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# EFFECT OF PRALIDOXIME ADMINISTRATION DURING CARDIOPULMONARY RESUSCITATION ON BRAIN TISSUE OXYGEN TENSION AFTER RESTORATION OF SPONTANEOUS CIRCULATION IN A SWINE MODEL OF CARDIAC ARREST

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## **ABSTRACT**

**Purpose:** Previous studies suggested that epinephrine reduced brain tissue  $O_2$  tension ( $PbtO_2$ ) after restoration of spontaneous circulation (ROSC) via  $\alpha_1$ -adrenoceptor stimulation. Another previous study reported that pralidoxime had  $\alpha_1$ -adrenoceptor inhibitory action together with non-adrenergic vasopressor action. We sought to investigate the effects of pralidoxime administered during cardiopulmonary resuscitation (CPR) as a sole vasopressor on  $PbtO_2$  after ROSC. We hypothesized that pralidoxime administration would lead to a comparable ROSC rate and higher  $PbtO_2$  after ROSC when compared to epinephrine administration.

**Methods:** After 7 min of ventricular fibrillation, 24 pigs randomly received either pralidoxime or epinephrine during cardiopulmonary resuscitation (CPR). Cerebral measurements, including  $PbtO_2$ , were measured from the parietal cortices during the 60min post-ROSC period.

**Results:** Coronary perfusion pressure (CPP) during CPR was significantly higher in the epinephrine group than in the pralidoxime group ( $P = 0.012$ ). All animals in the epinephrine group achieved ROSC, while 7 (58.3%) did in the pralidoxime group ( $P = 0.037$ ). The areas under the curves for  $PbtO_2$  during the post-ROSC period did not differ between the two groups.

**Conclusions:** *Pralidoxime alone was significantly inferior to epinephrine in increasing CPP and achieving ROSC. In addition, pralidoxime administration did not improve PbtO<sub>2</sub> during the post-resuscitation period as compared with epinephrine.*

**Key words:** *Brain Tissue oxygen • pralidoxime • cardiac arrest*

## Introduction

Hypoxic brain injury is a well-known determinant of neurologic outcome following cardiac arrest. To improve the likelihood of neurologically favorable survival, it is critically important to ensure sufficient cerebral oxygenation and prevent secondary hypoxic brain injury after restoration of spontaneous circulation (ROSC).

Epinephrine still remains the first-line drug used during cardiopulmonary resuscitation (CPR) Panchal, A.R et al. [1]. Several studies have indicated that epinephrine, though it increases coronary perfusion pressure (CPP) and myocardial blood flow and thereby facilitates ROSC, affects the brain adversely after ROSC Ristagno et al. [2]. In a study that investigated the effects of epinephrine administered during CPR on cerebral oxygenation in a pig cardiac arrest model, Ristagno et al. reported that epinephrine reduced cerebral cortical microcirculatory blood flow and brain tissue O<sub>2</sub> tension (PbtO<sub>2</sub>) after ROSC as compared to saline placebo [2], via  $\alpha$ 1-adrenoceptor stimulation. Pralidoxime is well-known as an antidote for organophosphate poisoning. Multiple studies suggested that pralidoxime, when administered together with epinephrine, improves CPP and ROSC rate [3-5]. Jung et al. reported that the pralidoxime has non-adrenergic pressor action together with  $\alpha$ adrenoceptor inhibitory action in anesthetized normal rats [4]. Given the reported pressor effects and  $\alpha$ -adrenoceptor inhibitory action reported in these studies, pralidoxime may increase CPP and help restore spontaneous circulation without adversely affecting PbtO<sub>2</sub> after ROSC. However, to our knowledge, no study



has evaluated the effects of this drug administered during CPR as a sole vasopressor drug on PbtO<sub>2</sub> after ROSC.

In the present study, we sought to investigate the effects of pralidoxime administered during CPR as a sole vasopressor on PbtO<sub>2</sub> after ROSC. We hypothesized that pralidoxime administration would lead to a comparable ROSC rate and higher PbtO<sub>2</sub> after ROSC when compared to epinephrine administration.

### **Methods**

This study was conducted in 24 healthy Yorkshire/Landrace cross pigs weighing  $24.9 \pm 2.8$  kg and was approved by the Animal Care “Biomedical Research Center” and Use Committee of Chonnam National University Hospital (CNUH IACUC-20012) and Bukhara State Medical Institute. Animal care and experiments were conducted according to the author’s Institutional Animal Care and Use Committee guidelines.

After intramuscular injection of ketamine (20 mg/kg) and xylazine (2.2 mg/kg) followed by inhalation of a mixture of sevoflurane (2–5%) and O<sub>2</sub>, tracheal intubation (6.5 mm internal diameter) was performed. Then, the animals were ventilated using an anesthesia machine on a 70/30 mixture of N<sub>2</sub>O/O<sub>2</sub> and sevoflurane (titrated to prevent signs of pain) with a tidal volume of 10 ml/kg and a respiratory rate adjusted to maintain normocapnia. Endtidal carbon dioxide (ETCO<sub>2</sub>) was monitored by placing a sample line between the intubation tube and ventilator circuit. A 7.0-F catheter was inserted from the left femoral artery to the aorta for arterial pressure monitoring and blood sampling. A 6.0-F introducer sheath was advanced through the right external jugular vein for drug administration, right atrial pressure monitoring, and pacemaker catheter insertion. Another 7.0-F catheter was inserted into the left internal jugular vein and advanced retrogradely into the jugular bulb for jugular venous blood sampling. Burr holes (10 mm in diameter) were created bilaterally on the skull over the parietal cortices. Through the burr holes, the dura mater was carefully incised enough to visualize the cerebral cortical microvessels. The animal’s rectal temperature was monitored and maintained at

38°C during the preparation period. Immediately after the preparation procedures, the animals were randomly assigned by using information in a closed envelope to either the epinephrine group or the pralidoxime group. An investigator prepared either epinephrine (0.02 mg/kg) or pralidoxime chloride (40 mg/kg) solution in equal volumes (20 ml), while the remainder of the investigators remained blinded to the group assignment.

#### Experimental protocol

Ventricular fibrillation (VF) was induced by delivering a 60 Hz and 30 mA alternating current through the pacemaker catheter placed in the right ventricle. Mechanical ventilation was suspended immediately after induction of VF. After 7 min of untreated VF, CPR was started using a pneumatic, piston-driven chest compressor (Life-Stat; Michigan Instruments, Grand Rapids, MI, USA) at a rate of 100 compressions/min to a depth of approximately 20% of the anteroposterior chest diameter. During CPR, ventilation was performed using a bagvalve device with an O<sub>2</sub> flow rate of 15 l/min and at a rate of 10 breaths/min. Coincident with the start of CPR, either an epinephrine or pralidoxime solution was administered into the right atrium according to the group assignment. During CPR, epinephrine solution was administered intravenously every 3 min in the epinephrine group, while saline placebo was administered every 3 min in the pralidoxime group. Defibrillation was attempted with a 150-J biphasic waveform transthoracic shock every 2 min if indicated. CPR was continued until ROSC was attained or for 14 min. The resuscitation efforts were discontinued if ROSC was not achieved within 14 min of CPR.

Following ROSC, mechanical ventilation was resumed with 100% oxygen. The animals were observed for 1 hour under general anesthesia with 1% sevoflurane. After 15 min following ROSC, the ventilatory rate was adjusted to maintain an ETCO<sub>2</sub> of 40 mmHg. No hemodynamic drug was administered during this period. After completion of the experimental protocol, the animals were euthanized with potassium chloride under general anesthesia.

CPP was calculated from the difference between aortic end-diastolic pressure and right atrial end-diastolic pressure. Cerebral microcirculatory blood flow and PbtO<sub>2</sub> were measured on the cerebral cortices exposed through burr holes. PbtO<sub>2</sub> was measured with an optical oxygen sensor (Oxygen Dipping Probe DP-PSt7; PreSens-Precision Sensing GmbH, Regensburg, Germany). Cerebral hypoxia was defined as a PbtO<sub>2</sub> of <20 mmHg [67]. Cerebral microcirculatory blood flow was assessed by observing cerebral cortical microcirculation videos, which were obtained using a hand-held digital microscope (GScope™ G5; Genie Tech, Seoul, Korea) positioned over the burr holes. Microvascular flow index (MFI) and the number of perfused capillaries were determined by the method of Spronk et al. [8-9]. The number of perfused capillaries after ROSC was expressed as a percentage of the number of perfused capillaries relative to that at the pre-arrest baseline (%Capillary number). Arterial and jugular venous blood samples were obtained and examined for blood gases and lactate levels (GEM Premier 3000; Instrumentation Laboratory Company, Lexington, MA, USA) at pre-arrest baseline and at 3, 15, and 60 min after ROSC.

### **Statistical analysis**

The normality of continuous variables was examined with the Shapiro-Wilk and Kolmogorov-Smirnov tests. Normally distributed continuous variables were summarized by their means  $\pm$  standard deviation, and independent two-sample t-tests were used for intergroup comparison, while non-normally distributed continuous variables were summarized by their medians, and interquartile ranges (IQR) and Mann-Whitney U tests were used. Categorical variables were compared using Fisher's exact test. Areas under the curves (AUC) were calculated and expressed as mean  $\pm$  standard error or median (IQR). A two-tailed P value of <0.05 was considered statistically significant.

### **Results**

Table 1 shows the pre-arrest baseline measurements. There were no significant inter-group differences at the pre-arrest baseline. CPP during CPR was significantly



higher in the epinephrine group than in the pralidoxime group (AUC of CPP for the first 2 min of CPR, 19.2 [10.7 - 24.0] mmHg · min and 5.1 [2.4 - 11.5] mmHg · min in the epinephrine and pralidoxime groups, respectively,  $P = 0.012$ ). All animals in the epinephrine group achieved ROSC, while 7 (58.3%) did in the pralidoxime group ( $P = 0.037$ ). The epinephrine group animals received 1 (1 - 2) mg of epinephrine during CPR. The duration of CPR was significantly shorter in the epinephrine group than in the pralidoxime group (2 [2 - 4] min and 11 [4 - 12] min, respectively,  $P = 0.002$ ).

All the animals that achieved ROSC were hemodynamically stabilized and survived the 60min post-ROSC period. During the post-resuscitation period, mean arterial pressure was maintained above 65 mmH in all of the animals (Figure 1). None had hypoxemia or hypocapnia during this period. No significant intergroup differences were found in the AUC for mean arterial pressure,  $\text{PaO}_2$ , and  $\text{PaCO}_2$ . Figure 2 and Table 2 show cerebral measurements after ROSC.  $\text{PbtO}_2$  was higher in the pralidoxime group throughout the 60min post-resuscitation observation period, but the differences in AUC for  $\text{PbtO}_2$  did not reach statistical significance. Five animals (45.5%) in the epinephrine group experienced cerebral hypoxia during the 60-min post-ROSC period, while none did in the pralidoxime group ( $P = 0.106$ ). Neither the AUC for MFI nor that for %Capillary number differed between the two groups. The AUCs for arterial and jugular venous lactate also did not differ between the two groups ( $P = 0.759$  and 0.920, respectively)

## Discussion

In the present study, pralidoxime was significantly inferior to epinephrine in increasing CPP and achieving ROSC. Pralidoxime administration did not improve  $\text{PbtO}_2$  during the postresuscitation period as compared with epinephrine. These findings were in contrast to our hypothesis that pralidoxime administration would lead to comparable ROSC rate and higher  $\text{PbtO}_2$  after ROSC when compared to epinephrine administration.

The reasons why pralidoxime did not increase CPP during CPR and thereby improve ROSC rate are not clear. In contrast to the previous studies in which pralidoxime was administered together with epinephrine [3-5], this drug was administered as a sole vasopressor during CPR. Pralidoxime may have vasopressor action but this may be insufficient to achieve CPP enough to restore spontaneous circulation. On the other hand, this may be attributable to its vasodepressive action caused by  $\alpha$ -adrenoceptor inhibition reported by Jung et al. [6]. The vasodepressive action might have been greater than non-adrenergic pressor action of this drug when used as a sole vasopressor. To evaluate the exact reason why pralidoxime fail to improve CPP in the present study, a further study comparing pralidoxime and saline placebo is required.

Several studies have suggested that cerebral hypoxia is not uncommon after ROSC Elmer et al. [10-11]. Although the impact of cerebral hypoxia after ROSC on neurologic outcome in cardiac arrest survivors remains elucidated, a number of studies in patients with severe traumatic brain injury have suggested that cerebral hypoxia leads to unfavorable outcomes [12-15]. The reason why pralidoxime could not improve PbtO<sub>2</sub> after ROSC is unclear. PbtO<sub>2</sub> is determined by multiple factors, including cerebral O<sub>2</sub> delivery, diffusion from cerebral capillaries to neurons, and cerebral O<sub>2</sub> consumption. We postulate that the benefits from  $\alpha$ -adrenoceptor inhibitory effect of pralidoxime (probably on cerebral O<sub>2</sub> delivery) were not great enough to improve PbtO<sub>2</sub>.

In this study, epinephrine administration resulted in significantly higher CPP and thereby improved ROSC rate. However, in the present study, 45.5% of the animals in the epinephrine group experienced cerebral hypoxia during the post-resuscitation period. These results are in line with those of clinical studies suggesting increased ROSC rates after epinephrine at the expense of poor neurological outcomes [16-17]. Given the fact that the majority of cardiac arrest survivors suffer from brain injury, further efforts to develop novel therapeutics to prevent cerebral hypoxia are required.

This study has several important limitations. First, it was conducted on young, healthy anesthetized pigs. Thus, the findings are not directly extrapolated to clinical cardiac arrest patients. Second, our study was preliminary in nature, and thus sample size calculation a priori was not conducted. Therefore, the sample size may have been insufficient. Third, PbtO<sub>2</sub>, MFI, and %Capillary number were measured in a small area of the parietal cortex.

Thus, the results might not accurately reflect changes in the whole brain.

### **Conclusions**

In the present study, pralidoxime alone was significantly inferior to epinephrine in increasing CPP and achieving ROSC. In addition, pralidoxime administration did not improve PbtO<sub>2</sub> during the post-resuscitation period as compared with epinephrine.

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Table 1. Pre-arrest baseline measurements.

Variable	Pralidoxime (N =12)	Epinephrine (N = 12)	P value
Systolic arterial pressure (mmHg)	123.92 ± 12.32	126.82 ± 17.25	0.852
Diastolic arterial pressure (mmHg)	85.25 ± 13.11	83.73 ± 15.51	0.864
Mean arterial pressure (mmHg)	102.25 ± 11.67	102.82 ± 14.88	0.925
Mean right atrial pressure (mmHg)	8.08 ± 1.78	6.73 ± 2.15	0.203
Heart rate (/min)	89.25 ± 9.98	87.27 ± 13.34	0.743
ETCO <sub>2</sub> (mmHg)	38.83 ± 2.59	38.09 ± 1.92	0.722
Arterial pH	7.51 ± 0.03	7.52 ± 0.02	0.276
PaCO <sub>2</sub> (mmHg)	42 (41 - 44)	41 (39 - 42)	0.134
PaO <sub>2</sub> (mmHg)	160.57 ± 26.48	171.82 ± 27.31	0.591
Arterial lactate (mmol/l)	0.76 ± 0.22	1.01 ± 0.27	0.065
Jugular venous lactate (mmol/l)	1.06 ± 0.31	1.38 ± 0.64	0.239
PbtO <sub>2</sub> (mmHg)	32.16 ± 6.83	34.12 ± 6.69	0.624
Microvascular flow index	3	3	NA
Number of perfused capillaries (N)	13 ± 5	13 ± 3	0.327

Data are presented as the means ± standard deviation or medians with interquartile ranges.

Microvascular flow index at pre-arrest baseline was 3 in all animals. PaCO<sub>2</sub>, partial pressure of arterial CO<sub>2</sub>; PaO<sub>2</sub>, partial pressure of arterial O<sub>2</sub>; PbtO<sub>2</sub>, brain tissue O<sub>2</sub> tension; NA, not applicable.



Table 2. Comparisons of the areas under the curves for cerebral measurement parameters.

	Pralidoxime (N = 7)	Epinephrine (N = 12)	P value
<b>PbtO<sub>2</sub> (mmHg · min)</b>			
The 60-min post-ROSC period	2539.419 ± 301.826	1713.663 ± 249.566	0.147
First 10-min post-ROSC period	625.204 ± 77.712	450.108 ± 61.505	0.284
Subsequent 50-min post-ROSC period	1915.429 ± 260.574	1281.996 ± 215.457	0.233
<b>%Capillary number (% · min)</b>			
The 60-min post-ROSC period	5545.884 ± 545.197	3845.438 ± 461.057	0.110
First 10-min post-ROSC period	1143.714 ± 90.609	850.188 ± 97.169	0.180
Subsequent 50-min post-ROSC period	4402.170 ± 526.492	2995.251 ± 406.270	0.190
<b>Microvascular flow index (unit · min)</b>			
The 60-min post-ROSC period	55.786 ± 7.699	55.625 ± 6.824	1.000
First 10-min post-ROSC period	16.357 ± 2.058	20.227 ± 1.481	0.363
Subsequent 50-min post-ROSC period	39.429 ± 8.149	35.712 ± 6.680	1.000

Data are presented as mean  $\pm$  standard error. %Capillary number, percent of counted number of perfused capillaries relative to that at the pre-arrest baseline.

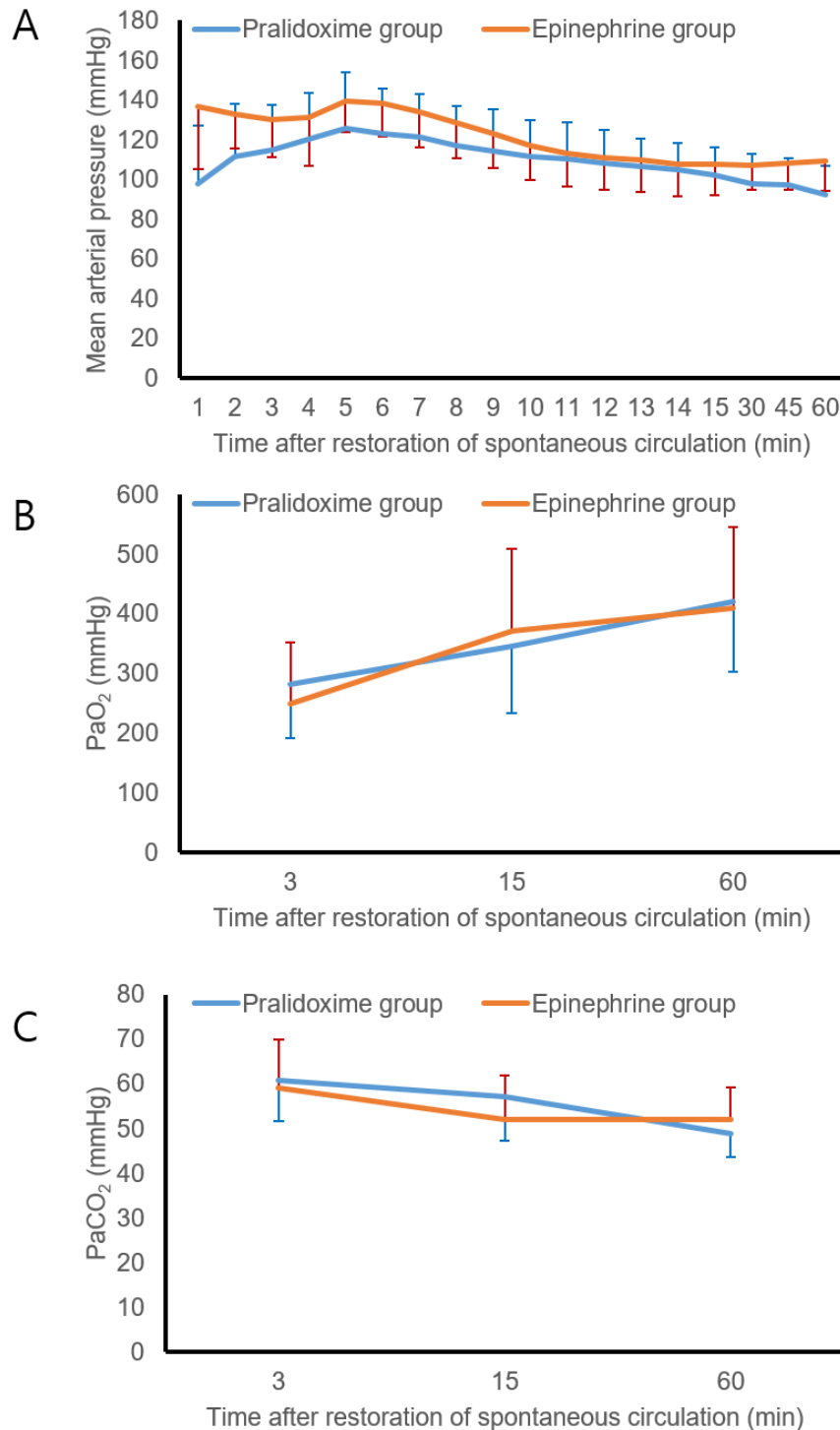


Figure 1. Mean arterial pressure (A), PaO<sub>2</sub> (B), and PaCO<sub>2</sub> (C) after the restoration of spontaneous circulation. Error bars represent the standard deviation. PaCO<sub>2</sub>, partial pressure of arterial CO<sub>2</sub>; PaO<sub>2</sub>, partial pressure of arterial O<sub>2</sub>.

