is a valid way to measure benefits, a good evaluation requires a preliminary step: measuring the effectiveness of the implementation of investment projects. This paper aims to identify the factors of good performance. Unlike previous studies, the current study analyzes performance using a project life cycle approach. The main condition is that the duration of the investment project, that is, the days from its approval to the final payment - factors related to preparation and implementation are taken into account. There is evidence that a healthy macroeconomic and fiscal environment in countries is important for good performance. In addition, the authors find that delays in project planning and implementation can significantly prolong project life. These findings highlight the need to continue to improve performance in these areas.*

**Key words:** *project plan, risk management, resources, budget, data analytics.*

### **Introduction**

Any enterprise or company should develop a competent investment program. But managing investment projects is a complex and multifaceted process. Investment project management refers to the process of planning, implementing and controlling a specific investment initiative or project to achieve financial goals and objectives. This type of project management is particularly focused on projects that involve the allocation of resources to generate revenue or profit over a period of time. These projects can vary widely, including areas such as real estate development, infrastructure projects, technology investments, and more. Key aspects of investment project management include:



1. **Project Planning:** This involves determining the scope, goals and objectives of the investment project. It includes an assessment of the financial stability, risks and potential returns associated with the investment.

2. **Allocation of resources:** Effective allocation of financial, human and other resources is very important in the management of investment projects. This includes budgeting, determining staffing needs and ensuring optimal use of resources to achieve project objectives.

3. **Risk Management:** Identifying, assessing and managing risks is an important aspect of investment projects. This involves analyzing the obstacles that may affect the success of the project and developing strategies to reduce or manage these risks.

4. **Financial analysis:** It is essential to conduct a thorough financial analysis to determine the feasibility of the project and the potential return on investment (ROI). This includes cost estimates, revenue projections, and other financial metrics.

5. **Implementation and Monitoring:** Once a project is implemented, project managers must monitor its implementation to ensure that it is on schedule and within budget. Continuous monitoring allows for corrections if necessary.

6. **Stakeholder Communication:** Effective communication with stakeholders, including investors, regulators and other relevant parties, is critical to project success. This includes providing updates, resolving issues, and maintaining transparency.

7. **Compliance:** Compliance with legal and regulatory requirements is important in managing an investment project.

This includes obtaining necessary permits, complying with environmental regulations and meeting other legal standards. Effective management of investment projects requires a combination of financial acumen, strategic thinking, and project management skills. This is essential to maximize return on investment and minimize risks associated with complex projects.

## **Methods**

All businesses require money to invest in equipment and people to start a business, support customers or clients, run a business, and grow a business. The success of this business requires investment. Many companies only look at the hard business assets they have invested in. One of the most overlooked investments is project management processes. As a business practice, project management is an investment. We need staff who have the skills to be project managers and provide training to these people. It takes time to develop a methodology, policies, procedures and templates that

work within the company culture. It also takes time to ensure that the relevant personnel in the company are on board with the concept that project management is a way to improve overall performance. Project management involves overseeing and managing a project from start to finish. Successful project management requires attention to various key elements. Some important aspects to consider in project management are:

**Project objectives and scope:** Clearly define the objectives and scope of the project. Ensure that all stakeholders have a common understanding of what the project is trying to achieve.

**Stakeholder Engagement:** Identify and engage with all stakeholders. Regular communication is critical to managing expectations, gathering feedback, and addressing concerns.

**Project Planning:** Develop a comprehensive project plan that includes timelines, milestones, tasks, and resource allocation. This plan serves as a road map for the project team.

**Risk Management:** Identify potential risks and develop strategies to reduce or manage them. Regularly evaluate and update the risk management plan throughout the life of the project.

**Resource Management:** Effectively allocate resources, including personnel, budget, and materials. Ensure resources are available when needed to avoid delays.

**Communication:** Establish clear and effective communication channels. Regularly update stakeholders on project progress, changes and issues. Develop open communication in the project team.

**Quality Management:** Establish quality standards and ensure that products meet those standards. Implement quality assurance and quality control processes throughout the project.

**Change Management:** Anticipate and plan for change. Have a structured change management process to evaluate, approve and implement changes while minimizing disruption.

**Monitoring and control:** Regularly monitor project performance according to plan. Use key performance indicators (KPIs) to assess progress and identify areas where adjustments may be required.

**Team Dynamics:** Create a positive team environment. Encourage collaboration, resolve conflicts promptly, and recognize and reward team members for their contributions.

**Customer/Customer Satisfaction:** Check in regularly with clients or customers to make sure their needs and expectations are being met. Ask for feedback and make adjustments as needed to improve satisfaction.

**Documentation:**

Maintain complete documentation throughout the project. This includes project plans, meeting minutes, decisions and any changes made. Proper documentation facilitates accountability and learning for future projects. Flexibility: Be adaptable to changes in the project environment. Projects often face unexpected challenges, and the ability to adjust plans accordingly is critical to success. By focusing on these aspects, project managers can improve their ability to deliver successful projects on time and on budget while meeting or exceeding stakeholder expectations. Effective project management is a dynamic process that requires constant monitoring, adaptation and improvement.