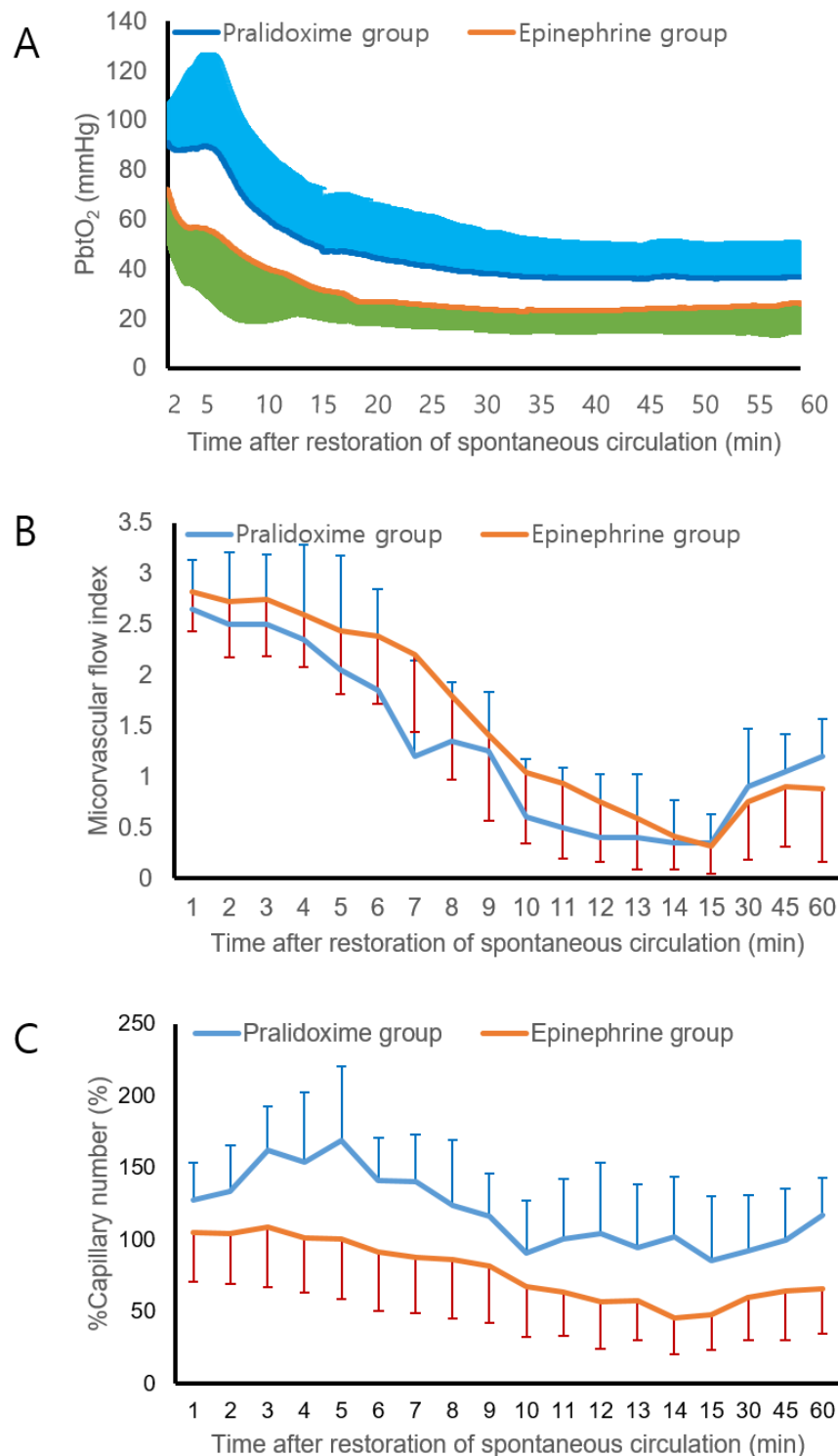


Figure 2. Brain tissue O<sub>2</sub> tension (PbtO<sub>2</sub>, A), microvascular flow index (B), and %Capillary number (C) after the restoration of spontaneous circulation. Error bars represent the standard deviation. %Capillary number, percent of counted number of perfused capillaries relative to that at the pre-arrest baseline.

## **IN VITRO SHAROITIDA OLMA NAVLARINI YUZA STERILLASH VA KO'PAYTIRISH**

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***Annotatsiya.** Daraxt ko'chatlarini yetishtiruvchi muassasalarda vegetativ ko'paytirilayotgan ekinlardan farqli ravishda in vitro sharoitida mikroklonal ko'paytirish asosida nasl olinadigan patogensiz navnamunalari bilan onalik ko'chatzorlari va bog'larni barpo etish iqtisodiy hamda ekologik xavfsizlik jihatidan ahamiyatlidir. Ushbu ish biz olmaning istiqbolli navlarini ko'paytirish maqsadida intraduktsiya qilingan, tashqi stress omillarga chidamli olma payvandtaglarini in vitro sharoitda mikroklonal ko'paytirish asosida patogensiz ko'chatlarini olish bo'yicha olib borilgan tadqiqotlar natijalari qisqa bayon qilingan. Olib borilgan tadqiqotlar uchun ob'ekt sifatida olmaning Samarqand viloyati tuproq-iqlim sharoiti uchun istiqbolli navlariga payvandtag tayyorlash uchun intraduktsiya qilingan yovvoyi olmaning tabiiy sharoitda ko'paytirilgan MM.106-yarim pakana bo'yi namunasi olindi.*

***Kalit so'zlar:** MM.106 olma payvandtag, mikroklonal ko'paytirish, in vitro, spirt, (NaOCl) 3-5% li eritma.*

### **1. Kirish.**

Jahon miqyosida aholining oziq-ovqat xavfsizligini ta'minlashda agrar sohaning o'рни va ahamiyati kundan-kunga oshib bormoqda. Jumladan, mamlakatimizda ham mavjud resurs va imkoniyatlardan oqilona foydalanib, aholini qishloq xo'jalik mahsulotlari bilan kafolatli ta'minlash, hosildorlik va

manfaatdorlikni yanada oshirish, sohaga ilm-fan yutuqlari hamda zamonaviy yondashuvlarni joriy etish dolzarb masaladir.

O‘zbekiston Respublikasi Prezidentining 2019 yil 20-martdagi PQ-4246-son «O‘zbekiston Respublikasida bog‘-dorchilik va issiqxona xo‘jaligini yanada rivojlantirish chora-tadbirlari to‘g‘risida»gi, O‘zbekiston Respublikasi Prezidentining 2020 yil 28 yanvardagi PQ-4575-son «O‘zbekiston Respublikasi qishloq xo‘jaligini rivojlantirishning 2020-2030 yillarga mo‘ljallagan strategiyasida belgilangan vazifalarni amalga oshirish chora-tadbirlari to‘g‘risida»gi qarorlarida yangi intensiv mevali bog‘larni tashkil etish vazifalari alohida belgilab berilgan. Bugungi kunda dunyo miqyosida olma yetishtirish yalpi hajmi 80,5 mln tonnadan ortiq bo‘lib, yetakchi o‘rinlarni Xitoy (mos holda 44,45 mln tonna), AQSh (4,65 mln tonna), Polsha (3,60 mln tonna) va Turkiya (2,93 mln tonna) egallab kelmoqda. Olma yetishtirish va uni eksport qilish bo‘yicha dunyoda birinchi o‘rinlarni egallab kelayotgan davlatlarda olma bog‘larining qariyb 90-95% past bo‘yli payvandtaglarga asoslangan intensiv bog‘larda yetishtirilmoqda.

## **2. Tadqiqot ob‘yekti va metodi.**

**2.1.** Qayd etilganidek, bu ishda biotexnologik usullarda mikroklonal ko‘paytirish uchun olmaning MM.106-yarim pakana navining qo‘ltiq osti va uchki apikal kurtaklari tadqiqot ob‘ekti bo‘lib xizmat qildi.

**2.2.** Харамильо Р.К. xrizantema ekplantlari uchun mart-aprel oylarida sterilizatsiya qiluvchi vosita sifatida 0,1% li sublimat (simob xlorid) eritmasidan barg ko‘chatlari va gulbarglari uchun 60 dan 120 sekundgacha, kurtaklar uchun esa 3 dan 4 minutgacha foydalanish maqbul ekanligini aniqladi. So‘ngra 3 marta steril distillangan suv bilan yuvib tashlash kerak. Ushbu sterilizatsiya usuli yordamida kallus to‘qimasini yanada ko‘paytirishga, qo‘shimcha kurtaklar hosil bo‘lishini induksiya qilishga yoki mavjud meristemalarning rivojlanishini faollashtirishga qodir bo‘lgan yaxshi o‘sadigan kulturalar olindi.



**1-rasm. O‘simlik mikroklonlash jarayonida yuza sterillash.**



**2-rasm. Ozuda muhiti tayyorlash.**

Майорова Ю.А. gilos to‘qimalari kulturasi bilan ishlaganda, simob xloridning 0,1% eritmasini 8 daqiqa sirt sterilizatsiya qilish kerakligini aytgan.

Biz ilmiy tadqiqotimizda Sterilizatsiya, matematik statistik tahlil, *in vitro*, *ex vitro*, klonlash metodlarimizdan foydalandik.

### **3.Natijalar.**

So‘nggi paytlarda tibbiyotda yangi usullar, o‘simliklarni mikroko‘paytirishda muvaffaqiyatli qo‘llanilishi mumkin bo‘lgan texnik yangiliklar paydo bo‘lmoqda. Masalan, steril kamerada lazer yordamida o‘simlikning meristematik uchlarini izolyatsiya qilish, *in vitro* kulturasiga eksplantlarni kiritishda to‘liq sterillikka erishish va ushbu texnologiyada qo‘l mehnati ulushini kamaytirish imkonini beradi.

Mevali ekinlarni klonal mikroko‘paytirishda qo‘llaniladigan sterilizatorlar ko‘pincha odamlar uchun toksik xususiyatga ega bo‘lib, muhitni tozalash va eksplantlarni ekish atrof-muhit infeksiyasidan butunlay ozod qilmaydi. O‘simlik to‘qimalari kulturalarini infeksiyalardan himoya qilish uchun antibiotiklardan foydalanish adabiyotlarda ham kam yoritilgan. Sterillikni saqlashning texnik vositalari, masalan, meristemani lazer bilan izolyatsiya qilish iqtisodiy jihatdan qimmatga tushadigan usullardir. Shunday qilib, eksplantlar va muhitlarni ekish va



atrof-muhit infeksiyasidan himoya qilish uchun sterilizatorlar va antibiotiklarni tanlash mevali ekinlarni, xususan vegetativ ravishda ko‘paytiriladigan olma ildizpoyalarini klonal mikroko‘paytirish samaradorligini oshirishning muhim elementidir.

Ilmiy izlanishlarning barchasi Samarqand viloyati, Jomboy tumanidagi **“BOG‘BON” Sag Agro *in vitro*** laboratoriyasida olib borildi. Olma payvandtaglari uchun tanlangan namunalarni sog‘lomlashtirish ishlari laminar boksda eksplantni sterilizatsiya qilish, to‘qimaga antibiotiklar bilan ishlov berishdan boshlandi. Ushbu jarayonda payvandtaglar bakteriya va zamburug‘ infeksiyalari hamda nematodalardan ozod qilinadi.

O‘simlik namunlarini *in vitro* sharoitda ko‘paytirishda sterillikka qat’iy e’tibor berish talab etiladi.

Olib borilgan tadqiqotlar davomida olma payvandtaglarining onalik namunalaridan olingan novdalarni barglaridan ajratib olindi va 1 soat davomida oqib turgan suvning tagida qo‘yildi. Novdalarni suvdan olib 96% li spirtda 3 sekund ushlab turildi. So‘ngra o‘simliklarni 800 ml suv hamda 200 ml 5 foizli natriy gipoxlorid sodasi aralashmasida 10, 15, 20, 25 minut magnitli aralashtirgichda aylantirildi. Avtoklavda +120<sup>0</sup>S harorat sharoitida distillangan toza suvda 3-4 marotaba barcha sterilizatsiyalashda ishlatilgan kimyoviy moddalar qoldiqlarini ketkazish uchun yuvib tashlandi.



**3-4 rasm. MM.106-yarim pakana navini kulturaga kiritish jarayoni**

Olma payvandtagligi uchun tanlangan namunalar *In vitro* sharoitida quyidagi tartibda ko‘paytirildi:

-Bo‘g‘im meristemalarini faollashtirish

-Birlamchi kallus to‘qmani hosil qilmasdan, adventiv kurtaklarni barg, novda, ter va ildiz to‘qimasi bilan induksiya qilish.

-Apikal dominantlikni saqlab qolgan novdalarni mikroko‘paytirish.

-Somatik embriogenez induksiyasi.

Birinchi va asosiy usul – bo‘g‘im meristemalarini faollashtirish. U apikal dominantlarni ajratish va o‘simlikda mavjud meristemalarni rivojlanishini faollashtirishdan iborat. Bu usul oddiy vegetativ ko‘paytirishda ham asosiy hisoblanadi. Olmada xam, klonlash hodisasida xam apikal meristemani olib tashlash yoki sitokininlar faolligi asosida erishiladi. Klonlashda sitokininlar (6-benzilaminopurin, Kinetin, meta-politen ) ozuqa muhitiga qo‘shilib, ko‘p miqdordagi bo‘g‘im novdalarini paydo bo‘lishiga sabab bo‘ldi.



### **5-rasm. Olmaning MM.106 payvandtagini steril muhitda mikroklonlash jarayoni**

Olma payvandtaglarini sterillashda natriy gipoxloridning (NaOCl) 3-5% li eritmalaridan foydalanildi (1-jadval). Turli konsentrasiyalari va turli ta‘sir ettiruvchi (sterillovchi vositalar) qo‘llanilganda o‘simliklardagi zararlanishlar soni va yashovchanligi ko‘rsatilgan.

## jadval-1

*In vitro* sharoitida olmaning MM.106-yarim pakana navini yuza sterillash

№	Yuza sterillash vositasi va konsentrasiyasi	Stelillash muddati (min.)	Kulturaga kiritilgan kurtaklar soni (dona)	Zararlangan kurtaklar foizi (%)	Yashab qolgan kurtaklar foizi (%)
1.	NaOCl - 3 %	10 min.	20	72	3
		<b>20 min.</b>	<b>20</b>	<b>25</b>	<b>60</b>
		30 min.	20	32	28
		40 min.	20	42	25
2.	NaOCl - 5 %	10 min.	20	80	5
		<b>20 min.</b>	<b>20</b>	<b>15</b>	<b>74</b>
		30 min.	20	45	33
		40 min.	20	53	14

**4.Xulosalar**

O'tkazgan tadqiqotimizda 3% li natriy gipoxlorid eritmasi bilan 20 daqiqa dizinfeksiya qilinganida, zararlangan kurtaklar 25% ni, yashab qolgan kurtaklar 60 foizni tashkil qildi. Eng past ko'rsatkich 10 daqiqa dezinfeksiya qilinganida zararlangan kurtaklar 72% ni va yashab qolgan kurtaklar 3 foizni tashkil qildi. Natriy gipoxloridning 5% li eritmasida eng yaxshi dizinfeksiyalovchi sifatida 20 daqiqa ishlov berilganda zararlangan kurtaklar soni 15 foiz va yashab qolgan kurtaklar soni 74 foizni tashkil qildi. Samarali dizinfeksiyalovchi 5% li NaOCl da yaxshiroq sterillash yaxshi ekanligi aniqlandi.

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## PARASITES OF THE ORAL CAVITY

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**Abstract:** *Oral parasites usually parasitize the first part of the digestive system of sick people and harm the normal life of the host organism, that is, they affect the mucous membranes of the oral cavity, swelling of the gums causes various sores and rashes in the mouth, negatively affects the normal formation and development of teeth, in turn, chewing processes. In order to protect against such parasites, it is necessary to observe the rules of personal hygiene, to wash hands before directly eating fruits and vegetables, and to pay attention to the accumulation of dental caries, tartar, and dental caries.*

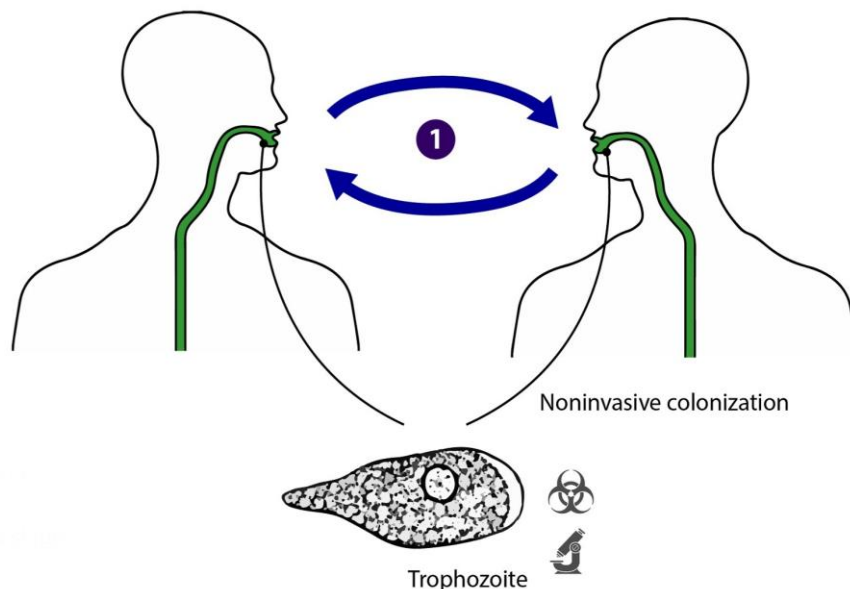
**Key words:** *Entamoeba gingivalis, Trichomonas buccalis, caries, tartar.*

It should be noted that the oral cavity is the initial part of the digestive system and it has two main functions: preparing food for digestion and our social media. In this regard, it is necessary to pay special attention to the protection of the oral cavity from parasites and various diseases. Oral parasites of the gums, tongue, tongue, lips, parasitises around the teeth and causes unconsciousness. Oral parasites such as oral amoeba (*Entamoeba gingivalis*), oral trichomoniasis (*Trichomonas buccalis*) are treated.

Oral amoeba (*Entamoeba gingivalis*) is in the tooth pockets in the human mouth a parasitic non-pathogenic amoeba. It was identified among the representatives of the population living on all continents. They feed on bacteria, fungi and other debris around the teeth. *E. gingivalis* is considered a cosmopolitan

species, widespread and often found in the oral cavity it occurs in people who do not follow hygiene or have periodontal disease, are infected tissues and the bacteria that cause them are a favorable environment for the development of amoeba is considered. The way it is transmitted is by eating dirty water, unwashed fruits or vegetables, directly from person to person is carried out with the help of kissing, coughing, sneezing, personal hygiene products used by the patient, dishes, toothbrush. To determine the presence of this parasite in a person's oral cavity, it is carried out by laboratory examination through smears from tooth pockets and sputum. There is no cure for oral amoeba and no medicine to get rid of it. In people with a weak immune system, it causes stomatitis, glossitis, bleeding gums, and bad breath. In order to prevent infection with *Entamoeba gingivalis*, it is necessary to take care of the oral cavity, clean the teeth from caries and stones.

### ***Entamoeba gingivalis***



Oral trichomoniasis (*Trichomonas buccalis*) - parasitises only in the gum pockets and neck area of most patients with pyorrhea, acute gingivitis or abscess disease. Trichomoniasis can enter the tonsils from the oral cavity, and then the



respiratory system organ, the lungs. it causes pain when brushing and chewing food. This parasite cannot be infected without contact, because its cysts and eggs cannot live in the external environment, and the entire development cycle takes place in the human mouth. To prevent trichomoniasis infection, first of all, personal hygiene products compliance, washing fruits and vegetables before direct consumption, dental care it is important to pay special attention, to clean them from stones and scratches, of course.

Conclusion: Based on the information presented above, it can be concluded that parasites can spread widely among the population as a result of non-compliance with the rules of personal and collective hygiene. If we pay attention to dental caries, swelling of the gums and mucous membrane, bleeding, and bad breath, we will prevent the bad conditions caused by parasites. The most effective way to treat any disease is prevention. In order to avoid parasites, we need to take measures not to infect them, in turn it is worth noting to pay attention to the health of the oral cavity. Knowing that all the mentioned information is important for our health one of us should look at it responsibly.

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## ANCIENT TURKISH AND ARAB SCIENTIFIC ACADEMIES IN THE ISLAMIC GOLDEN AGE

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**Abstract:** *The Islamic Golden Age, spanning from the 8th to the 14th centuries CE, witnessed significant advancements in various fields of knowledge, including mathematics, astronomy, medicine, and philosophy. Central to this flourishing era were the scientific academies that emerged in the regions of ancient Turkey and the Arab world. This article explores the contributions and characteristics of these academies, shedding light on their pivotal role in preserving, translating, and furthering scientific knowledge during this remarkable period.*

**Keywords:** *scientific academies, Islamic Golden Age, ancient Turkey, Arab world, preservation of knowledge, translation, interdisciplinary collaborations, mathematics, astronomy, medicine, philosophy, intellectual exchange.*

**Introduction:** The Islamic Golden Age, spanning from the 8th to the 14th centuries CE, stands as a remarkable period in history characterized by remarkable advancements in science, mathematics, philosophy, and medicine. It was a time when the pursuit of knowledge thrived, and the Islamic world became a hub for intellectual growth and exchange. At the heart of this flourishing era were the scientific academies that emerged in ancient Turkey and the Arab world. These academies played a pivotal role in preserving, translating, and advancing scientific knowledge, thereby contributing to the remarkable intellectual achievements of the time.

Founded by the influential Persian statesman Nizam al-Mulk in the 11th century CE, the Nizamiyya Madrasa in Nishapur, located in present-day Iran, stood as a

prestigious educational institution during the Islamic Golden Age. Renowned for its emphasis on a wide range of disciplines, including theology, law, medicine, and mathematics, the Nizamiyya Madrasa played a pivotal role in shaping the intellectual landscape of the time.

One of the significant contributions of the Nizamiyya Madrasa was its promotion of medicine and medical education. The madrasa offered a comprehensive curriculum in medicine, attracting aspiring physicians from far and wide. Students studied the works of renowned physicians such as Galen, Hippocrates, and Ibn Sina (Avicenna), deepening their understanding of medical theory and practice. The Nizamiyya Madrasa's emphasis on medicine not only contributed to advancements in healthcare but also fostered a culture of critical thinking and empirical observation.

Moreover, the Nizamiyya Madrasa nurtured the development of mathematics and its applications. Scholars explored various mathematical disciplines, including arithmetic, algebra, geometry, and trigonometry. They refined existing mathematical knowledge and made original contributions, paving the way for future advancements. Notable mathematicians associated with the madrasa include Al-Biruni, who conducted groundbreaking research in mathematics and astronomy.

The Nizamiyya Madrasa also played a vital role in the study of law and jurisprudence. Legal scholars honed their understanding of Islamic law (Sharia) and engaged in scholarly debates on legal matters. Their contributions to legal theory and jurisprudence had a lasting impact on the development of Islamic legal systems.

The intellectual legacy of the Nizamiyya Madrasa extended beyond its immediate time, influencing subsequent educational institutions and intellectual traditions. Its commitment to a broad and comprehensive education, encompassing both religious and scientific knowledge, laid the groundwork for the integration of various disciplines and the cultivation of well-rounded scholars.

In conclusion, the Nizamiyya Madrasa in Nishapur, under the patronage of Nizam al-Mulk, served as a renowned educational institution during the Islamic Golden Age. Its emphasis on theology, law, medicine, and mathematics attracted

scholars from diverse backgrounds and fostered a climate of intellectual stimulation and innovation. The madrasa's contributions to scientific knowledge, medical education, mathematical advancements, and legal scholarship left an indelible mark on the intellectual landscape of the time, shaping the trajectory of future educational institutions and contributing to the rich heritage of Islamic scholarship.

**Al-Azhar University:** Al-Azhar University, situated in Cairo, Egypt, stands as one of the oldest and most prestigious centers of Islamic learning in the world. Founded in 970 CE, it has played a crucial role in the dissemination of knowledge and the promotion of scholarly pursuits. While primarily renowned for its religious studies, Al-Azhar University also incorporated scientific disciplines into its curriculum, including medicine, mathematics, and astronomy. The university's scientific academy facilitated the exchange of knowledge and ideas with other centers of learning throughout the Islamic world.

**Conclusion:** The scientific academies of the Islamic Golden Age were instrumental in the preservation, translation, and development of knowledge in ancient Turkey and the Arab world. Their contributions to various scientific disciplines created a legacy of intellectual excellence and innovation that continues to inspire and inform scholars to this day. The Islamic Golden Age stands as a testament to the power of intellectual curiosity, collaboration, and the pursuit of knowledge, leaving an enduring impact on the history of science and scholarship.

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## THE MAGNIFICENT SAGA OF THE METROPOLITAN OPERA HOUSE: A HISTORIC LEGACY

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**Abstract:** *The Metropolitan Opera House has stood as an emblem of cultural excellence in New York City for over a century. This article delves into the captivating history of this renowned institution, tracing its origins back to the late 19th century. From its grand opening in 1883 to its evolution through architectural transformations, the Metropolitan Opera House has hosted legendary performances by some of the greatest opera singers and musicians of all time. This article highlights the opera house's architectural splendor, its role as a global operatic stage, and its continued significance as a cultural landmark in the modern era.*

**Keywords:** *Metropolitan Opera House, opera, New York City, cultural landmark, performing arts, history, architecture, power of opera.*

**Introduction:** The Metropolitan Opera House, an iconic institution nestled within the vibrant cultural fabric of New York City, stands as a testament to the grandeur of the performing arts. For over a century, this hallowed institution has enthralled audiences with its world-class productions, exceptional talent, and architectural splendor. Let us embark on a journey through time to explore the captivating history of the Metropolitan Opera House.

The Metropolitan Opera House was born out of the desire to create a prestigious opera house that could rival the great theaters of Europe. In 1880, a group of wealthy businessmen, led by philanthropist Henry G. Havemeyer, joined forces to establish the Metropolitan Opera Company. Determined to create a venue worthy of



the world's most renowned performers, they commissioned American architect J. Cleaveland Cady to design the opera house.

**Literature analysis and methodology:** After years of planning and construction, the Metropolitan Opera House finally opened its doors on October 22, 1883. Located on Broadway and 39th Street, the theater boasted opulent interiors adorned with luxurious fabrics, ornate chandeliers, and intricate woodwork. The auditorium, with its horseshoe-shaped seating arrangement, provided an intimate experience for the audience, while the stage offered state-of-the-art technical capabilities.

From its earliest days, the Metropolitan Opera House has witnessed legendary performances that have left an indelible mark on the world of opera. It became renowned for its association with internationally acclaimed singers, conductors, and directors who graced its stage. Opera luminaries such as Enrico Caruso, Maria Callas, Luciano Pavarotti, Placido Domingo, and countless others have brought their unparalleled talents to the Metropolitan, captivating audiences with their artistry.

Over the years, the Metropolitan Opera House underwent several transformations to adapt to changing times and artistic requirements. In 1893, the original building was extensively remodeled by architect Stanford White, who enhanced its opulence and expanded the seating capacity. Subsequent renovations in the 1960s and 2000s modernized the stage and improved the acoustics, further enhancing the opera house's reputation as a world-class venue.

Today, the Metropolitan Opera House remains an epicenter of operatic excellence and a cultural landmark in New York City. Its annual season, which runs from September to May, showcases a diverse repertoire ranging from beloved classics to contemporary masterpieces. The Metropolitan Opera has embraced innovation by broadcasting performances to cinemas worldwide through the Met Live in HD series, making opera accessible to a broader audience.

While opera remains the primary focus, the Metropolitan Opera House has also played host to various other performing arts disciplines. Ballet companies, symphony

orchestras, and solo artists have graced its stage, enriching the cultural panorama of the city.

**Conclusion:** The Metropolitan Opera House stands as a testament to the enduring power of the performing arts. Its rich history, marked by legendary performances and architectural splendor, has made it an internationally renowned institution. As it continues to evolve, embracing the modern world while cherishing its illustrious past, the Metropolitan Opera House will undoubtedly inspire generations to come, preserving the legacy of this cultural treasure for centuries ahead.

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## SOS BOLALAR MAHALLALARI TARBIYALANUVCHILARDA NAMOYON BO‘LADIGAN EMOTSIONAL KECHINMALARNING PSIXOLOGIK XUSUSIYATLARI

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***Annotatsiya:** Hozirgi kunda SOS bolalar mahallalarida uch bo‘linma o‘z faoliyatini olib bormoqda. Ular: bolalar mahallalari – muqobil parvarish qilish xizmatlari; yoshlar uylari – yoshlarga hamrohlik qilish xizmatlari va ijtimoiy markazlar – ijtimoiy etimlikning oldini olish bo‘limlari. Ularda asosan ota-onasining qaramog‘isiz qolgan yoki ijtimoiy etimlik havfi ostida bo‘lgan bolalar va yoshlar, shuningdek qiyin hayotiy vaziyatga tushib qolgan 280dan ortiq oilalar qo‘llab-quvvatlanib, 620 nafar bola tarbiyalanmoqda, ushbu bolalardan 32 nafari imkoniyati cheklangan bolalardir. Mazkur muassada qabul qilinuvchilar nafaqat ijtimoiy himoya qilinadi, shu bilan birgalikda ularga psixologik xizmat ham ko‘rsatiladi. Bu ularga hayotiy qiyin vaziyatlardan, stress va depressiyalardan chiqishga, shaxs sifatida rivojlanishga, qobiliyatlarning namoyon bo‘lishiga, motivatsion sohasining to‘g‘ri yo‘nalishiga yordam beradi.*

***Kalit so‘zlar:** SOS bolalar mahallalari, muqobil parvarish qilish xizmatlari, yoshlar uylari, ijtimoiy markazlar, stress va depressiya, motivatsion soha.*

### **KIRISH**

Bugungi kunda O‘zbekiston SOS Bolalar mahallalarida ota-onasi qaromog‘idan ajralgan bolalar tarbiyalanib kelmoqda. Ushbu tashkilotning muhim vajifalaridan biri xam aynan ota-onasining qaramog‘isiz qolgan va qiyin hayotiy sharoitlarga tushib qolgan bolalarga ijtimoiy va psixologik ko‘makni ta‘minlashdan iboratdir. Aynan

shuning uchun ham ushbu muassasa tarbiyalanuvchilarning psixologik jihatlarini chuqur tahlil qilish lozim. Chunki bunday bolalar o'z oilasidan, ota-ona bag'rida mahrum bo'lish barobarida, nafaqat fiziologik balki psixologik jarohat bilan ulg'aygan. Ularni ijtimoiy hayotga moslashtirish, kelgusida ularni qabul qiluvchi oilalarga maslaxatlar ishlab chiqish, hayotda o'z o'rnini topishlariga ko'maklashish uchun ham emotsional holatlarini psixologik tahlil qilish va o'rganish muhim.

### **MUHOKAMA VA NATIJALAR**

I.Langmeyer va Z.Mateycek tomonidan bolalikdagi psixik muammolari bo'yicha an'anaviy tadqiqot ishlari olib borilgan [3]. So'nggi yillarda mehribonlik uylarida bolalarni tarbiyalash muammosi bo'yicha ko'plab tadqiqotlar olib borilgan.

Adabiyotlar tahlili shuni ko'rsatadiki, ota-onasi qaromogidan ajralgan sharoitida tarbiyalangan bolada rivojlanish buzilishlari to'rt darajada uchraydi:

- hissiy (sezgilar darajasida);
- kognitiv (tashqi dunyo rasmini shakllantirish darajasida);
- hissiy (kimdir bilan qoniqarli samimiy hissiy munosabatlarni o'rnatish darajasida);
- ijtimoiy (jamiyatda tasdiqlangan ijtimoiy rollar bilan o'zini identifikatsiya qilish darajasida).

Ko'pgina o'tkazilgan tadqiqotlarga ko'ra [6], sezgi buzilishlari bachadondagi bolaning homiladorligiga salbiy munosabatda bo'lganda, uning odatlarini o'zgartirmasa, ayniqsa spirtli ichimliklarni suiste'mol qilish yoki boshqa psixoaktiv dorilarni istemol qilishlari natijasida yuzaga keldi. Chaqaloqni tashlab ketish va uni bolalar uyiga joylashtirish yoki tug'ilgandan keyin psixologik jihatdan rad etish ona yoki uning o'rnini bosuvchi shaxs bilan tana, eshitish, vizual aloqalar sonini halokatli darajada kamaytiradi. Bu bolaga psixologik noqulaylik tug'dirishi, uyqu va uyg'onish ritmining buzilishiga hissa qo'shishi, hissiy beqarorlikni shakllantirishi va haddan tashqari bezovtalanish, yomon boshqariladigan xatti-harakatlarga olib kelishi tadqiqot ishlarida o'z isbotini topgan.

Sensor darajadagi rivojlanish muammolari keyingi, kognitiv (intellektual) darajaga salbiy ta'sir ko'rsatishi mumkin. Bola dunyo unga xavfsiz bo'lib tuyulganda, onasidan emaklab yoki qochib ketganda, u orqasiga o'girilib, uning jilmaygan yuzini ko'rishi mumkin bo'lganda faol rivojlana boshlaydi. Bularning barchasi bolalar uyida yoki uning asosiy ehtiyojlarini e'tiborsiz qoldirish sharoitida tarbiyalangan bolalar bundan mahrum bo'lganligi sababli sensor emotsiyalarni rivojlanishi qiyin kichadi. Shuning uchun u kamroq emaklaydi va shuning uchun farovon oilalar farzandlariga qaraganda kamroq faol, atrofidagi dunyoni o'zlashtiradi. Natijada, uning intellektual rivojlanishi kechiktiriladi. U kech gapira boshlaydi, ko'pincha iboralarni noto'g'ri tuzadi va tovushlarni qiyinroq talaffuz qiladi.

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Ijtimoiy daraja bola rivojlanishining butun piramidasining eng yuqori nuqtasidir. Oilaning farzandi, ayniqsa, farovon, o'z shaxsini yoki oilasiga, urug'iga mansubligini tan oladi. Taqlid kanallari orqali u ijtimoiy jihatdan tasdiqlangan xulq-atvor modellarini, ijobiy ijtimoiy rollarni bajarish qobiliyatini rivojlantiradi.

Oila bolaning normal rivojlanishining eng muhim shartidir. Bu bolalarni sevadigan va ularga g'amxo'rlik qiladigan oila, bu bolaga doimiy bog'lanish imkoniyati bilan ishonchli va barqaror dunyo namunalarini beradi. Butun dunyo, mahalliy tadqiqotlarga ko'ra, bolaning homiylik ostidagi oiladagi hayoti uning barcha sohalarda rivojlanishiga ijobiy ta'sir ko'rsatadi [4].

Ota-ona qaramog'isiz qolgan bolalar bir qator o'ziga xos xususiyatlarga ega. Xususan, tajovuzkorlik, yuqori sezuvchanlik, injiqlik, o'jarlik kuchaygan; yuqori darajadagi dushmanlik va mojarolar. Bolalar uyida tarbiyalangan bolalar quyidagilar bilan tavsiflanadi: muloqotdagi qiyinchiliklar, ruhiy stress belgilari, nevroitik tendentsiyalar. O'g'il va qiz bolalarda psixo-emotsional holatlarning nomutanosibligi quyidagilarda namoyon bo'ladi. Qizlar ko'proq qo'rqinchli, xavotirli, ularda o'zini pastlik hissi bor, ular ko'pincha muloqotda qiyinchiliklarga duch kelishadi, ruhiy stressning yuqori darajasiga ega. O'g'il bolalar ko'proq injiq, hasadgo'y, dushman, ishonchsiz, o'zlarini ishonchsiz his qilishadi, o'zini o'zi qadrlash darajasi oshadi [1].

L.L.Mityayevning «SOS bolalar mahallari etim bolalar va ota-ona qaramog'ida bo'lmagan bolalar uchun rivojlanish muhiti sifatida» (2005) nomi tadqiqot ishida Rossiyaning SOS bolalar mahallarida ota-ona qaramog'isiz qolgan bolalar uchun rivojlanish muhitini yaratish tajribasini keng tahlil qilish jarayonida, SOS bolalar mahallarida rivojlanish muhitiga aylanadigan sharoitlarni o'rgangan. Tadqiqotning nazariy ahamiyati shundaki, u ilmiy tadqiqot ishida ta'lim muassasasining rivojlantiradigan muhiti tushunchasini ochib beradi, oilaviy bolalar uylarida rivojlanayotgan ta'lim muhitining mohiyati va tuzilishini keng ko'lamda tavsifladi.

Ba'zi tadqiqotlarga ko'ra [2; 5] bolaning hissiy holatiga ota-ona va bola munosabatlarining tabiati ta'sir qiladi: noqulay ota-ona va bola munosabatlari bolaning salbiy hissiy holatiga hissa qo'shadi, ota-ona va bolaning qulay munosabatlari aksincha, bolalarning ijobiy hissiy holatiga hissa qo'shing.

Adabiyotlarni tahlil qilish bolalar uyi tarbiyalanuvchisining psixologik portretining quyidagi xususiyatlarini ajratib ko'rsatishga imkon beradi:

1.Yolg'izlik muammosi. Agar bola o'zining oilaviy ahvolini noqulay deb hisoblasa (va bu bolalar uyida qolgan har bir bola bilan sodir bo'ladi), u o'zining kuchsizligini («muammo mendan kattaroq») va o'zining foydasizligini his qiladi (kattalar juda ko'p muammolarga duch kelishadi) mensiz»). Darhaqiqat, bola o'z qiyinchiliklari bilan yolg'iz qoladi, bu esa «yolg'izlik majmuasini» tashkil qiladi. Bu



vaziyatni uning hayotida muhim kattalar yo'qligi (hatto eng yaxshi o'qituvchi ham vaqtinchalik) bilan og'irlashtirishi mumkin.

2. Ojizlik. Psixologik tanglik muammolari ko'pincha erta bolalikdan kelib chiqadi, bola ularni haqiqatan ham bilmasligi mumkin. Hozirgi vaqtda travmatik vaziyat yo'qolganligi sababli, bola muammolar yo'qolgan deb hisoblashi mumkin, garchi ular chuqur darajada saqlanib qolsa ham. U boshdan kechirgan travmatik tajriba qo'rquvni, ongsiz spontan xatti-harakatlar reaksiyalarini va hissiy blokirovkalarni keltirib chiqarishi mumkin.

3. Shakllanmagan «Men-kontsepsiya». Buni faqat o'smirlik va yoshlik davrida to'liq muhokama qilish mumkin, ammo ba'zi tendentsiyalarni undan ham oldinroq kuzatish mumkin. Tug'ilgandan boshlab har qanday odamning barcha harakatlari baholanadi. Bolaning har bir qadami ota-onalar tomonidan nazorat qilinadi. Shu bilan birga, u cheksiz sevgi va qo'llab-quvvatlashni his qiladi. Shunday qilib, bola uchun o'ziga va dunyoga bo'lgan munosabat modeli shakllanadi, u bilan inson butun hayoti davomida o'z harakatlari, fikrlari, tamoyillarini bog'laydi. O'smirlik davrida esa o'zi haqidagi g'oyalar tizimi (boshqacha qilib aytganda, «men-kontsepsiya») shakllanishi kerak, bu har doim ota-onaning qiyofasiga tayanadi. Yetimda bu naqsh mo'rt va zaif bo'ladi, agar bo'lsa. Shu sababli, maktab-internat bitiruvchisi etuk, to'lovga layoqatsiz bo'lib qoladi. U savollarga javob bera olmaydi: «Men kimman?», «Men kimman?» va hokazo. Shuni ta'kidlash kerakki, odatda bunday turdagi savollar berilmaydi. Natijada o'zini tanqid qilish, fikr yuritish qobiliyati namoyon bo'lmaydi.

4. Passivlik. Bolalar uyidagi butun hayot qat'iy jadvalga bo'ysunadigan vaziyatda tizim individual e'tiborni ta'minlamaydi va bolani shaxsiy imtiyozlarni izlashga yo'naltirmaydi, o'zini rivojlantirish zarurati yo'qoladi. Shu bilan birga, shuni hisobga olish kerakki, odatda ta'lim jarayoniga alohida shaxsiy yondashuvni talab qiladigan pedagogik e'tiborsizlik va aqliy zaiflik tufayli bolaning umumiy, qo'shimcha yoki kasbiy ta'lim olishi qiyinlashadi.

5. Agressivlik. Bola barcha kattalar vaqtinchalik ishchi bo'lgan dunyoda yashaydi. Yetim muassasada kamdan-kam hollarda mehr va individual e'tiborga

sazovor bo‘ladi; guruhdagi tengdoshlar bilan munosabatlar raqobatbardosh va har doim ham do‘stona emas (guruh ichidagi o‘ziga xos ijtimoiy ierarxiyaga ega bo‘lgan yopiq davlat muassasasining o‘ziga xos xususiyatlari ham shu erda joylashgan). Natijada boshqalarga nisbatan dushmanona munosabat, ishonchsizlik, murosasizlik shakllanadi. O‘ziga ham qaratilishi mumkin bo‘lgan tajovuz butunlay tushunarli xatti-harakatlar reaksiyasiga aylanadi.

6. O‘zini past baholash. O‘ziga bo‘lgan ishonch ota-onalar tomonidan cheksiz sevgi va qabul qilishga asoslanadi. Bunday vaziyatda bolada ijobiy mustahkamlash, uni qadrligi va noyob shaxs sifatida qabul qilish juda kam. Faqat shu asosda bolaning harakati va rivojlanishi mumkin. Aks holda, uning shaxsiy makoniga har qanday aralashuvga qarama-qarshilik reaksiyasi mavjud.

7. Ijtimoiy moslashuv va qaramlik. Bolalar uyida bola ovqatlanishni, yangi va toza kiyim kiyishni, bo‘sh vaqtini tashkil qilishni, kasb-hunar maktabiga joylashtirishni o‘rganadi, ya’ni. uning barcha dolzarb muammolarini hal qilish.