### **Discussion**

Investment project management involves the use of various methods and approaches to ensure the successful planning, implementation and completion of projects aimed at generating returns on investments. Some of the commonly used methods for managing investment projects are: Payback Period: The payback period is the time required to generate sufficient cash flows to cover the initial cost of the investment. Shorter repayment periods are often preferred because they indicate faster returns. Cost-Benefit Analysis (CBA): CBA compares a project's costs with its benefits, usually expressed in monetary terms. This helps to assess whether the benefits outweigh the costs. Risk Management: Various risk management techniques such as risk identification, assessment and mitigation planning are crucial in managing an investment project. This includes analyzing potential risks and implementing strategies to minimize their impact. Scenario analysis: This involves evaluating how different scenarios or changes in variables (such as market conditions, costs, or demand) might affect the project. It helps in planning for uncertainties and making informed decisions. Agile project management: Agile methodologies, often associated with software development, are increasingly used in investment projects. Agile emphasizes iterative development, flexibility, and responsiveness to changing requirements. Earned Value Management (EVM): EVM integrates cost, schedule, and scope to evaluate project performance. Compares the planned cost of work to the actual cost of work performed to measure project progress and identify variances. Stage-Gate Process: The Stage-

Gate model involves dividing a project into stages, each stage ending with a gate at which a decision is made whether to continue, modify, or stop the project based on its performance and alignment with goals. will be done. Quality Management Systems: Implementing quality management systems ensures that project deliverables meet predetermined quality standards. It includes quality planning, assurance and control processes. Project Portfolio Management (PPM): PPM involves managing a portfolio of projects together to achieve strategic goals. This helps in prioritizing and optimizing the allocation of resources across multiple projects. Lean Project Management: Lean principles focus on eliminating waste, optimizing efficiency, and continuously improving processes. Applying lean concepts to project management can increase value delivery and reduce unnecessary costs. Procurement Management: Effective management of the procurement process is essential for projects that involve the purchase of goods or services. This includes supplier selection, contract negotiations and ongoing vendor management. The choice of methods depends on the nature of the investment project, best practices of the industry, specific objectives and constraints of the project. Combining several methods and approaches often provides a more comprehensive and effective strategy for managing investment projects.

### **Results**

In order to attract more investments to the management of investment projects, it is necessary to create a favorable environment for the implementation of such initiatives. Here are some key steps that can be taken to encourage and channel more investment in investment project management: A clear regulatory framework: A clear and transparent regulatory framework that provides a stable and predictable environment for investors. creating a transparent legal framework. Clarity of rules helps reduce uncertainty and encourages investment. Incentive programs: Implementation of incentive programs to attract investors. This may include tax credits, grants, subsidies or other financial incentives that make investment in project management more attractive. Infrastructure development: Invest in infrastructure development, including technology and communication networks. A well-developed

infrastructure can facilitate project management activities and attract investors looking for efficient operations. Education and skills development: Invest in education and training programs that produce a workforce with project management expertise. A skilled workforce is essential for the successful management of complex investment projects. Public-Private Partnerships (PPPs): Encourage and promote public-private partnerships in which the government partners with private organizations to develop projects. PPPs can bring private investment and expertise to public projects. Risk Reduction Strategies: Develop and communicate effective risk reduction strategies. Investors are more likely to participate if measures are in place to manage and mitigate the potential risks associated with investment projects. Showcase successful projects: Highlight successful investment projects that have been effectively managed. Case studies and success stories can inspire confidence in potential investors and demonstrate potential for positive returns. Technology Adoption: Encouraging adoption and adoption of modern project management technologies. This includes project management software, data analytics, and other tools that improve efficiency and effectiveness in managing investment projects. Networking and Collaboration: Create a collaborative environment by encouraging networking opportunities for investors, project managers and other stakeholders. Partnerships can lead to shared insights, expertise and potential joint investment ventures. Market research and demand analysis: Thorough market research and demand analysis to identify potential areas for investment. Understanding market trends and demands helps direct investments to projects with the highest potential for success. Sustainable practices: Consider incorporating sustainable practices into project management. Investors are increasingly interested in projects that meet environmental and social responsibility goals. By addressing these factors, governments, organizations and stakeholders can create an environment that attracts and directs more investment into investment project management. This requires a holistic and collaborative approach involving the public and private sectors.

## Conculation

Several factors can significantly influence the management and attraction of investment projects. These factors can be diverse and multifaceted, impacting the decision-making process of investors and the overall success of investment initiatives. Here are some key factors:

**Political Stability:** Political stability is crucial for attracting and retaining investments. Investors prefer environments with stable political conditions, as political instability can lead to uncertainties and increased risks.

**Infrastructure:** The availability and quality of infrastructure, including transportation, energy, and communication networks, play a vital role in attracting investments. Well-developed infrastructure facilitates efficient project management.

**Labor Force and Skills:** Access to a skilled and educated workforce is critical. Investors are attracted to regions with a labor force that possesses the necessary skills for project management and innovation.

**Cost of Doing Business:** The cost of doing business, including factors like taxation, labor costs, and overhead expenses, influences investment decisions. Lower costs may attract investors looking for cost-effective project management.

**Technology and Innovation:** Access to technology and a culture of innovation are increasingly important. Investors often seek opportunities in regions that encourage technological advancements and innovation in project management.

**Natural Resources:** The availability of natural resources can attract investments in industries related to extraction, processing, and utilization of these resources.

**Security and Safety:** A safe and secure environment is crucial for both the investment itself and the well-being of the workforce. Political stability, law enforcement, and overall safety contribute to a favorable investment climate.

**Market Access and Trade Agreements:** Access to international markets and favorable trade agreements can attract investments. Being part of larger economic blocs or having preferential trade agreements can enhance the appeal of a region.

Proactive government measures, such as tax breaks, grants, and supportive agencies, can attract investors. Understanding and addressing these factors can contribute to the effective management and attraction of investment projects, creating an environment conducive to successful and sustainable investments.

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