## **XULOSA**

Mehribonlik uylariga muqobil sifatida ota-onasiz qolgan bolalar hayotida yarim asrdan ortiq tajribaga ega bo‘lgan SOS bolalar qishloqlari SOS qishloqlari faoliyatining asosiy tamoyillari va standartlari ko‘rib chiqiladi. Mehribonlik uylari tarbiyalanuvchilaridan farqli o‘laroq, Bolalar mahallari - SOS bolalarining tashvish darajasi normal chegaralarda bo‘lishi, SOS onasi bilan chuqur hissiy aloqalarga ega ekanligi taklif qilindi.

2. Bolalar mahallari – SOS ta’lim tizimi samaradorligining mezoni sifatida tarbiyalanuvchilarning emotsional holatini baholash taklif qilindi.

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## ATIRGUL METAFORASINING KOGNITIV TAHLILIGA DOIR

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***Annotatsiya:** Ushbu maqolada ruhiy olamdagi konseptual o'zgarishlarning kognitiv kodlari tahlil qilinadi. Shu bilan birga gul metaforasi asrlar davomida mavjud bo'lgan mazmun tizimining zamonaviy konseptual metafora nazariyasiga asoslanadi.*

***Tayanch so'zlar:** kognitiv poetika, kognitiv adabiyot, metafora, she'riy metafora, gul metaforasi, maqsad va manba sohalar, kognitiv tahlil.*

Insonning har bir estetik harakati kabi she'riyat ham birinchi navbatda inson idrokida yuzaga keladigan ijodiy jarayondir. She'riyat boshqa har qanday estetik insoniy, avvalambor, o'z ijodiy tasavvurida vujudga keladi. Demak, she'riyatning kognitiv jihatida she'riyatni kognitiv tekshirishni taqazo etadi. Adabiy tanqidning fanlararo maktabi bo'lgan kognitiv poetika she'riy matnlardagi kognitiv jihatlarga e'tibor qaratib, shoirlar bilishidagi konseptual olamlarni tahlil qilish uchun tegishli asos yaratadi. Shu sababdan she'riyatni bilish ijodi jarayoni sifatida ko'rib chiqish shoirni birinchi navbatda uning idrokidan tadqiq etishni taqazo etadi. Kognitiv adabiyot bu adabiyotning fanlararo maktabi bo'lib, u adabiy matnlardagi kognitiv jarayonlarga e'tibor qaratish orqali shoirlarning konseptual dunyosini tekshirish imkonini beradi. Bu sohaning nazariyalaridan biri bo'lgan konseptual metafora nazariyasi badiiy matnlardagi metaforik tuzilmalarni o'rgansa-da, vaqt va kontekstning kognitiv kodlarini tahlil qilish uchun vaqt yetarli emas.

Soʻnggi yillarda kognitiv fanlar va gumanitar fanlar oʻrtasida farqlar tahlil qilindi. Oʻzaro taʼsirning kuchayishi yangi fanlararo taʼlim sohaslarining paydo boʻlishiga olib keldi. Kognitiv tadqiqotlar, kognitiv adabiy tahlil, kognitiv adabiy tanqid, kognitiv poetika kabi sohalarda ham kognitiv ham gumanitar fanlarning nazariyalari, usullari va terminologiyalaridan foydalaniladi. Kognitiv adabiyot ana shu sohalardan biri “kognitiv fanlar topilmalarini adabiy matnlarga yetkazish” dir. Kognitiv adabiyotlar ham bu adabiy harakatning butun jarayonini tubdan qayta koʻrib chiqish deb taʼriflangan. Bu yerda adabiy jarayon shoirida ham, kitobxondan ham kelib chiqadigan bilish jarayonlariga taalluqli boʻlib, badiiy matnni mazmunli qiladigan kognitiv mexanizmlarni oʻz ichiga oladi. Shunday qilib, kognitiv fanlar va adabiyot fanlari umumiy konseptual asosda birlashtiriladi.

Bundan tashqari, kognitiv adabiyotda badiiy matnning kognitiv va kommunikativ jihatlariga urgʻu beriladi. Kognitiv adabiyotga koʻra, adabiy - badiiy asar, sheʼriyat kognitiv mahsulotdir. Sheʼr ijodi ham shoir bilishida yuzaga keladigan ijodiy jarayondir. Kognitiv adabiyot adabiy jarayonni, inson idrokini qayta ishlash mexanizmlari bilan izohlab, avval adabiyot nazariyasi va ritorikada ifodalangan qarashlarni kognitiv asosga joylashtiradi. Sheʼrning ijodkorning bilimiga daxldor qarashlar, aslida turk shoirlari va adabiy nazariyotchilar tomonidan bildirilgan. Turk shoiri Fikret bir sheʼrida ijod jarayonida uning boshida boʻlayotgan voqealarni sheʼrlashtirar ekan, aslida ijod va idrok oʻrtasidagi bogʻliqlik va bu jarayonda boshidan kechirganlarini hikoya qiladi. Kognitiv adabiyot borliq doirasini inson bilishi sifatida belgilar ekan, tushunchalar olamiga oʻzaro munosabatlarni, oʻzaro taʼsirlarni ham inson idroki sifatida belgilab beradi.

Konseptual metafora va sheʼriy metafora uzoq vaqtdan beri muhokama qilingan tushunchalar boʻlib, ularning taʼrifi, chegaralari va qamrovi haqida hali ham bahs-munozaralar davom etmoqda. Lakoff va Tyorner fikriga koʻra “Sheʼriy fikr bizning kundalik fikrlash usullarimizdan kelib chiqadigan mexanizmlardan foydalanadi, lekin ayni paytda bu mexanizmlarni kengaytiradi va takomillashtiradi va ularni odatdagidan chiqarib yuboradigan tarzda birlashtiradi”. Demak sheʼriy

metaforalarda ham oddiy (kundalik til) metaforalardan kelib chiqadigan, lekin ularni farqlovchi xususiyat mavjud. Keyingi yillarda kognitiv olimlar tomonidan chuqur tadqiq etilgan tadqiqot sohasiga aylangan metafora shoirning shunchaki ritorika emas, balki voqelik va tushunchalar olami bilan aloqasini ochib beruvchi kognitiv ijodiy jarayon sifatida ko‘rila boshlandi.

Metafora tilda qiziqish yoki o‘xshatish natijasida to‘g‘ridan to‘g‘ri ma‘nosidan boshqa ma‘noda qo‘llanilgan so‘z ma‘nosida qo‘llaniladi. Metafora kognitiv ijodkorlik jarayoni sifatida idrokshunoslik nuqtai nazaridan va adabiyot nuqtai nazaridan she‘riyatda ma‘no shakllanishida qo‘llaniladigan element sifatida kognitiv adabiyotshunoslikning markazida turadi. Konseptual metafora nazariyasi fikrni yoki kognitiv sohani boshqa kognitiv sohadan konseptsiyalashimizni aytadi, ko‘pincha mavhum deb o‘ylanadigan “maqsadli maydon” jismoniy (tana) qiymatga ega bo‘lgan “manba maydoni” bilan aniqlanishini taklif qiladigan bilish nazariyasidir.

Konseptual metafora nazariyasi bizning idrokimizda mavhum darajada yuzaga keladigan konseptualizatsiya tashqi dunyoda o‘xshash bo‘lgan boshqa sohalar nuqtai nazaridan tushuntiriladi. Chunki odamlar yolg‘iz mavhum tushunchalar bilan yashay olmaydilar, ular o‘zlari yaratgan belgilar va afsonalar yoki bo‘lishi kerak bo‘lgan narsalar bilan o‘zlarida bo‘shliqlarni to‘ldiradilar.

Gul metaforasining zamonaviy she‘riyatimizda qanday shakllar olganligini aniqlash, o‘zgaruvchan va o‘zgarmas unsurlarni sog‘lom tarzda yoritish uchun metaforaning mumtoz she‘riyatimizdagi o‘rnini ochib berish muhim ahamiyatga ega. Poetik metaforalarni shakllantiruvchi asosiy ta’sirlardan biri bu madaniyatdir. Shoirlarning metaforalardan foydalangani, she‘rning ham madaniyatni bir parchasi bo‘lishi metafora va madaniyat o‘rtasida bevosita bog‘liqlik mavjudligini ko‘rsatadi. Mumtoz she‘riyatda eng ko‘p uchragan metaforalardan biri bu ma‘shuqa -atirgul obrazidir. Ushbu metaforaning manbasi bo‘lgan gul o‘zining go‘zal ifori va turli rangdagi ajoyib turlari bilan azaldan odamlar uchun muhim ahamiyat kasb etgan va barcha madaniyatlarda o‘ziga xos va alohida o‘rin egallagan. Turkiy she‘riyatimizda ham asrlar davomida o‘z ahamiyatini saqlab kelgan.

Oshiq va gulni bir-biriga bog‘lagan tuyg‘u, shubhasiz muhabbatdir. Gul so‘fiylik an‘analarida barcha gullar o‘zining go‘zal hidini, iforini Payg‘ambarlardan olgan degan e‘tiqod bilan uning ramzi sifatida qabul qilingan. Bulbul ham mashaqqatli yo‘llarni bosib o‘tgan darvesh ramzidir. Tonggacha zikr va ibodat bilan mashg‘ul bo‘lgan Haq oshiqdari o‘zlarini gulning ochilishi umidi bilan tongga qadar faryod etgan bulbulga o‘xshatadilar. Shu sababdan ham gul ilohiy go‘zallik va ulug‘vorlikni eng mukammal tarzda aks ettirgani uchun, ehtirosdagi qalb timsoli bo‘lgan bulbul tomonidan sevilgan va abadiy sevilib qoladi.

Bundan tashqari, so‘fiy timsolida g‘uncha shaklidagi gul birlikni, gullagan ya‘ni, ochilgan gul esa, birlikning ko‘plik ko‘rinishini ifodalaydi. Ma‘shuqa ya‘ni gulning metaforasi turli shakllarda namoyon bo‘ladi. Ushbu metaforaning maqsad va manba sohalari quyidagicha ko‘rsatishimiz mumkin:

<b>Maqsad:</b> ma‘shuqa		<b>Manba:</b> gul
Ma‘shuqa	—————>	gul
Ma‘shuqadan kelgan go‘zal xabar	—————>	gulning ochilishi
Ma‘shuqaning bergan azobi	—————>	gulning tikani
Ma‘shuqaning bo‘yi	—————>	gulning shoxi
Ma‘shuqaning yuzi, yanog‘i, dudog‘i	—————>	gulning barglari
Ma‘shuqaning og‘zi	—————>	g‘uncha
Ma‘shuqaning kulishi	—————>	g‘unchaning ochilishi

Yuqorida ma‘shuqa va ma‘shuqaga oid keltirilgan xususiyatlar ma‘lum ma‘noda mumtoz she‘riyatimizda asrlar davomida mavjud bo‘lgan mazmun tizimining zamonaviy konseptual metafora nazariyasiga asoslangan ifodasidir. Bu yerda o‘ziga xos narsa shundan iboratki, berilgan javoblar emas, balki bu javoblar gul metaforasi vaqt o‘tishi bilan qanday o‘zgarganligini ko‘rsatish mumkin bo‘lgan asosiy doirasini tashkil etishidir. Bu yerda bizning idrokimizda mavhum bo‘lgan maqsadli soha, manba sohasiga harakatlanish orqali gavdalanadi.

Lakoff va Johnsonning fikriga ko‘ra: “Metaforalar bizning normal konseptual tizimimizni ham qamrab olgan. Bizning tajribamizda vaqt bilan bog‘liq his-tuyg‘ular,



g'oyalar va ko'plab tushunchalar muhimdir. Mavhum tushunchalar yoki aniq bir shaklda chizib bo'lmaydigan tushunchalar o'rnida biz aniqroq ifodalangan boshqa bir tushunchaga ehtiyoj sezamiz". Xulosa o'rnida shuni aytish mumkinki, bunday metaforalar faqatgina biror so'z san'ati sifatida emas, konseptualizatsiya tizimimizda muhim ro'l o'ynagan kognitiv jarayon sifatida qaralmoqda.

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## ZAMONAVIY INGLIZ TILI ASPEKTLARINI NAZARIY VA AMALIY O‘QITISH MUAMMOLARI, YECHIMLARI VA RIVOJLANISH ISTIQBOLLARI

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***Annotatsiya.** Bugungi kunda chet tillarini o‘rganishga bo‘lgan talab kun sayin ortib bormoqda, xususan, zamonaviy ingliz tiliga qaratilgan talab ham kundan kun ortib bormoqda. Ushbu maqolada zamonaviy ingliz tili tili aspektlari nazariy va amaliy o‘qitish muammolari, yechimlari va rivojlantirish istiqbollari haqida to‘xtalib o‘tiladi. Shuningdek, zamonaviy uzluksiz ta‘limning hozirgi davrdagi imkoniyatlari ko‘rsatilib, bu borada mamlakatimizda amalga oshirilayotgan islohotlar keltirib o‘tilgan.*

***Kalit so‘zlar:** zamonaviy texnologiyalar, mustaqil ta‘lim, multimedia o‘quv qurollari, internet resurslari, til portfeli, chet tilini bilish darajasi, kompyuterlashtirilgan integratsiya.*

Ilm, ijod umuman, go‘zallikning poyoni yo‘q. Agar poyoni bo‘lganida faqat bitta odam “Hamlet”ni sahnalashtirardi. “Har bir insonning hayoti kamida bitta Kitob, kitobning qalinligi Umruga, mundarijasi esa Taqdirga bog‘liq”(William Shakespeare).

XXI asrga kelib, yurtimizda ta‘lim sohasida keskin rivojlanish ishlari olib borilmoqda, jumladan, zamonaviy innovatsion texnologiyalar kun sayin

rivojlanmoqda, eng soʻngi pedagogik texnologiyalar ishlab chiqarilmoqda hamda tatbiq qilinmoqda. Albatta, XXI asr chet tillarini oʻzlashtirish va oʻqitishda zamonaviy texnologiyalar tez va samarali oʻrganishni yetqazib bermoqda. Zamonaviy innovatsion texnologiyalar nafaqat anʻanaviy taʼlim sohasida, balki online yoki mustaqil taʼlim jarayonlarida ham oʻqituvchi va oʻquvchilarga yengillik yaratmoqda. Misol uchun aytadigan boʻlsak, 2019-yilda yurtimizda Covid19 virusi keng tarqaldi. Shu sababli, hamma ish joylari, bogʻcha, maktab, kollej, oliy oʻquv yurtlari va boshqa jamoat maskanlari vaqtinchalik toʻxtatildi. Ushbu davr mobaynida, taʼlim sohasi online oʻqitish tizimini yoʻlga qoʻydi, jumladan, online darslar, online mashgʻulotlar va boshqa turli xil oʻquv metodlari oʻquvchilar uchun tashkil qilindi. Eng asosiysi, eng soʻngi texnologiyalardan foydalanib oʻquv mashgʻulotlari olib borildi va oʻquvchilarga dars mashgʻulotlarini tez va oson oʻrganishini taʼminlab berdi.

Chet tilini bilish Jahon madaniyatini bilish, oʻz faoliyatidan kelib chiqib internet resurslari imkoniyatlaridan foydalanish, shuningdek multimedia oʻquv qurollari va axborot-kommunikatsiya texnologiyalari bilan ishlash imkonini beradi. Chet tilini oʻqitishning asosiy maqsadi bu maktab oʻquvchilarining kommunikativ madaniyatini rivojlantirish va shakllantirishdir. Chet tillarini oʻqitish jarayonida oʻqituvchining vazifasi talabaning bilim va koʻnikmalarini faollashtirish va mustahkamlash. Yangi axborot texnologiyalaridan foydalanish, hamkorlikda oʻqitish loyiha metodikasi, internet resurslari kabi zamonaviy pedagogik texnologiyalar taʼlim sohasida oʻquvchilarga yoʻnaltirilgan taʼlimiy yondashuvlarni amalga oshirishda yordam beradi. Bolalarning ilm olish darajasi va qobiliyatlarini hisobga olgan holda oʻqitishni differentsiallashtirish va individuallashtirish bilan taʼminlaydi.

Til portfeliga keladigan boʻlsak, u chet tillarini oʻzlashtirish darajasiga boʻlgan rus talablarning umumiy Yevropa taʼlim tizimlari bilan oʻzaro aloqa vositasi himoyasida asoslanadi, bu esa oʻz navbatida yagona taʼlim makonini joriy qilish boʻyicha asosiy va boshlangʻich nuqtasidir. Til portfeli texnologiyasida asosiy mezon bu test hisoblanadi yaʼni chet tilini bilish darajasi va baholashning asosiy

mezonidir. Ta'lim jarayonida til portfel texnologiyasining asosiy ustuvorligi o'qituvchidan talabaga yo'naltirishdir. Umumiy qilib aytganda, til portfeli ko'p funksiyali bo'lib, ko'p tillikni mustahkamlashga va rivojlantirishga yordam beradi. O'quv maskanlarida, jumladan, maktablarda til portfeli chet tillarini o'rgatishning istiqbolli vositasi sifatida va chet tilini o'zlashtirishda zamonaviy sharoitlar talabaning o'quv jarayonida u yoki bu natijasini yoki tajribasini ifodalovchi ishchi materiallar to'plami orqali aniqlanadi.

Chet tilini bilish darajasini, o'z-o'zini baholash vositasini yaratish g'oyasini birinchi bo'lib 10 yil oldin Shveytsariyada paydo bo'lgan. Hozirgi kunda Yevropa kengashi qoshida tashkil etilgan Akkreditatsiya qo'mitasida til portfel loyihalari yuboriladi. Til portfelining eng muhim afzalliklaridan biri shundaki, talabaning ma'lum vaqt mobaynida o'rganilayotgan tilni bilish darajasining dinamikasini mustaqil ravishda kuzatish uchun imkoniyatdir.

Chet tilini bilish darajasini optimallashtirish, takomillashtirish, ishlab chiqarish vazifasi doimiy ravishda rus ta'lim sohasida dolzarb muammolaridan biri bo'lgan. Tadqiqotlar shuni ko'rsatadiki, bugungi davrda chet tillarini o'rgatish innovatsion komponentsiz mumkin emasligi ko'rsatdi.

Ta'lim tizimiga innovatsion g'oyalarni joriy qilishimiz uchun, avvalo, boshqa sohadagi muammolarni bartaraf etishimiz kerak, jumladan, O'zbekiston Respublikasi Axborot texnologiyalari va kommunikatsiyalarni rivojlantirish vazirligi hamkorligida O'zbekistonning barcha hududlarida global internet tarmog'ini yana takomillashtirish, hamda uning sifatini jahon standartlariga javob beradigan holda moslashtirish lozim. Shundan so'ng bakalavr va magistratura bosqichlarida yana masofaviy ya'ni online ta'lim tizimini yo'lga qo'yish mumkin bo'ladi.

Xulosa qilib aytganda, zamonaviy ingliz tilini rivojlantirish metodlari texnologik jarayonlarga borib taqaladi. Texnologiya rivojlangan davrda yashar ekanmiz, chet tillariga bo'lgan talab kun sayin ortib bormoqda. Ingliz tili jahon hamjamiyatini yagona, yaxlit, umumjahon aloqa vositasi sifatida birlashtirishda muhim ro'l o'ynaydi. Shuningdek, ingliz tili o'zining geografiyasi va amalga oshirish sohalari

kundan kun kengaytirilmoqda. Jumladan, ingliz tili butun jahon bo‘ylab turli xil mamlakatlar o‘rtasida xalqaro biznes va shaxslararo munosabatlarining kompyuterlashtirilgan integratsiyasidir.

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## XIX ASR OXIRI VA XX ASR BOSHLARIDA TURKISTON HAYOTIDA JADIDLARNING O‘RNI

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***Annotatsiya:** Bu maqolada XIX asr oxiridan XX asr boshiga qadar Turkiston hayotida Jadidlarning o‘rni va roli ko‘rsatilgan. Jadidlarning kelib chiqishi, turli sohalar bo‘yicha faoliyat ko‘rsatishi, ta‘lim, ma‘rifat, tarbiya va madaniyat sohalaridagi muvaffaqiyatlari, milliy tiklanishlarni o‘zlashtirishda o‘zgaruvchan o‘rni, iqtisodiy, siyosiy va madaniy hayotdagi o‘zgarishlarga ta‘sir qo‘yganligi ta‘kidlanadi.*

***Kalit so‘zlar:** Turkiston, Jadidlar, tarix, madaniyat, ta‘lim, milliy tiklanish, iqtisod, siyosiy, o‘zgarish.*

Turkiston tarixida XIX asr oxiridan XX asr boshiga qadar, Jadidlarning hayotida markaziy ahamiyatga ega bo‘lgan davr bo‘lib, ularning o‘rni va roli katta e‘tibor bilan qarash mumkin. Jadidlarning kelib chiqishi va turli sohalar bo‘yicha faoliyat ko‘rsatishi, Turkistonning iqtisodiy, siyosiy va madaniy hayotida katta o‘zgarishlarni olib kelganligini ko‘rsatadi.<sup>1</sup>

Jadidlarning kelib chiqishi Turkistonning o‘zining tarixiy, ijtimoiy va madaniy xalq bilan hamkorlik qilgan zamonida sodir bo‘lgan javobgarlikning natijasi sifatida tushunilishi mumkin. Jadidlar qo‘llarini qamrab, yangi ideyalar va fikrlar bilan umumiy hayotga jalb qilganlar. 19 asrning oxirida, Rossiya imperiyasi Turkistonning ohangli orolida o‘tirgan va turli hududdalarda qonuniy, iqtisodiy va ijtimoiy o‘zgarishlarni o‘tkazgan. Bu muhitda, Jadidlar Turkistonning mustaqilijiga, milliy

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<sup>1</sup>Saidov, B. A. (2013). Jadidlik va milliy tiklanish. O‘zbekiston milliy ensiklopediyasi.

identitetining saqlanishi va o‘zaro intilishini oshirish uchun zarur bo‘lgan ta’lim, ma’rifat va tarbiyani oshirishga yo‘naltirishga erishishdi.

Jadidlarning tarbiyaviy maqsadlariga muvofiq Turkistonning ma’naviy jihatlarini rivojlantirish ham muhim ahamiyatga ega bo‘ldi. Jadidlar, ma’naviy qadriyatlarni ta’lim va ilmiy ishlar yordamida o‘zlarining keng bo‘lgan oqituvchilari orqali o‘rgatishni amalga oshirdilar. Bu, asosan turli ilm-fan sohalarida bo‘lgan to‘garaklikni va ma’naviy muhim masalalar ustida munozara va diskussiyalarni olib borishga yo‘naltirilgan ta’lim uslublaridan foydalanganlarining ko‘rsatgan natijalar bilan aniqlanadi. Shuningdek, Jadidlar zamonaviy tizimlarga moslashtirilgan, tarbiyaviy ma’ruzalarni va kitoblar, jurnallar, gazetalar orqali ta’limni kengaytirishga harakat qildilar.

Jadidlarning iqtisodiy hayotdagi o‘rni va ahamiyati ham sezilarli edi. Ular, iqtisodiy jarayonlarni yangilash, tarif rejimini isloh qilish va mahalliy sanoatni rivojlantirishga oid tavsiyalar berish bilan shug‘ullanishdi. Jadidlar tarixiy ma’rifatga ega, mas’uliyatli fuqarolardir. Ular, turli sohalar bo‘yicha ishlab chiqarish, maishiy qurilish, ta’lim va madaniyatning asosiy omillarini rivojlantirishga va o‘zlashtirishga xizmat qildilar.<sup>1</sup>

Jadidlarning siyosiy hayotdagi o‘rni ham muhim edi. 20 asr boshida, siyosiy fikrlar va ideyalar sohasida Jadidlar Turkistonning siyosiy tizimida katta ahamiyatga ega bo‘lganlar. O‘zbeklar, qirg‘izlar, tojiklar, turkmanlar va boshqa millatlar, Jadidlar orqali milliy tiklanishlarini ifodalash va mustaqillikning o‘zlarining siyosiy maslahatlariga kiritishga erishishdi. Bu, Turkeston xalqining milliy birligini o‘zgartirish, umummilliy g‘oyalarini to‘liq qo‘llash va turli shart-sharoitlarda o‘zaro intilishni oshirishga olib kelgan jiddiy ommaviy ishlar orasida ko‘p vaqt talab etgan.

Jadidlarning kelib chiqishi va faoliyati Turkiston hayotida tarixiy ahamiyatga ega bo‘lib, ularning o‘rni hamda qo‘shimcha roli qadrli kutubxonalar va ilmiy institutlar tomonidan o‘rganilib, tadqiqotlarda o‘zining o‘rniga sazovor sifatida qaralganligi katta asar qoldirgan. Jadidlarning faoliyatining asosiy natijalari orasida

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<sup>1</sup> Nematov, S. (2006). Jadidchilik: tarixiy, iqtisodiy va madaniy o‘zgarishlarni o‘rgangan asosiy davr. Sharq yulduzi.



o‘zbek tilining tarixiy o‘rnini qayta o‘rgatish, tarixiy-madaniy muhitni muhokama qilish, turli sohalar bo‘yicha yangiliklarni o‘zlashtirish, milliy taraqqiyotni yuqori darajaga olib chiqish va mustaqillikni o‘zining siyosiy va madaniy maslahatlariga kiritish kabi ko‘rsatkichlar katta ahamiyatga ega. Ular, Turkistonning o‘zining tarixiy, madaniy, siyosiy va iqtisodiy hayotining asosiy sababiy bo‘lib, bu davrda umuman jamiyatni rivojlantirishga ko‘maklashishdi.

Jadidlar Turkistonning tarixiy, iqtisodiy va madaniy hayotida o‘zlarining ahamiyatli o‘rni va o‘zgaruvchan o‘zliklarini namoyon qildilar. Ularning qo‘llab-quvvatlagan milliy ruh, ilm-fan zavqlari va yuksak insoniy qadriyatlarining muhofazasi Turkistonning asosiy asalarini tashkil etdi. Bugungi kunda ham, Jadidlarning yolg‘izlik, insoniyat, demokratiya va ma’naviyatning muhim asoslari bilan bog‘liq fikrlari va ideyalari Turkiston jamiyatida insonlararo taraqqiyotning paydo bo‘lishiga o‘z hissasini qo‘shgan.<sup>1</sup>

Jadidlarning Turkiston hayotidagi o‘rni va roli, ularning yaratgan o‘ziga xos tarixiy, madaniy, ilmiy va siyosiy yutuqlari bilan tasdiqlangan. Ularning faoliyati Turkiston jamiyatida milliy istiqbollarning mustaqillik yo‘li bilan birlashishiga, milliy yuksak ma’naviyatning tiklanishi va milliy identitetni o‘zlashtirishga yordam berdi. Jadidlarning kelib chiqishi va faoliyati Turkiston tarixining asosiy jarayonlari va o‘zgarishlari bilan bog‘liq bo‘lib, ularning yolg‘izlik, o‘zg‘arishga tayyorgarlik, insoniyat va ma’naviyatga qo‘ng‘iroq qilishga erishganligi Turkistonning mustaqillik yo‘lidagi qadriyat va qo‘shimcha rolini ko‘rsatadi.

Jadidlarning kelib chiqishi va faoliyati Turkiston jamiyatida asosiy o‘zgarishlar yaratdi. 19 asr oxiridan 20 asr boshiga qadar Jadidlar, madaniy, ilmiy va ma’rifat sohalarida katta muvaffaqiyatlar qozondilar. O‘zbek tilining o‘zlashtirilishi, adabiyotning rivojlanishi va tarixiy yodgorliklarining qayta tadqiqi, milliy identitet va birlashuvning mustaqillik yo‘li bilan o‘zaro bog‘liqligi, ilmiy va ma’naviy qadriyatlar rivojlanishiga katta ta’sir etdi.<sup>2</sup>

<sup>1</sup> Usmonov, A. (2010). Jadidlarning iqtisodiy faoliyati va rivojlanishi. Milliy adabiyot, (1), 46-50.

<sup>2</sup> Ismoilov, O. (2015). Jadidchilik va milliy o‘zlashtirish. Xalqaro muloqotlar, (4), 80-87.

Jadidlarning kelib chiqishi va faoliyati Turkiston tarixidagi yoʻnaltirish va oʻzgarishlarni oʻrnatishda muhim ahamiyatga ega boʻlgan. Ularning oʻzlashtirgan maʼnaviy, iqtisodiy va siyosiy gʻoyalar Turkistonning yuksak sivilizatsiya va madaniyat darajasiga erishishida katta hissa qoʻshgan. Ular Turkistonning milliy-iymaniy qadriyatlarini, oʻzbek xalqi odatlarini va atrofdagi insonlararo muloqot va birlashishning muhimligini koʻrsatib berdi. Ularning ilmiy yutuqlari, maʼnaviy fikrlari va milliy identitetga qoʻngʻiroq qilishlari Turkistonning oʻz tarixiy, madaniy va insoniy oʻsishini koʻrsatadi. Bugungi kunda ham, Jadidlar Turkistonning tarixiy va madaniy yodgorliklarini oʻzgartirmagan holda insoniy qadriyat, bilim va yangiliklar asosida milliy yuksakliklarni saqlashga oʻz hissasini qoʻshgan.

Jadidlarning kelib chiqishi va Turkiston hayotidagi oʻrni, ulardan maʼlum boʻlgan taʼlim, ilm-fan, madaniyat, iqtisod va siyosat sohasidagi fikrlari, oʻzbek milliy odatlari va adabiyotining rivojlanishiga hamda milliy identitetni saqlashga oʻz hissasini qoʻshgan. Ularning xizmatlarini baholashda, Turkistonning oʻzining tarixiy, madaniy, iqtisodiy va siyosiy hayoti uchun katta ahamiyatga ega boʻlganligi aniqdir.

XIX asr oxiri va XX asr boshlarida Turkiston hayotida Jadidlarning oʻrni va roli aniqlik bilan koʻrsatilgan. Ular oʻzining oʻrni bilan tarixiy, madaniy, ilmiy, iqtisodiy va siyosiy hayotga muhim taʼsir koʻrsatdi. Jadidlarning kelib chiqishi Turkistonning oʻziga xos madaniy va intellektual jarayonlarni boshlagan va milliy-iymaniy qadriyatlar bilan bogʻliq faoliyatlarini ifodalagan ahamiyatli davr sifatida hisoblanadi.<sup>1</sup>

Jadidlarning taʼlim, maʼrifat va tarbiyaviy sohalar boʻyicha yaratgan oʻziga xos uslublar, milliy tilning oʻzlashtirilishi va yangilashishi, ilmiy fikrlar va ideyalar sohasidagi rivojlanishlar, milliy identitet va oʻzbek xalqining ruhiy tiklanishi uchun muhim asar qildi. Ularning siyosiy va ijtimoiy faoliyati milliy tiklanishlarning mustaqillik yoʻli bilan birlashishiga, milliy birlashuvning rivojlanishiga, oʻzbek milliyatining oʻzlashtirilishiga katta qoʻshimcha taʼsir etdi.

<sup>1</sup> Ismoilov, O. (2015). Jadidchilik va milliy oʻzlashtirish. Xalqaro muloqotlar, (4), 80-87.

Jadidlarning kelib chiqishi va faoliyati Turkistonning rivojlanishida milliy yuksakliklarni saqlash, insoniy qadriyatlar va birlashishni o'zlashtirishga xizmat qildi. Ularning ideyalari, fikrlari va yangiliklari Turkistonning tarixiy, madaniy va ilmiy yurtimizning qimmatli hazinasi sifatida qabul qilinadi. Bugun ham Jadidlarning o'zgaruvchan g'oyalaridan, ilmiy yutuqlaridan, milliy identitetni saqlashga, milliy adabiyot va tilning rivojlanishiga e'tibor qaratishimiz zarur. Jadidlarning kelib chiqishi va faoliyati Turkistonning yirik maqsadlarini o'rnatishda o'z hissasini qo'shgan, jamiyatning insoniy, ilmiy, madaniy va milliy rivojlanishiga katta qo'shimcha hissa qo'shganligini tasdiqlaydi.

Jadidlarning vazifasi va roli Turkistonning mustaqillikka olib kelgan yo'lda jamiyatni rivojlantirishga, milliy-iymaniy qadriyatlar va milliy birlashishni o'zlashtirishga yo'naltirgan. Ularning yolg'izlik, insoniyat, demokratiya, o'zg'arishga tayyorgarlik va ma'naviyatga qo'ng'iroq qilishga erishganligi Turkistonning o'zining o'zgarish va rivojlanish jarayonida ahamiyatli o'rni va rolini ko'rsatadi.

Jadidlarning kelib chiqishi va faoliyati Turkiston hayotida asosiy o'zgarishlar yaratgan, milliy yuksakliklarni saqlab qolgan va milliy identitetni mustaqil yo'l bilan o'zlashtirgan. Ularning tarixiy, madaniy, ilmiy va siyosiy yutuqlari Turkistonning yuqori sivilizatsiya va madaniyat darajasiga erishishida jiddiy asar qoldirgan. Jadidlar o'zining fikrlari va ideyalari bilan Turkistonning mustaqillik yo'lida umuman jamiyatni rivojlantirishga ko'maklashgan. Shunday qilib, Jadidlarning kelib chiqishi va faoliyati Turkistonning tarixiy, madaniy, iqtisodiy va siyosiy hayotida o'ziga xos o'rni bilan yodgorlik qo'shgan.

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## XODIMLAR FAOLIYATINI INNOVATSION “JOB SHARING” USULI ORQALI TAKOMILLASHTIRISH

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**Annotatsiya:** Ushbu maqolada mahalliy hokimiyat organlari va xususiy sektor tarmoqlariga tajribali va professional xodimlarni jalb qilish va mavjud personalni saqlab qolishda teng imkoniyatlar siyosatining bir qismi sifatida kadrlar qo‘nimsizligi masalasidagi afzallik va kamchiliklar tahlil qilingan. Tadqiqot natijalari bo‘yicha xulosa va takliflar ishlab chiqilgan.

Bu maqolaning o‘ziga xosligi shundaki, O‘zbekiston Respublikasi davlat tashkilotlar va xususiy sektorida uchramaydigan, xodimlarning mehnat samaradorligini oshirishga xizmat qiladigan innovatsion metod taklif qilingan.

**Kalit so‘zlar:** Ish almashish, moslashuvchanlik, klassik usul, orollar usuli, gibrid usul, kadrlar qo‘nimsizligining oldini olish.

**Abstract:** This article analyzes the advantages and disadvantages of staff shortages as part of the equal opportunities policy in attracting experienced and professional employees to local authorities and private sector networks and retaining existing personnel. Based on the results of the research, conclusions and proposals were developed.

The uniqueness of this article is that it offers an innovative method that serves to increase the labor efficiency of employees, which is not found in the public organizations and private sector of the Republic of Uzbekistan.

*Аннотация:* В данной статье анализируются преимущества и недостатки нехватки кадров как части политики равных возможностей при привлечении опытных и профессиональных сотрудников в местные органы власти и сети частного сектора и удержании существующего персонала. По результатам исследования были разработаны выводы и предложения.

Уникальность данной статьи в том, что в ней предлагается инновационный метод, служащий повышению эффективности труда работников, не встречающийся в государственных организациях и частном секторе Республики Узбекистан.

### **Kirish.**

O‘zbekiston Respublikasida davlat tashkilotlari va xususiy tarmoqlar tizimida jahon amaliyotida xodimlarni boshqarish sohasida yangicha yo‘nalishga aylanib borayotgan va xodimlar tomonidan iliq kutib olinayotgan job sharing (ishni ulashish) ya’ni, ish soatlarini bir yoki bir necha kishi bilan baham ko‘rish tizimi yanada ommalashib bormoqda.

Hozirgi davrda O‘zbekiston Respublikasining xususiy sektorida mehnat shartnomasiga asoslanmagan holda yollanma mehnat faolloyati bilan shug‘ullanayotgan insonlarda bu usulni ommalashmagan turlarini ko‘rishimiz mumkin. Rivojlangan va rivojlanayotgan davlatlar qatoridan joy olgan Angliya va Shotlandiyadagi 32 kengashdan to‘plangan ma’lumotlar shuni ko‘rsatdiki, ko‘pchilik ayol xodimlar ishni taqsimlash orqali moslashuvchan ishlashni afzal ko‘rishlari mumkin bo‘lsa-da, teng imkoniyatlarni ta’minlash vositasi sifatida ish almashishni amalga oshirish bo‘yicha o‘rnatilgan siyosat kam yoki umuman yo‘q.<sup>1</sup> 1990 yillarning oxirida mahalliy hokimiyat organlarida yangi davlat boshqaruvining mustahkamlanishi bilan ish almashish va umuman moslashuvchan ishlashdan foydalanishga yondashuv tenglikni ta’kidlashdan biznes maqsadlariga erishishga

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<sup>1</sup> Mahalliy hokimiyat organlarida yangi davlat boshqaruvi ostida ish almashish va teng imkoniyatlar” Mohamed Branine AQSh-2004

o'zgard. Ish almashishni rag'batlantirish juda cheklangan. Ishlarni taqsimlash to'liq vaqtli ishlash qonuniga bo'ysunadi va iqtisodiy motivlar bilan belgilanadi. Ish soatini bo'lishish - bu to'liq vaqtli ishning bir yoki bir nechta xodimlar o'rtasida bo'linishida aks etadi. Bu, odatda, ikki yoki undan ortiq xodim tomonidan amalga oshiriladi, ular har bir xodim bajaradigan rolning bir qismiga mutanosib ravishda haq to'lanadi va ta'til olish huquqini oladi. Bu moslashuvchan ish madaniyati o'rnatilgan tashkilotlarda ko'proq uchraydigan moslashuvchan ish turi hisoblanadi. Ish beruvchi nuqtai nazaridan, bu doimiy qamrovning barcha afzalliklari bilan birga bo'lgan to'liq vaqtli roldir. Xodimning nuqtai nazari bo'yicha, bu to'liq bo'lmagan vaqt roli bo'lib, ularga haqiqiy dam olish vaqtini beradi, chunki u yerda bo'lmagan vaqtni boshqa birov nazorat qiladi. Ish ulushi rollari rol va biznes ehtiyojlariga, shuningdek, shaxslarning ehtiyojlari va imkoniyatlariga qarab turli xil usullarda ishlab chiqilishi mumkin. Ikkita eng keng tarqalgan modellar orollar modeli (bu yerda ish samarali bo'linadi) va egizak model (har ikkala xodim bir xil vazifalarni bajaradi, lekin har xil kunlarda ishlaydi). Amaldagi model rolning ehtiyojlari va talablariga qarab rivojlanishi mumkin. Ishga qabul qilish va tanlash tartib-qoidalari kabi ish beruvchilarni ishga yollash bo'yicha standart agentlik (mas'ul tashkilot va idoralar) jarayonlari qo'llaniladi. Ish ulushi doimiy, vaqtinchalik, tasodifiy yoki muddatli pudratchi bo'ladimi, har qanday mehnat shartnomasi uchun ishlatilishi mumkin.

### **Mavzuga oid adabiyotlar tahlili**

Xodimlar faoliyatini rivojlantirish bo'yicha bir qator olimlar tomonidan ilmiy-tadqiqot ishlari olib borilgan. Xususan, mamlakatimiz shu soha olimlaridan, T.Y.Bazarova, N.K.Yo'ldoshev, G.E. Zaxidov va boshqalarning ilmiy-tadqiqot ishlarini ko'rsatib o'tishimiz mumkin. Xorijlik olim Mohamed Branine izlanishlarida "job sharing" tushunchasi batafsil tadqiq qilingan. Bundan tashqari, bir nechta internet saytlaridan mavzuga doir kerakli malumotlar hamda O'zbekiston Respublikasi mehnat kodeksi va menejment faniga doir adabiyotlar o'rganildi.



N.K. Yo‘ldoshev, G.E. Zaxidovning Menejment o‘quv darsliklarini o‘rganish jarayonida quyida keltiriladigan innovatsion “Job sharing” usuliga taaluqli ba’zi jihatlarga ko‘ra, xodimlar faoliyati va korxonalar samaradorligini oshirish uchun smena (taqsimotli ish) usullari taklif qilingan. Hozirda bu jarayonlar yanada ommalashib, xususiyl sektorida, ishlab chiqarish sohasida juda mashhur bo‘lishga ulgurdi. Ammo rivojlangan mamlakatlarda xodimlar faoliyatida ish vaqti va ish yuklamasi haqida yetakchi olimlardan biri Mohamed Branine o‘z izlanishlarida shu ma’lumki, xodimlar samaradorligi ularning ish jarayoni, qobiliyatlari va shaxsiyl hayotida muammolarga uzviyl bog‘liqlidir. T.Y. Bazarovning Menejment darsliklarida ham Mohamed Branine izlanishlarida belgilangan omillar yoritib o‘tilgan.

Quyida biz taklif etayotgan va rivojlangan mamlakatlarda ommalashayotgan innovatsion metodning tavsifi va mohiyatini keltirib o‘tamiz.

**Egizak (klassik) model** - bir xil vazifalarni bajaradigan, lekin turli kunlarda ishlaydigan rolni va uning ish yukini bo‘lishishadigan ikki (yoki undan ortiq) xodimni o‘z ichiga oladi. Ular barcha vazifalar uchun birgalikda javobgardirlar va ularni bajarish uchun jamoa sifatida harakat qilishadi. Bu asosan ikki (yoki undan ko‘p) ishni ulashadigan sheriklar tomonidan yarim kunlik asosda bajariladigan bitta to‘liq vaqtli roldir. Ishda xodim o‘z zimmasiga oladigan vazifalar bo‘yicha hisobdorlik, mas’uliyat va ishlash maqsadlarining yagona to‘plamini bir xil darajadagi tajriba va imkoniyatlarning umumiy mijoz - manfaatdor tomonga o‘tadigan egalik va jamoani boshqarish kelishib olinadi. Ish vaqtiga to‘xtaladigan bo‘lsak, ular soatlar, kun(lar), hafta(lar), oy(lar) umuman olganda vaqt (frilanserlik)ni reja asosida kelishib olishadi, yoki rahbar tomonidan taqsimlanadi. Reja asosida va muvofiq tarzda ish vaqti va topshiriqlar taqsimlab bo‘lingach, vertikal juftlik (ishni bo‘lishganlar) bitta hamkor bilan yuqori darajali va bir hamkor pastroq (bo‘lingan ish staji) bo‘lgan joyda ishlaydi. Uning hamkasbi, katta sherik mentor yoki menejer vazifasini bajarishi mumkin. Vertikal juftliklar twin (egizak) modelida a‘lo darajada ishlaydi, bu yerda juftlikning birgalikda va jamoa a‘zolari bilan uchrashishi va

jarayonni ro'yxatdan o'tkazishi uchun ajratilgan o'zaro faoliyat davrlari mavjud bo'ladi.

**Orollar (ish bo'linishi) modeli** - ikki (yoki undan ko'p) ish yukini emas, balki, xodimning rolini bo'lishishini o'z ichiga oladi. Vazifalar xodimlar o'rtasida taqsimlanadi, bu ularga rolning turli sohalarini qamrab olish imkonini beradi. Lekin ish taqsimlovchilar bir biriga unchalik ishonmaydilar. Bu modelning egizak modeldan farqi shundaki egizak modelda vaqt kelishiladi. Bu modelda esa aynan 2 ta yarim kunlik ish belgilab olinadi. Ishlash maqsadlari va javobgarliklari farqlanadi. Bir ish tavsifi ikkiga bo'linadi, ammo nomzodlar hali ham bir xil qobiliyat, bilim va tajribaga nisbatan baholab olinishi kerak. Turli xil tajriba, mas'uliyat, belgilangan loyiha hamjihatlikda bajariladi.

**Gibrid (kombinatsiya) modeli** - egizaklar va orollar modelining aralashmasi bo'lib, bu yerda ikki (yoki undan ko'p) xodim ba'zi umumiy xodimlar bilan ish yuklamasini bo'lishadi. Mas'uliyat va javobgarlik bir xil kechadi, ba'zida istisno holatlar mavjud deb hisoblanadi. Ish yuklamasi bir-birining kuchli tomonlariga qarab faoliyat yuritishi uchun bo'linadi. Ish tavsifi: ishlash maqsadlarining yagona to'plami, qo'shimcha tajriba va diversifikatsion imkoniyatlardan iborat bo'ladi. Mazkur jarayonda qo'shimcha qobiliyatlar va tajribalar, javobgarlik, nisbiy qobiliyat talab qilinadi va ish yuklamasi bu xususiyatlarning sinovi natijalariga ko'ra taqsimlanadi.

Ish vaqti va yukini ulashishning iqtisodiy mohiyati bizga ish vaqti va yukini ulashishning samarali va innovatsion jihatlarini ochib beradi. Har qanday texnologiyani ustun va zaif jihatlar mavjud. Qidirilgan va tahlil qilingan ma'lumotlarga ko'ra bu tizimning quyidagi tahlilini keltirib o'tamiz (**1-jadval**).

Ushbu tahlil nima uchun jamoada ish ulushiga ega bo'lish turli xillik, moslashuvchanlik va mahsuldorlikdagi ba'zi umumiy bandlik muammolarini hal qilishda yordam berishi mumkinligini tushuntirishga yordam beradi. Ish ulushi tashkilotga xilma-xillik maqsadlariga erishishda yordam berishi mumkin. Undan foydalanishda iqtidorli, ammo kam vakillikka ega nomzodlarni jalb qilish mumkin,

hozirda talab qilinadigan sayohat vaqti, umumiy ta'vil yoki shaxsiy majburiyatlar tufayli yarim kunlik rahbarlik rollarini bajarishi mumkin.

### 1-jadval

#### Job sharing usulining ustunliklari va kamchiliklari<sup>1</sup>:

	<b>Afzalliklari</b>	<b>Kamchiliklari</b>
1.	xilma-xillik	Bizning mijozlarimiz faqat bitta odam bilan ishlashni xohlashadi
2.	moslashuvchanlik	Qaror qabul qilish bu yerda to'lov va huquqlar tez sur'atda
3.	mahsuldorlik	Bu rol qo'shimcha vaqtni talab qiladi
4.		Bu rol bevosita hisobotlarga ega
5.		To'lov va huquqlar

Agar korxonada raqobatbardosh mehnat bozorida ishlayotgan bo'lsa, ish ulushini o'z ichiga olgan manba strategiyalari korxonaga hozirda ancha pastroq stavkalarda murojaat qilayotgan demografik guruhlardan nomzodlarni jalb qilishga yordam beradi - bu korxonaning potentsial iste'dodlar zaxirasini kengaytiradi. Shuningdek, u tashkilotning saqlanishining qimmatli qismini tashkil qilishi mumkin. Strategiya ish ulushi hozirda rivojlana olmaydigan xodimlar uchun martaba yo'lini ochishi mumkin, chunki ularning g'amxo'rlik mas'uliyati, tibbiy sharoitlar yoki jamoat majburiyatlari yarim kunlik ishlashni yagona variantga aylantiradi. Bu, o'z navbatida, tashkilotning iste'dodlar tarmog'ini boyitishi mumkin. Ish ulushi biznes natijalarini buzmasdan har ikkala ish beruvchiga haqiqiy moslashuvchanlikni ta'minlaydi. Bu to'liq vaqtli ishda to'liq qamrovni ta'minlashi mumkin. Bu esa o'z navbatida, katta yoki yuqori lavozimdagi ish beruvchilar uchun moslashuvchanlikni ta'minlaydigan, qisqartirilgan soatlarda boshqacha tarzda erishib bo'lmaydigan talabchan ishga aylanadi.

<sup>1</sup> Job Share Guide - Managers, Public Service Commission and Gemini3 Pty Ltd

Kengaytirilgan ta'tildan qaytgan xodimlar - ota-ona bilan bog'liq holatlarni yoki kasallik bo'ladimi, ish vaqtini qoplashni buzmasdan ishni taqsimlashlar samaraliroq bo'ladi, ba'zi tadqiqotlarda optimal moslashuvlar samaradorlikni 30% gacha oshiradi<sup>1</sup>.

Ish ulushi pensiyaga o'tayotgan keksa ishchilarni saqlab qolish uchun ishlatilishi mumkin, bu ish ulushini ajratishni so'rashning eng ko'p keltiriladigan sabablaridan biri. Agar yosh ishchi bilan vertikal ravishda moslashtirilgan bo'lsa, ish ulushi ketma-ketlikni rejalashtirish uchun ishlatilishi mumkin va rolni qayta tuzish ikkala xodimda ko'nikmalarni shakllantirish uchun ishlatilishi mumkin. Ish ulushi bo'yicha menejerlar odatda bir-birini to'ldiradigan ko'nikmalar, tajriba va muammolarni hal qilish tufayli ishlab chiqarilgan ish doimiy ravishda yuqori sifatga ega ekanligi haqida xabar berishadi. Ushbu keng tarqalgan tushunchadan farqli o'laroq, ish ulushi mijozga qaratilgan rollarda yuqori samarali bo'lishi mumkin, chunki u besh kunlik qamrovga, ta'tilni qamrab olishga imkon beradi va bitta o'rniga ikkita manbaga kirish imkonini beradi. Buni faqat mijozlarga yaxshi yetkazish kerak xolos. Ishonch muvaffaqiyatli ish ulushi juftligining eng muhim atributlaridan biridir va o'sha kuni kim bo'lsa, qaror qabul qiladi. Boshqa sherik qabul qilingan qarorni, hatto ular boshqacha qabul qilgan bo'lsa ham, qo'llab-quvvatlashi va muhokamalarni alohida olib borishi juda muhimdir.

Ish beruvchilar bir-birlarining qarorlariga qanday qilib muvaffaqiyatli ishonishlari mumkinligiga sanoat misolida ko'rish mumkin. Qo'shimcha vaqt miqdorini kuzatish va hatto vazifalar/kunlarni taqsimlash hamkorlar tomonidan boshqarilishi kerak. Ishning, ayniqsa, ma'lum kunlarda qanday tez sur'atlar bilan o'tishini qayd etish, yordam berishi mumkin. To'g'ridan-to'g'ri hisobotlarni raqamlar bo'yicha teng taqsimlash, agar ko'p bo'lsa, topshiriq bo'yicha bo'lish yoki birgalikda ishlash, ish kunlariga bo'lish orqali ko'rib chiqilishi mumkin. Ishlash sharhlari alohida-alohida yoki birgalikda hamkorlar navbatma-navbat ko'rib chiqilishi

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<sup>1</sup> BHP case study on PSC flexible working website for more details on the productivity, safety and production accuracy forecasting data achieved through flexible rostering, including job sharing roster lines in mining workforces. Also Job Share Project Research UK 2011 303 respondents.

mumkin. Bundan tashqari zamonaviy sharoitlarda HR tizimlari e'tiborga olinishi kerak, chunki ish haqi tizimlari ham bo'linishni talab qilishi mumkin. Ish haqi va xodimlarning huquqlari mutanosib ravishda hisoblab chiqiladi va tegishli mukofotlar hisobga olinadi.

### **Xulosa va takliflar**

O'zbekiston Respublikasida davlat tashkilotlari va xususiy tarmoqlar tizimida jahon amaliyotida sinalgan innovatsion "job sharing" (ishni ulashish) ya'ni, ish soatlarini va yuklamasini bir yoki bir necha kishi bilan baham ko'rish tizimi o'rganildi.

Hozirgi davrda ayrim kasb va mutaxassisliklar faoliyatida xodim yoki rahbar tomonidan topshiriqlar o'z vaqtida bajarilmaganligi tufayli Mehnat kodeksida belgilangan mehnat vaqti me'yorlaridam ortiqcha vaqtlarda ishlash holatlari uchrab turadi.<sup>1</sup> Bu jarayonda xodimda ortiqcha ish yuklamasi va charchash, toliqish, ishga mas'uliyatsizlik holatlari paydo bo'ladi. Bu holatda "job sharing" usulini qo'llash samarali natija ko'rsatishi aniq. Demak, xodimlarni boshqarish, tashkilot va korxonalarda ish faoliyatini yaxshilash uchun jahon tajribasi metodi bo'lgan innovatsion "Job sharing" usulini yanada chuqurroq o'rganish va mehnat faoliyatimizga tadbiq etish maqsadga muvofiq bo'ladi.

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<sup>1</sup>O'zbekiston Respublikasi Mehnat kodeksi 115-modda

## Foydalanilgan adabiyotlar.

### Normativ hujjatlar

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## RIVER BASIN WATER EROSION AND ITS CLASSIFICATIONS

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***Annotation.** This article provides a comprehensive examination of water erosion in river basins, exploring its causes, processes, and impacts. It delves into the various classifications of water erosion, highlighting their distinct characteristics and implications. By analyzing the latest scientific literature, the article presents a well-researched and original perspective on this important environmental phenomenon.*

***Keywords:** river basin, water erosion, classifications, erosion processes, hydrology, sediment transport, channel erosion, bank erosion, gully erosion, sheet erosion, rill erosion, environmental impacts.*

**Introduction.** Water erosion is a natural process in which the surface of the Earth is worn away or removed by the action of flowing water. It occurs when water, such as rainfall or runoff, has sufficient force and volume to detach and transport soil particles and sediment from one location to another. Water erosion is a significant geomorphic process that shapes landscapes, alters landforms, and influences the distribution of soil and sediment.

The process of water erosion involves several stages. First, rainfall or snowmelt impacts the soil surface, dislodging particles and creating small depressions. As water accumulates, it starts to flow over the land surface, forming channels or sheet-like flows. The flowing water picks up loose soil particles, sand, silt, and other sediments, transporting them downstream.



The erosive power of water is determined by its velocity, volume, and the slope of the land. Higher water velocities increase the force of impact and the ability to carry sediments. Steeper slopes accelerate the flow, enhancing erosional potential. As water moves across the land, it can create distinct erosion features, such as rills, gullies, and channels.

**Main Part.** Water Erosion Processes:

1. Sheet Erosion:

Sheet erosion refers to the uniform removal of a thin layer of topsoil from the surface of an area. It occurs when water flows over a large, uninterrupted expanse of land, carrying away soil particles. The eroded soil is often transported as a sheet of sediment rather than concentrated in distinct channels or gullies.

Sheet erosion is typically associated with moderate to low-intensity rainfall or runoff and is common on sloping surfaces with minimal vegetation cover. The lack of adequate ground cover leaves the soil exposed to the erosive force of water, making it vulnerable to erosion.

During rainfall or runoff events, water droplets strike the soil surface with force, dislodging soil particles and causing them to be transported downslope. The water then carries the eroded particles over the land, creating a thin sheet of sediment that gradually reduces the fertility and quality of the topsoil.

2. Rill Erosion:

Rill erosion refers to the formation of small channels or depressions, known as rills, on the soil surface due to the concentrated flow of water. It is a more pronounced form of erosion compared to sheet erosion. Rills typically range in depth from a few millimeters to several centimeters and are formed when water flow concentrates in certain areas, creating channels that can transport soil particles.

Rill erosion occurs when the force of water runoff exceeds the soil's ability to resist erosion. It often happens on sloping surfaces where water flow is accelerated, particularly during intense or prolonged rainfall events. Rill erosion is commonly

observed in agricultural fields, construction sites, or areas with disturbed or bare soil surfaces.

### 3. Gully Erosion:

Gully erosion refers to the formation of deep and wide channels, known as gullies, in the landscape due to the continuous and concentrated flow of water. It is a more advanced and severe form of erosion compared to rill erosion. Gullies can be several meters deep and can cause significant soil loss, leading to severe land degradation and environmental consequences.

Gully erosion typically occurs in areas with steep slopes, intense rainfall, or where the soil is highly erodible. It often starts as small rills that progressively deepen and widen over time. As water flows through the rills, it erodes the soil and enlarges the channels, creating gullies.

The process of gully erosion involves the removal of substantial amounts of soil, including topsoil, subsoil, and sometimes even underlying bedrock. Gullies can extend for significant distances, and their formation disrupts the natural drainage patterns of the landscape.

### 4. Streambank Erosion:

Streambank erosion refers to the wearing away and removal of soil or sediment from the banks of rivers, streams, and other watercourses. It is a natural process influenced by the erosive force of flowing water and can have significant impacts on aquatic ecosystems, land stability, and infrastructure.

Streambank erosion occurs when the force of the water exceeds the bank's ability to resist erosion. The erosive power of the water is influenced by factors such as flow velocity, volume of water, bank composition, and vegetation cover. Several factors contribute to streambank erosion:

I. Hydraulic action: Fast-moving water exerts pressure on the bank, gradually undermining and eroding it.

II. Abrasion: Sediment particles carried by the water collide with the bank, wearing it away over time.

III. Mass failure: Banks weakened by erosion may experience mass failure, leading to slumping, landslides, or collapse.

#### 5. Coastal Erosion:

Coastal erosion refers to the gradual or rapid wearing away of land along coastlines due to the action of waves, tides, currents, and other coastal processes. It is a natural phenomenon that can be exacerbated by human activities and factors such as sea-level rise and climate change. Coastal erosion can have significant impacts on coastal communities, ecosystems, and infrastructure.

**Conclusion.** Water erosion is a complex process with various classifications, each characterized by specific mechanisms and impacts. Understanding these classifications is essential for implementing effective erosion control measures and sustainable land management practices. By addressing the causes and consequences of water erosion, we can mitigate its negative effects and promote the conservation of river basin ecosystems.

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## TAX ANALYSIS AND ITS STRUCTURE

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**Abstract.** *The article examines the practical and theoretical foundations of tax analysis carried out by foreign and local researchers. The author has analyzed the shortcomings, given suggestions and recommendations.*

**Keywords.** *Economic analysis, tax analysis, financial resources, methods, theory, tax elements.*

### INTRODUCTION.

In recent years, economic crises in the world, problems in the field of financial management, analysis of the use of financial resources, and the presence of various interests of users of analytical information increase the need for tax analysis. Many scientific studies are being conducted by scientists from Europe, the USA, and Central Asia on the practical and theoretical study of the tax system. In most sources, we can see that the research is covered by economic and financial analysis.

We can witness that the opinions of foreign scientists on economic analysis are more practical than theoretical. For example, M.I.Bakanov and A.D.Sheremet noted that: "Economic analysis as a science is understood as a system of special assignments on research methods and methods used in the processing and analysis of economic data on the activities of enterprises."<sup>1</sup>. In addition, a number of Uzbek scientists have expressed their opinion on economic analysis. In particular, Yo.Abdullayev, A.Ibrohimov, M.Rahimov tried to reveal the essence of economic analysis: "In the analysis, changes in economic events and processes occurring in the

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<sup>1</sup>Bakanov M.I., Sheremet A.D. Theory of economic analysis, INFRA-M, 2011, st.12 p.367

production, commercial and financial activities of enterprises, the causes of changes, management and its coordination issues are studied. Economic analysis is the study of economic processes, describes the changes and differences in them, the study of their interrelationships and relationships under the influence of internal and external factors”.<sup>1</sup>

In our opinion, it is appropriate to study economic analysis today by dividing it into components such as financial analysis, management analysis and tax analysis. The table below shows a series of elements related to the tax analysis process.

**Table 1**

**Basic elements of tax analysis**

Object	System of indicators of taxation
Subject	Tax payers
Subject	Financial and tax reports
Directions	Analysis of the amount of taxes and fees paid; Tax payments, penalties, tax norms debt analysis; Taxation system and tax policy performance analysis.
Analysis of the amount of taxes and fees paid;	Unity; Compatibility; Speed; Generality.
Tax payments, penalties, tax norms	Internal; External; Prospective; Retrospectov; Quick; Final.

<sup>1</sup>Abdullaev Y., Ibrohimov A., Rahimov M. Economic analysis: 100 questions and answers. T.: Work. 2001 9-12 p.-320 p

In the course of our research, we witnessed that the concept of tax analysis, the level of study of its elements is insufficient. The reason is that some taxation concepts used in world practice have not yet been fully formed in our country. For example, according to the tax information function, the system does not fully cover the tax-paying population.

In conclusion, it can be said that it is necessary to improve the introduction of tax-paying individuals and legal entities to the increasingly digitized systems. In this way, it provides an opportunity to increase the literacy of the population and increase the weight of taxes in the state budget.

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## BUXORO SHAHRIDAGI TIK QUDUQLARDAN FOYDALANISHNING SAMARADORLIGINI OSHIRISH

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***Annotatsiya:** Buxoro shahridagi tik quduqlar 1968-2021 yillarda qazilib ishga tushirilgan. Bu tik quduqlar Buxoro shahrining nafaqat qishloq xo‘jaligida foydalanilayotgan maydonlar, shuningdek shahar qurilish va aholi yashaydigan hudular meliorativ holatini yaxshilashga, sizot suvlar sathini me‘yorda ushlab turish va yerlarni sho‘rlanishini oldini olishga mo‘ljallangan va qishloq xo‘jalik ekinlarini hosildorligini oshirishga xizmat qilmoqda. Ulardagi nasos agregatlari 2007-2021 yillarda o‘rnatilib, bugungi kunda ham rusum bo‘yicha, ham ish qobiliyati jihatdan anchayin eskirgan. Foydali ish koeffitsiyenti pasaygan.*

***Kalit so‘zlar:** Nasos, tik quduq, drenaj, burg‘ulash, zovur suvlari, sizot suvlari, ESV nasoslar.*

Buxoro shahridagi tik quduqlar 1972-2022 yillarda qurilib ishga tushirilgan. Bu tik quduqlar Buxoro shahrining qishloq xo‘jaligida foydalanilayotgan maydonlar meliorativ holatini yaxshilashga va sug‘orishga mo‘ljallanganlari esa qishloq xo‘jalik ekinlarini sug‘orishga xizmat qiladi.



Nasosli tik quduq tarmoqlarini kengaytirish Buxoro shahrida ayniqsa katta istiqbolga ega, chunki shaharda jami sug'oriladigan maydon 2950,1 ming m<sup>2</sup>ni 60 foizi kuchsiz sho'rlangan, 20 foizi o'rtacha va 20 foizi kuchli sho'rlangan yerlardir. Olib borilgan tadqiqotlar shu narsa aniqlandiki, har bir tik quduqning debiti loyihadagi 20-25l/sek o'rniga 30-35 l/sek gacha ko'paytirish mumkin ekan. Bir quduq yordamida zaxsizlangan maydon 28-113 ga ni va uning ta'sir doirasi 300-600m ni tashkil qiladi. Quduqlarda foydalanish natijasida sizot suvlarning sathi 0.84m pasaydi. Yer ostidan olinishi lozim bo'lgan chuchuk suvlardan foydalanish yo'li bilan 70 mingga chamasidagi yangi o'zlashtirilgan yerlarni muntazam ravishda sug'orish mumkin. Zax qochirish tik quduqlari orqali sho'rlangan va qaytadan sho'rlanishga moyil bo'lgan yerlarning sho'rini istalgan muddatlarda yuvish imkonini beradi.

Hisoblashlarni ko'rsatishicha, Buxoro voxasida 198 mingga yerni melioratsiya qilish uchun 655 quduq qurish talab etiladi bitta quduq joyining gidrogeologik-litologik sharoitiga qarab 150dan 800 ga gacha maydonga xizmat qiladi. Qolgan maydonda 172.000 ga chamasida tegishli gidro geologic sharoit mavjud emas sababli zax qochirish tik quduqlari qurish maqsadga muvofiq emas. Zax qochirish tik quduqdan foydalanilganda sizot suvlar albatta nasoslar yordamida chiqarib yuborilishi kerak shuning uchun bunday zovurdan faqat suv o'tkazuvchi gorizontni tashkil etuvchi barcha suv o'tkazuvchi qatlamlar o'rtasida gidravlik bog'lanish mavjud bo'lgan joylardagina foydalanish mumkin. Agar tuproq qatlami tagida yotuvchi suv o'tkazuvchi qatlami ancha qalin va suv o'tkazuvchanlik xususiyati yaxshi bo'lsa, vertikal zovur yaxshi natija beradi. Vertikal zovur (zax qochirish tik quduq'i) gorizontaldrenajga nisbatan quydagi afzalliklarga ega:

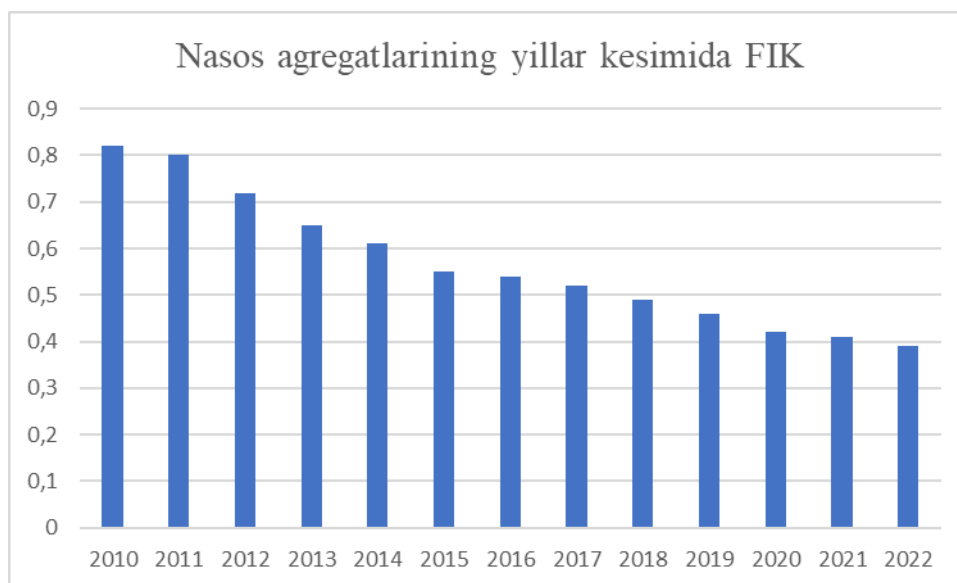
1. Sizot suv satxini juda chuqurlikkacha pasaytirish imkonini beradi;
2. Quduqlardan tortib chiqariladigan sizot suvlardan qishloq xo'jalik ekinlarini sug'orish va aholini suv bilab ta'minlashning qo'shimcha manbayi sifatida foydaniladi;
3. Yer qazish ishlari hajmi ancha kamayadi;

4. Sizot suvlar har qanday holatda bo'lgan joylarda va yilning istalgan faslida bularni qurish mumkin bo'ladi.

Quyidagi kamchiliklarga ega ; suv o'tkazuvchi mayda zarrachali gruntlarda 1 m chuqurlikka to'g'ri keladigan debitning kichikligi va nisbatan eksplutatsiya xarajatlarining (elektr energiyasini sarflanishi eksplutatsiya qilish shtatining saqlanishi va remont qilib turish zarurligi va x.k) ko'pligi zax qochirish tik qudug'ining kamchiligi hisoblanadi.

Buxoro shahridagi drenajlarda foydalaniladigan nasos agregatlari rusumi ancha eskirgan bo'lib, suv chiqarish qobiliyati sezilarli darajada pasayish barobarida foydsali ish koeffitsiyenti kamaygan. Ularni joriy ta'mirlash ishlari olib borilgan bo'lishiga qaramay, nasos agregatlari o'z ish xususiyatini to'liq bajara olmaydi.

Tik quduqlar uzoq yillar davomida eksplutatsiya qilinishi natijasida tik quduqlarga o'rnatilgan ESV-8 nasoslari, elektr qurilmalari, quvurlari va boshqa qismlari o'zining me'yoriy eksplutatsiya muddatini o'tib bo'lgan.



### 2.1-diagramma. Zax qochirish nasoslarining FIKi.

Yuqorida keltirilgan diagrammaga asoslanib, nasos agregatlarimiz o'z ish xususiyatini deyarli yo'qotganligini ko'rish mumkin. Buning asosiy sababi sifatida sizot suvlarining o'zgaruvchanligi, fasllar ta'sirida kuzgi-qishki, shuningdek, bahorgi yog'ingarchiliklar sizot suvlarini yuqori qatlamlarga ko'tarilishiga sabab bo'ladi va nasos agregatlarini muntazam ishlatish zarurati tug'iladi. Buning natijasida tinimsiz

faoliyat hosilasi o'laroq nasos o'z ishchi xususiyatini yo'tadi. Joriy vaqtda ishlatilayotgan ESV turdagi nasos agregatlarini 5 marotabagacha joriy ta'mirlash amalga oshirilishi mumkin bo'lib, ushbu agregatlarni ko'p marotaba qayta-qayta ta'mirlash ishlarini olib borish, uning o'z foydali ish koeffitsiyentini yo'qotishiga sabab bo'ladi.



### **2.2-rasm. O'z ish xususiyatini yo'qotgan nasoslar.**

Ko'pgina drenajlar nasos agregatlariga xos bo'lgan muhim imkoniyatlardan to'liq foydalanmaydigan rejimlarda ishlaydi. Elektr energiyasining samarasiz yo'qotishlari ortib bormoqda va drenajlarda foydali ish koeffitsiyenti pasaymoqda. Shu sababli, tik quduqlarning imkoniyatlaridan maksimal darajada foydalanish va tanlangan sifat mezoniga muvofiq suv uzatish rejimlarini optimallashtirish imkonini beruvchi nasoslarni tanlash zarurati tug'iladi

Ushbu ishda taklif etiladigan nasos agregatlari yangi turdagi Hindiston va Xitoy davlatlarida ishlab chiqarilgan. Ularning foydali ish koeffitsiyenti ancha yuqori bo'lishi bilan birga elektr energiyani tejamkorlik xususiyati ham mavjud. Nasos



agregatini to'g'ri eksplutatsiya qilinishi esa uning uzoq muddatga xizmat qilishini ta'minlaydi.

Bugungi kunda Buxoro shahrida 40ga yaqin tik quduqlarda o'rnatilgan ESV 8-40-90M rusumli nasos agregatlari o'rniga ESV 8-25-100M markali nasos agregati o'rnatilsa, ushbu drenajlarda 50%gacha elektr energiyasidan iqtisod qilishimiz mumkin va yer osti suvlari keskin kamayganligi sababidan shu rusumdagi (ESV 8-25-100M) nasos agregatini o'rnatilsa maqbul yechim bo'la oladi.

### 2.3-rasm. Tavsiya etilayotgan nasos turi.



Tik quduqlar tarmoqlarida joylashgan

quvurlar aholiga noqulaylik tug'durmaslik uchun yer ostidan qazilma shaklda o'tkazilgan hamda ko'p yillar davomida tik quduqni ishlatishda tarmoqdagi quvurlardan foydalanilgan va quvurlar o'z xususiyatini yo'qotib yemirilish va korroziyaga uchragan. Bunga asosiy sabab bo'lib, quvurlardan foydalanishda quduqlardan mavsumiy suv chiqarish amalga oshirilgan va bu quvurlar foydalanishga yaroqsiz holatga kelib qolgan.

### XULOSA

Buxoro shahridagi tik quduqlar 1968-2021 yillarda qazilib ishga tushirilgan. Bu tik quduqlar Buxoro shahrining nafaqat qishloq xo'jaligida foydalanilayotgan maydonlar, shuningdek shahar qurilish va aholi yashaydigan hudular meliorativ

holatini yaxshilashga, sizot suvlar sathini me'yorda ushlab turish va yerlarni sho'rlanishini oldini olishga mo'ljallangan va qishloq xo'jalik ekinlarini hosildorligini oshirishga xizmat qilmoqda. Ulardagi nasos agregatlari 2007-2021 yillarda o'rnatilib, bugungi kunda ham rusum bo'yicha, ham ish qobiliyati jihatdan anchayin eskirgan. Foydali ish koeffitsiyenti pasaygan. Buxoro shahrida 40ga yaqin tik quduqlarda o'rnatilgan ESV 8-40-90M rusumli nasos agregatlari o'rniga ESV 8-25-100M markali nasos agregati o'rnatilsa, ushbu drenajlarda 25%gacha elektr energiyasidan iqtisod qilinishi mumkin va yer osti suvlari keskin kamayganligi sababidan shu rusumdagi (ESV 8-25-100M) nasos agregatini o'rnatilsa maqbul yechim bo'la oladi.

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## BUXORO SHAHRIDAGI TIK QUDUQLAR HAQIDA UMUMIY MALUMOT VA TIK QUDUQLARNI KUZATUV O‘TKAZISH TARTIBI

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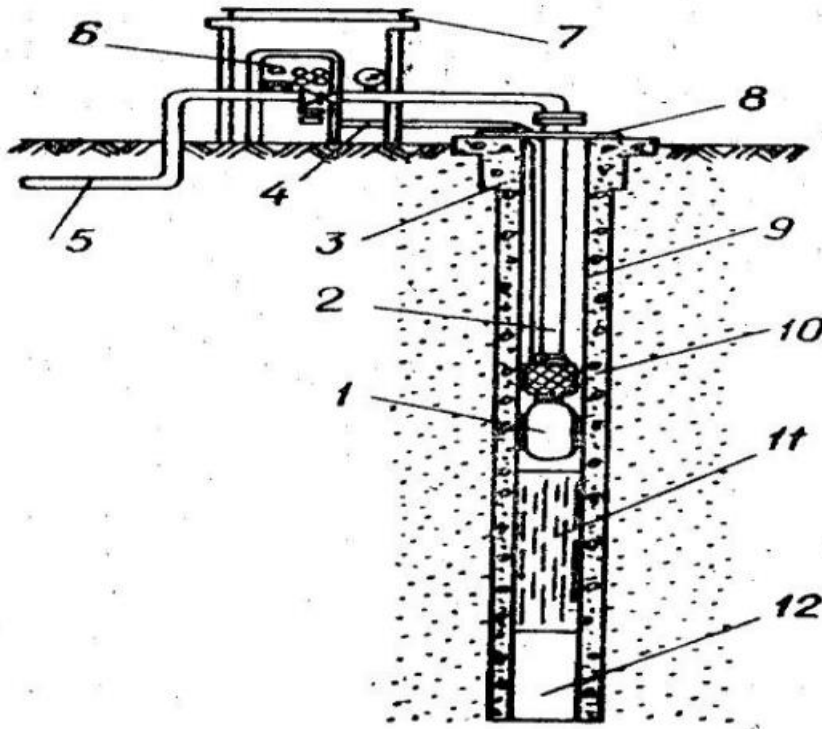
***Annotatsiya:** Buxoro shahridagi tik quduqlar 1968-2021 yillarda qazilib ishga tushirilgan. Bu tik quduqlar Buxoro shahrining nafaqat qishloq xo‘jaligida foydalanilayotgan maydonlar, shuningdek shahar qurilish va aholi yashaydigan hududlar meliorativ holatini yaxshilashga, sizot suvlar sathini me‘yorda ushlab turish va yerlarni sho‘rlanishini oldini olishga mo‘ljallangan va qishloq xo‘jalik ekinlarini hosildorligini oshirishga xizmat qilmoqda. Ulardagi nasos agregatlari 2007-2021 yillarda o‘rnatilib, bugungi kunda ham rusum bo‘yicha, ham ish qobiliyati jihatdan anchayin eskirgan. Foydali ish koeffitsiyenti pasaygan.*

***Kalit so‘zlar:** Tik quduq, drenaj, burg‘ulash, zovur suvlari, sizot suvlari, ESV nasoslar.*

Odatda bitta tik zovur 50-100 ga maydonga xizmat qilib, uning debiti 20-200 l/s ni tashkil etadi.

Tik zovur litologik qirqim tarkibiga binoan va suv ta‘minotining turiga qarab, ayrim yoki chiziqli ko‘rinishida ham joylashishi mumkin. Bu vaqtda zovurlarning hisobi muntazam tik zovurlar hisobidan farq qiladi.

Tik zovurlar 20-150 m chuqurlikda 40-100 sm li burg‘u quduqlari ko‘rinishida bo‘lib, yer osti suvlarini so‘rib chiqarish va zaxqochirish maydonidan uzoqlashtirish vazifasini o‘taydi. Burg‘u quduqlaridan suv so‘rilishi natijasida sizot suvlari sathi keskin pasayadi.



**1.3-chizma. Tik zovur burg‘u qudug‘ining konstruktiv sxemasi: 1- elektronasos agregati; 2- suv ko‘taruvchi quvur; 3-burg‘u qudug‘i-ning og‘zi; 4- tok kabeli; 5-tashlama quvur; 6- elektrodvigatelni avto-matik boshqaruv pulti; 7-nasos stansiyasi binosi; 8-tayanch qurilma; 9-foydalanish kolonnasi; 10- qumshag‘al to‘kmasi; 11-filtr; 12-tindirgich**

Buxoro shahridagi mavjud tik quduqlarning hududlar kesimida va ishlash muddatlari bo‘yicha ma‘lumot 1.2-jadvalda keltirilgan. Har yili bu tik quduqlarning nasoslari va boshqa qismlari joriy va to‘liq ta‘mirlash ishlari olib borilayotgan bo‘lsada bugungi kunda bu tik quduqlar kafolatli ishlashini ta‘minlay olmayapti. Buning oqibatida sizot suvlari to‘planib qolishi, sho‘rlashish kabi qator ekologik muammolar yanada ildiz otmoqda. Ushbu muammolar yechimi sifatida tik zovurlarda innovatsion texnologiyalardan foydalanish berilgan.



Yuqorida keltirilgan zax qochirish quduqlari Buxoro shahrida uzoq muddat davomida xizmat qilib kelmoqda. Bu quduqlarda bugungi kunga qadar kam miqdorda kapital ta'mirlash ishlari olib borilgan.

Quduqlarni kavlash (burg'ulash) o'ziyurar stanoklar UGB-50 m, LBU50, SBUDM-150 yordamida amalga oshiriladi. Burg'ilash vaqtida va so'ngra kuzatuvlar sath o'lchovchi gidrogeologik ruletka, elektr sath o'lchovchi va avtomatik ravishda sath o'lchovchi qurilmalar yordamida olib boriladi.

Rejim quduqlarini kavlashda, geologik kesim va kimyoviy tahlilga olinadigan namunalar hujjatlashtiriladi. Jihozlangan quduqlar sizot suvlari rejimi ustidan to'liq hajmdagi (turdagi) kuzatuvlarni ta'minlashi lozim.

Mustahkamlovchi quvurlar metallardan, asbotsementdan, plastmassadan yoki sopoldan ishlangan bo'ladi. Diametri 89; 127; 146 mm li bo'ladi. Sizgichlar uchun material va konstruksiya suvli qatlamning litologiyasiga qarab tanlanadi. Sizgichning uzunligi 1-2 m, pezometrniki 0,5-1,0 m, tindirgich uzunligi 1,0-1,5 m bo'ladi.

Sizgich o'rnatilgan chuqurlikdan yuqorisi, ya'ni quvur bilan quduq devori orasidagi bo'shliq sementlanadi yoki gill bilan shibbalanadi. Quduqning og'zi atrofidagi maydoncha 0,2-0,3 m chuqurlikda sementlanadi. Quduqlarni buzilishdan saqlash uchun quduq og'ziga diametri va balandligi 0,5-1,0 m bo'lgan temir beton halqa o'rnatiladi. Hamma quduqlar qulflar (qopqoqlar) bilan yopiladi. Qavatli (yarusli) pezometrlarni jihozlashda sizgichlar izolyasiyasini saqlash, loyqa bosmasligini ta'minlash kerak. Quduqlar bir yilda bir marta nivelirovka qilinadi.

Tayanch quduqlari yordamida kuzatuvlarni olib borish muddatlari, sizot suvlari rejimining asosiy xususiyatlari, uning shakllanish qonuniyatlari va chuqurlik bo'yicha minerallashganligini, qatlamlar bo'yicha, o'zgarish qonuniyatlari regional quduqlarda o'rganilganligini hisobga olib belgilanadi. Shuning uchun tayanch kuzatuv quduqlarining vazifasi yerlarni meliorativ holatini nazorat qilish bilan chegaralanadi. Shuning uchun ko'pgina sug'oriladigan tumanlarda sizot suvlarining chuqurligi 5-7m dan yaqin bo'lgan yerlarda, sizot suvlarining sathi va bosimi, suvlarning pezometrik sathi 1 oyda 3 marta o'lchash bilan chegaralanadi. Kuzatuv oyning 1-nchi, 11-nchi va

26- kunlarida o'tkaziladi. Harorat maxsus jihozlangan quduqlarda bir oyda bir marta oyning 1-nchi kunida o'tkaziladi.

Minerallashganlik yuqori hamda ishqoriyligi ko'tarilgan sizot suvlarining namunalari (minerallashganlik darajasidan qat'iy nazar) yiliga 2 marta vegetatsiya boshlanishidan oldin (1 aprel) va vegetatsiya tugagandan so'ng olinadi. kapital sho'r yuvish (promivka) o'tkaziladigan sho'rlangan yerlarda qo'shicha namunalar olinishi mumkin.

Barqaror chuchuk suvlar shakllangan tumanlarda, ya'ni tabiiy zovurlar bilan ta'minlangan yerlarda namunalar 2-3 yilda 1 marta olinadi va asosan suvlarni sifatini «subirrigatsiya» uchun, baholash uchun olib boriladi. Namunalar maxsus qurilmalar yordamida kuzatuv qudug'idagi suv hajmining 2-3 barobarini tortib tashlab olinadi.

Past darajada tabiiy drenalangan, sizot suvining chuqurligi 10-12 metrdan katta bo'lgan yangi o'zlashtirilgan yerlarda sath va harorat har oyning 1-nchi kunida, tahlil uchun namuna esa yiliga 1 marta o'lchanadi. Sizot suvlari sathi sug'orish ta'sirida ko'tarilib borgan sari (chuqurlik 10 m dan kichik) o'lchashlar muddati tezlashadi, muddatlar kichik chuqurlikdagi kabi olib boriladi.

Xo'jaliklar hududida joylashgan quduqlarda kuzatuvlar 1 oyda bir marta o'lchanadi. Meliorativ sharoit murakkablashgan holda sizot suvlarini ko'tarilishi ta'sirida (masalan, sug'orishdan oldingi davr, vegetatsiya davrining o'rtasida, yerlarni sho'rini yuvishdan oldin va b.) kuzatuvlar vaqti qisqartiriladi. Bu yerlarda qo'shimcha quduqlar qazilishi ehtiyoji tug'ilishi mumkin.

Sizot suvlarining yotish chuqurligi va minerallashganligini aniq masshtabli xaritasi quyidagi masalalarni yechishda foydalaniladi:

- yerlarning meliorativ holatini nazorat qilish;
- tuproqning tuz va suv rejimiga bo'lgan talabini hisobga olib qishloq xo'jalik ekinlarini joylashtirish;
- qishloq xo'jalik ekinlarini sug'orish rejimini tuzish va aniqlashtirish, sug'orish tizimlarini ochish muddatlarini rejalashtirish, profilaktik suv quyishlarni rejalashtirish;

- suv va tuz balansini hisoblash;
- meliorativ tadbirlarning samaradorligini baholash;
- gidrogeologik-meliorativ bashoratlash va hisobotlarning ishonchligini tekshirish va ehtiyoj bo'lsa qo'shimcha meliorativ tadbirlarni rejalashtirish.

Xo'jaliklar hududidagi va tayanch quduqlar bo'yicha yuqorida ko'rsatilgan vazifalarni bajarish uchun olib borilgan kuzatuvlar tuproq melioratsiyasi muvaffaqiyatli tugaganidan so'ng ham davom ettiriladi

Buxoro shahrida joylashgan 98 ta tik quduqlarni mavsum davrida bir me'yorda ishlashini va uzoq muddat xizmat qilishini ta'minlash maqsadida drenaj xodimlari va Meliorativ ekspeditsiya xodimlari jadval tuziladi.

Xarbiy kism-Namozgox ko'chasi	1	29.08.2022dan 4.09.2022gacha
I.Karimov ko'chasi	3	
M.Ikbol ko'chasi	4	
Kizilkum ko'chasi	5	
Texnol. Oliygox.kottejlari old.	9	
Dilkusho ko'chasi	12	10.10.2022dan 16.10.2022gacha
Dilkusho ko'chasi	13	
Cho'lpon ko'chasi	14	
Abu Xavz Kabr	15	
Chorbakr	16	
Somoniylar	17	14.11.2022dan 20.11.2022gacha
Xazrati Imom	18	
Xazrati Imom	19	
Trolleybus depo	20	
Shaxar Hokimligi	21	
AK.Shneyder ko'chasi	22	12.12.2022dan 18.12.2022gacha
Ko'zi Ojizlar	23	
Tez yordam markazi	24	
Olimpiya Sp/maktab	25	
M.Ikbol	26	

Arxitektura qurilish kolleji	27	16.01.2023dan 22.01.2023gacha
Sayfiy Buxoriy	28	
Xo'ja Ismat	29	
Zuxro	31	
S.Yurenev ko'chasi	32	
Sharq	33	20.02.2023dan 26.02.2023gacha
Sanoatchilar ko'chasi	35	
Buxoro Sanoat MChJ xudud	36	
Buxoro Davlat universiteti	38	
K.Murtazoev	39	
Piridastgir	40	13.03.2023dan 19.03.2023gacha
Namozgox	41	
Namozgox	42	
Jalol Ikromiy	43	
K.Murtazoev	44	

Quyidagi jadvalda keltirilganiday yog'ingarchilik vaqtlarida bir haftalik davomiylikda ishlatish ko'zda tutiladi. Shu bilan birgalikda kunlik quduqning suv chiqarish qobiliyati tekshiriladi va qayd daftariga belgilab boriladi. Buxoro shahrida joylashgan 98 ta quduq eksplutatsiya xodimlariga bo'lib berilgan bo'lib tik quduqning soz xolatda ishlashi, mavsum davrida sizot suvlarini chiqarishi va quduqning tashqi ko'rinishidagi kamchiliklarni bartaraf etishi lozim.



### 3.2. Buxoro shahridagi tiq quduqlarni ta'mirlashga ketadigan sarf harajatlar

## XULOSA

Buxoro shahridagi tik quduqlar 1968-2021 yillarda qazilib ishga tushirilgan. Bu tik quduqlar Buxoro shahrining nafaqat qishloq xo‘jaligida foydalanilayotgan maydonlar, shuningdek shahar qurilish va aholi yashaydigan hududlar meliorativ holatini yaxshilashga, sizot suvlar sathini me‘yorda ushlab turish va yerlarni sho‘rlanishini oldini olishga mo‘ljallangan va qishloq xo‘jalik ekinlarini hosildorligini oshirishga xizmat qilmoqda. Ulardagi nasos agregatlari 2007-2021 yillarda o‘rnatilib, bugungi kunda ham rusum bo‘yicha, ham ish qobiliyati jihatdan anchayin eskirgan. Foydali ish koeffitsiyenti pasaygan. Buxoro shahrida 40ga yaqin tik quduqlarda o‘rnatilgan ESV 8-40-90M rusumli nasos agregatlari o‘rniga ESV 8-25-100M markali nasos agregati o‘rnatilsa, ushbu drenajlarda 25%gacha elektr energiyasidan iqtisod qilinishi mumkin va yer osti suvlari keskin kamayganligi sababidan shu rusumdagi (ESV 8-25-100M) nasos agregatini o‘rnatilsa maqbul yechim bo‘la oladi.

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## THE STRUCTURAL-SEMANTIC AND FUNCTIONAL ANALYSIS OF THE LEXICAL UNITS EXPRESSING THE MEANING OF DESIRE

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**ABSTRACT:** *The purpose of the article is to explore structural-semantic and functional peculiarities of the category of desire in English and Uzbek languages. Through the article it is possible to notice different ways of the chosen meaning in English and Uzbek.*

**KEY WORDS:** *category, morphological, syntactic, lexical, subjunctive mood, analytic and synthetic forms complex sentence, paradigmatic method, typological category.*

The category of desire in the English language, not being thoroughly investigated as an independent category, reflects its wider expression in the morphological, syntactic and lexical layers of the language. According to the results of the research, as the main basis of the category of desire in the English language serves the subjunctive mood. The analytic and synthetic forms, included into the system of subjunctive mood, express the deservedness of action and some desired level of its happening.

The subjunctive mood is the basis of the category of desire and we will analyzed the subjunctive mood.

The mood, generally speaking, is a category of verb that expresses the relation of a speaker to the universe through sentence. The traditional grammar appoints the existence of the 3 types of mood- indicative, imperative and subjunctive.



We can differentiate the following types of subjunctive mood:

- Type of having non-contradictory content to the real universe- *if he were, if he had been;*
- Type of expressing the contradictory meaning to the universe- *if he were, if he had known;*
- approximate type, made up of “*should*”- *should you meet him;*
- Conditional analytic form that comes with “*should*” and “*would*”: *what would you answer if you were asked?;*

This classification, according to its basis, can be considered as semantic classification.

I.B.Khlebnikova differentiates the followings in the content of subjunctive mood: The conditional mood, subjunctive (including such synthetic forms as: *be, were, if I knew*) and not included into system variants.

The lexical units forming the dictionary system of the English language can be distinguished into simple words, derived words and compound words. And the basis for this view can be taken the morphological analysis by V.Fromkin and R.Rodman which distinguished words into monomorphemic, derived and compound words.

The simple words that comprised 33% of the words taken for the analysis of words belonging to the nouns (*desire, want, wish, will, heat, hunger, thirst*) and expressing the category of desire in the English language. 90 % of words were verbs (*to want, to desire, to wish tend, hope, aspire, beg*), 6 % adjectives (*agog, eager, keen, lewd*) and 12 % adverbs (*rather, perhaps*).

The suffix mainly serves in the derived words. It was defined that the noun-forming suffixes participate in making up the nouns expressing the meaning of desire: *-ion/ -sion/ -tion/ -ation (inclination, requisition), -ness (willingness), -ing (craving), -(i)t y(desirability), -ance/ -ence (appetence, prurience), -er/ -or (adorer, prayer, petitioner), -cy (obstinacy), -y (jealousy), -ot (zealot), -ac (maniac), urn (desideratum), -ast (enthusiast), -asm (enthusiasm).*



The derived words, made up with the help of adjective- forming suffixes comprise 90% of semantic group: *-able (desirable), -ive (attractive), -ing (willing), -ed (wished), -ful (lustful), -ous (desirous), ate (passionate), -ish (freakish), -al (maniacal), -ic (enthusiastic), -ent (ardent), -y (greedy), -ac (aphrodisiac)*.

The compound nouns that form the category of desire in the English language comprise 2% of nouns belonging to this category. *monomania, megalomania, monomaniac, nymphomaniac ,shutterbug, firebug, crosswordpuzzleitis, ain't-supposed-to-it-itis, Phy-Beta-Kappa-itis* The compound words comprise 4% of adjectives: *open-mouthed, long-wished, self-willed, ill-willed, good-willed*.

The category of desire together with word combinations can be widely used as means of phraseological units in the syntactic layer of the language. The analysis revealed that nominative-substantive, nominative-adjective and nominative-adverbial phraseological units are included into nominative phraseological units. For example, such nominative-substantive phraseological units as: *that's the card, good will, ill will, the lust of the flesh, a call of the nature* are formed on the basis of constant connection of components. The parts that form these units reject their replacement by another equivalent. This kind of nominative- substantive phraseological unit is constant. The nominative-substantive phraseological units as: *men of good will, the desire of eyes, presidential fever* are formed on the basis of constant variant connection of components. The lexical variants of nominative-substantive phraseological units expressing the semantics of desire can be viewed in the following examples: *men of good will-people of good will, the desire of eyes-the light of eyes, presidential fever-presidential bee; etc.*

The explicitly expressed micro fields' dominant of desire sememe participates as the complex sentence constructions. In the complex part the object of desire, and in the main clause the feeling of desire itself is revealed, for example: *If you wanted to be exact, it was a decimal that went on and on forever without repeating the pattern of numbers (C.S)*

*If I were you, I would work hard in order to submit all the papers on time(C.S)*

The implicit micro fields' feeling and object of desire, revealing the wish is secretly expressed. On the basic stem meaning of the verbs "want" and "desire" is implicitly formed the meaning "to aspire".

The implementation of field approach to the process of the investigation of the category of desire in the English language helps to widen the study of language material and solve the contradictions between morphology, syntax and lexis. It was defined that lexical-semantic group, expressing the category of desire and distinguished on the basis of systematic paradigmatic method, and its elements included into its rich content, reveal its meaning of desire in various levels. It was found out that out of 107 verbs, which make content of LSG, only 14 express the meaning of desire as the main meaning and form the nucleus of the group. The rest verbs comprised the periphery of the group.

The reflection of the category of desire in the English language in all layers of the language was the proof for this category to have the inter layer peculiarity. This was enough basis for us to consider the category of desire as a typological category. Therefore, the expression of the meaning of desire not only in English, but in other related and non-related languages is the proof of our views.

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## MODEL OF FORMATION OF AUDITORY COMPETENCE OF CADETS

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***Annotation:** Listening as recognition of oral speech and as training in this type of speech activity is a difficult task. In the light of the new concept of education development, special attention is paid to the professional, business and socio-cultural aspects. This involves the formation of a cadet's motivation to master a foreign language in order to achieve and maintain a certain level of professional competence for further direct professional communication in a foreign language with colleagues, which will increase employment opportunities in an integrated world in the modern mobile global labor market.*

***Key words:** oral speech, new concept, socio-cultural, professional competence, professional communication, integrated world, global labor market.*

Currently, in accordance with a significant shift in emphasis in higher professional education, innovative educational technologies, models, methods and tools are being actively developed and introduced into pedagogical practice. The indicated requirements are expressed in the need to train specialists with a high level of knowledge of foreign languages. Our analysis of the scientific literature showed that in the theory and practice of professional training of cadets of the Faculty of Foreign Languages, a rich experience in the formation of professional competencies has been accumulated to date. However, the problem of improving auditory competence through the use of authentic materials remains one of the most relevant, and poorly developed. This led us to the need to develop a pedagogical model that would correspond to the modern conditions of professional training at the

university. For any pedagogical research, the problem of choosing its fundamental methodological orientation is relevant: from what angle the researcher will consider his object of study. The process of formation of auditory competence of cadets through the use of authentic materials is a complex phenomenon that requires a comprehensive study using various theoretical and methodological approaches. Based on this, we consider it expedient to combine systemic, activity and competence-based approaches.

The system approach is general scientific and acts as a methodological basis in pedagogical research, it is based on the idea of an object as a system. The system approach allows us to consider the process of formation of the auditory competence of cadets as an integral system of interrelated structural components, to reveal the variety of connections, to reveal the mechanisms that ensure the efficiency and integrity of the system. From a philosophical standpoint, a systematic approach means considering the phenomena of reality from the point of view of integrity, the complex organization of the objects under study, their internal functioning and dynamics. The use of a systematic approach in pedagogical modeling allows us to consider the process of forming the auditory competence of cadets and as a system of certain interrelated actions that form a hierarchical structure, allows us to analyze the internal and external connections and relations of the pedagogical object, to consider all its elements, taking into account their place and functions in it.

At present, the activity approach has a general theoretical status along with the systemic and other approaches. The significance of the activity approach in achieving the goals of our study also lies in the fact that it made it possible to consider the pedagogical process of the formation of auditory competence as a continuous change of various types of specially organized activities aimed at developing the personality of a future specialist, made it possible to consider the main components of the activities of a teacher and a cadet from a single methodological positions, namely, from the standpoint of the category of activity, to reveal the nature of their interaction, to define the process of formation of auditory competence as a continuous

change of various types of activity. The competency-based approach is a method of modeling learning outcomes and presenting them as norms for the quality of higher education. The competence-based approach regulates a new type of educational results, is aimed at organizing the educational process, involves the development and self-development of the individual, the significant use of subjective experience, the practical orientation of education, which corresponds to the idea of forming the auditory competence of cadets.

In the scientific literature distinguish three types of models:

- physical (having a nature similar to the original);
- real-mathematical (their physical nature differs from the prototype, but a mathematical description of the behavior of the original is possible);
- logical-semiotic (constructed from special signs, symbols and block diagrams).

The type of model depends on the information essence of the modeled object, connections and relationships between information components. There are no rigid boundaries between types of models. Pedagogical models belong to the second and third types of models.

The main requirement for the model is the adequacy of the real processes or objects that the model replaces. At the same time, those characteristics and parameters of the original object that are not essential for studying the object are discarded. The development of a system for the development of a specialist's personality in accordance with the goals of training is carried out on the basis of a model of the educational process, which includes such elements as the study of learning motives, the needs of students, goals, objectives and prospects for learning.

The formation of auditory competence is ensured if the educational process is carried out on the basis of the developed model. The presented model (Scheme 5) of formation of a cadet's auditory competence consists of logically consistent elements. This model belongs to the logical-semiotic type of the model described by A.N. Daikhin. The developed logical-semiotic model is a construction in which we placed the symbols of our experience. The developed model is based on the science of

semiotics, which studies the properties of signs (symbols) and sign systems. Semiotics made it possible to consider the model from the standpoint of syntactic, semantic and pragmatics of the functioning of sign systems (the process of forming linguistic competence). In building the model, syntactics made it possible to determine the connection and relationship between the components of the model. The selection of the content of the components of the model is made depending on the direction of education, worldview, theoretical and practical preparedness of the trainees, the individual's need for interdisciplinary knowledge and methods of activity. The formation and subsequent development of academic, and later professional mobility of a future specialist, presupposes the development of foreign language communication skills. The goals of linguistic education of a future specialist at the present stage include the development of auditory competence, as well as readiness for intercultural communication using the language being studied as a tool for this communication.

In modern society, the path to professionalism is the continuous updating of professionally important knowledge, skills and experience through advanced training courses, self-study and self-education, as well as the use of information sources for these purposes, including authentic ones. It requires constant work on self-development, the development of an individual style of activity. This process is motivated by internal motives, aspirations of a person, his goals, such as leadership, creativity, communication, formed in the educational process, where interest in learning, arising on the basis of motivation, is of great importance. Interest and motives in the educational process consolidate and develop the knowledge, skills and practical experience of cadets.

**Conclusion:** We consider the motivational component of the model as an internal aspiration of the cadet himself formed as a result of education and the influence of external factors on the acquisition of subjective experience in the field of listening to authentic sources of information, and also as a life prospect for professional growth. The formation of a cadet's motivational orientation also depends on his productive educational activity, which activates cognitive, emotional and functional processes.



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**MAKTABGACHA TA'LIM TIZIMIDA INNOVATSION  
TEXNOLOGIYALARDAN FOYDALANISHNING SAMARA VA  
NATIJALARI**

**Ibragimova Nozbegim Furqat qizi**

Romitan tumaniga qarashli 2-son davlat maktabgacha ta'lim tashkiloti

*Annotatsiya: ushbu maqolada ta'lim sifatining asosiy omillaridan biri bo'lgan innovatsion ta'lim texnologiyalari va interfaol metodlarni ta'lim jarayoniga samarali tatbiq etish me'zonlari yoritib berilgan*

*Kalit so'zlar: innovatsiya, axborot, maktabgacha ta'lim, texnik vosita, muloqot, kompyuter, xorijiy tajriba, ta'lim.*

*Ключевые слова: инновации, информация, дошкольное образование, технические средства, связь, компьютер, зарубежный опыт, образование.*

*Keywords: innovation, information, preschool education, technical means, communication, computer, foreign experience, education.*

Mamlakatimizni ijtimoiy-iqtisodiy rivojlantirish bo'yicha ustuvor vazifalarga muvofiq kadrlar tayyorlashning mazmuni tubdan qayta ko'rib chiqish, xalqaro standartlar darajasida oliy ma'lumotli mutaxassislar tayyorlashga zarur shart sharoitlar yaratish maqsadida O'zbekiston Respublikasi Prezidentining 2017-yil 20-

apreldagi “Oliy ta’lim tizimini yanada rivojlantirish chora-tadbirlari to‘g‘risida” gi PQ- 2909-son qarori qabul qilindi.

Mazkur qaror bilan oliy ta’lim darajasini sifat jihatidan oshirish va tubdan takomillashtirish, oliy ta’lim muassasalarining moddiy-texnika bazasini mustahkamlash va modernizatsiya qilish, zamonaviy o‘quv-ilmiy laboratoriyalari, axborot-kommunikatsiya texnologiyalari bilan jihozlash bo‘yicha Oliy ta’lim tizimini 2017-2021 yillarda kompleks rivojlantirish dasturi tasdiqlandi. Ta’lim tizimining hozirgi holati noan’anaviy ta’lim texnologiyalarining roli ortib borayotgani bilan tavsiflanadi. Talabalar tomonidan ularning yordami bilan bilimlarni o‘zlashtirish an’anaviy texnologiyalarga qaraganda ancha tezdir. Ushbu texnologiyalar bilimlarni rivojlantirish, egallash va tarqatish harakterini o‘zgartiradi, o‘rganilayotgan fanlarning mazmunini chuqurlashtirish va kengaytirish, uni tezda yangilash, samaraliroq o‘qitish usullarini qo‘llash, shuningdek, har bir kishi uchun ta’lim olish imkoniyatini sezilarli darajada kengaytirish imkonini beradi. "Ta'lim texnologiyasi" tushunchasi keng qo‘llanilishiga qaramay, juda shartli. V.I.ga ko‘ra. Zagvyazinskiy ta'lim jarayonida qo‘llaniladigan texnologiyalarning turlarini "o‘quv yoki pedagogik emas, balki o‘qitish deb atash to‘g‘riroqdir va ishlab chiqarish sohasidan olingan atamaning o‘zi, albatta, ta’limda shartli ravishda qo‘llaniladi Innovatsion usullarda dars o‘tish jarayonini, ya’ni zamonaviy pedagogik texnologiyalarni boshlang‘ich ta’lim davridan boshlab tashkillashtirish ta’lim tizimida yuqori samara beradi. Bu degani, boshlang‘ich ta’lim umumiy o‘rta ta’limning poydevori hisoblanadi. Ana shu poydevorni mustahkam tarzda bunyod etish kelgusi davrlardagi ta’lim jarayonlarining o‘tilishida ham qulayli yaratgan bo‘ladi. O‘z-o‘zidan kelib chiqadiki, boshlang‘ich ta’limdan boshlab tashkil etilgan pedagogik texnologiyalar ta’limning keyingi davrlarida tshkil etilishida birinchi bosqich vazifasini o‘taydi. Yangi texnologiyalar katta ta’lim imkoniyatlarini ochdi. Ro‘y berayotgan sifat o‘zgarishlar shuni ko‘rsatadiki, odat bo‘lgan tushuntirishda "o‘rgatish" jarayonlari o‘qituvchilarning kasbiy imkoniyatlari chegarasidan tashqari chiqib keta boshladi. Vujudga kelgan yangi texnik, axborot, bosma, eshitish va ko‘rgazma vositalari o‘ziga xos tarzda

yangi metodikalar bilan ta'lim jarayoniga ko'pgina yangiliklar kiritib, uning ajratilmas qismi bo'lib qolmoqda. Biroq, pedagogik texnologik jarayonning o'ziga xosligi, uning an'anaviy shakllaridan ustuvorligi va hozirgi zamon ta'limi muammolari real yechish usullari hali to'la o'rganilmagan. Lekin barchalari pedagogik texnologiyalar kelajakda ustuvor o'ringa ega bo'lishi aniq chunki bu o'quvchilarning bilim saviyasini oshiradi. Hozirda ta'lim texnologiyasi yordamchi vosita bo'lib qolmay balki, o'quv jarayonining rivojlanishida katta rol o'ynab, uning tashkiliy shakllari, metodlari, mazmunini o'zgartiradigan yangi sistema deb tushunilmoqda. Bu esa, o'z navbatida, o'qituvchi va o'quvchining pedagogik tafakkuriga o'z ta'sirini ko'rsatmoqda. Texnologiyani bunday tavsif qilish ta'lim jarayonidagi barcha tuzuvchilar orasidagi uzviy bog'lanishning muhimligini, pedagog va o'quvchining o'zaro hamkorligini ko'rsatadi. O'quv jarayonida yangi pedagogik texnologiyalarni qo'llash va ulardan unumli natija ola bilish pedagogdan katta salohiyat hamda mahorat talab etadi.

Hozirgi kunda ta'lim jarayonida interaktiv metodlar, innovatsion texnologiyalar, pedagogik va axborot texnologiyalari o'quv jarayonida qo'llashga bo'lgan qiziqish, e'tibor kundan kunga kuchayib bormoqda, bunday bo'lishining sabablaridan biri, shu vaqtgacha an'anaviy ta'limda o'quvchi talabalarni faqat tayyor bilimlarini egallashga o'rgatilgan bo'lsa, zamonaviy texnologiyalar ularni egallayotgan bilimlarini o'zlari qidirib topishlariga, mustaqil o'rganib, taxlil qilishlariga, hatto xulosalarni ham o'zlari keltirib chiqarishlariga o'rgatadi. Yetuk, bilimli, barkamol kadrlarni voyaga yetkazish uchun innovatsion texnologiyalarning o'rni va ro'li benihoya kattadir. Pedagogik texnologiya va pedagog mahoratiga oid bilim, tajribali o'qituvchilarni yetuk malakaga ega bo'lishlarini ta'minlaydi. Innovatsion texnologiyalar pedagogik jarayon hamda o'qituvchi va talaba faoliyatiga yangilik, o'zgarishlar kiritish bo'lib, uni amalga oshirishda asosan interaktiv metodlardan to'liq foydalaniladi. Interaktiv metodlar-bu jamoa bo'lib fikrlash deb yuritiladi, ya'ni pedagogik ta'sir etish usullari bo'lib ta'lim mazmunining tarkibiy qismi hisoblanadi. Bu metodlarning o'ziga xosligi

shundaki, o'qituvchi hamda o'quvchi birgalikda faoliyat ko'rsatishi orqali amalga oshiriladi.

Xulosa qilib aytadigan bo'lsak, uzluksiz ta'lim tizimidagi islohotlar ta'lim jarayonini tashkil etish va boshqarish mexanizmlarini takomillashtirishni, ya'ni ta'lim sifati va samaradorlogini oshirishning an'anaviy metodlardan voz kechib, yangi media va axborot texnologiyalardan foydalanib, sifatli, zamon talabiga mos dars o'tish va raqobatdosh kadrlarni voyaga yetkazishni taqozo etmoqda. Ushbu yo'nalish bo'yicha biz ishni, avvalo maktabgacha ta'lim muassasalarida faoliyat yuritib, bolalarga tarbiya berib kelayotgan tarbiyachilariga informatika va axborot texnologiyalari fanini chuqur singdirishdan boshlashimiz darkor.

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