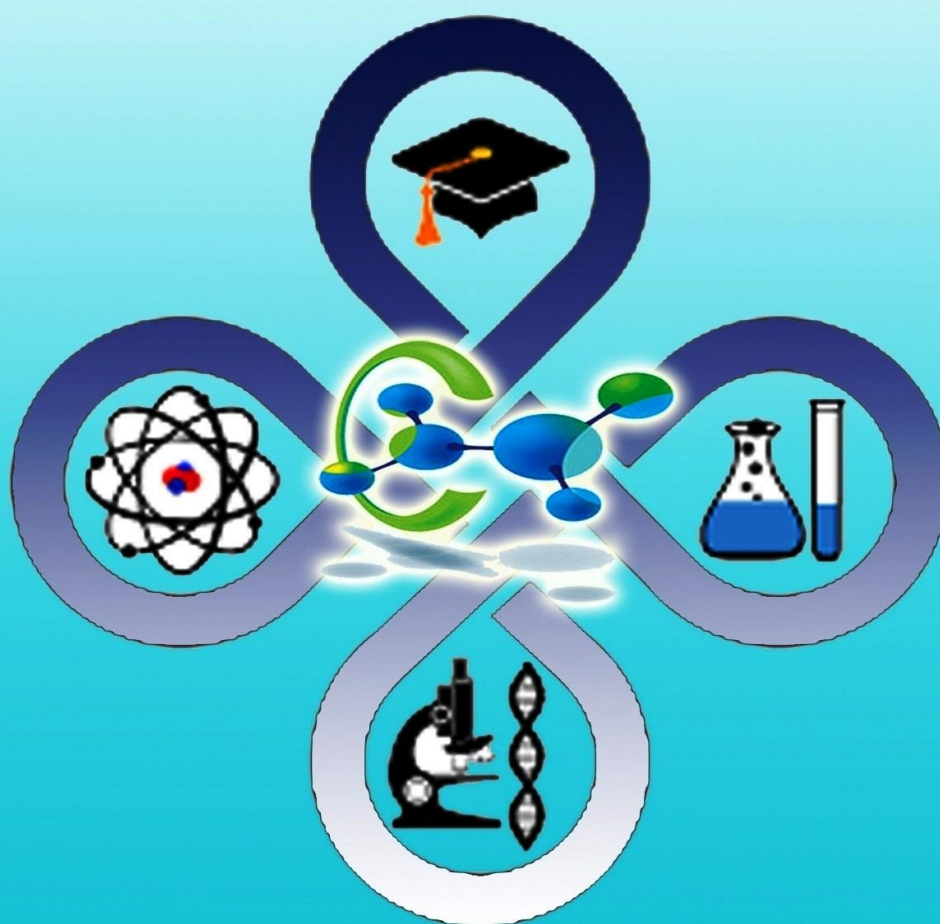




**ZAMONAVIY FAN, TA'LIM VA TARBIYANING DOLZARB  
MUAMMOLARI**

**АКТУАЛЬНЫЕ ВОПРОСЫ СОВРЕМЕННОЙ НАУКИ,  
ОБРАЗОВАНИЯ И ВОСПИТАНИЯ**

**ACTUAL PROBLEMS OF MODERN SCIENCE,  
EDUCATION AND TRAINING**



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## **SOLUTION OF SYSTEMS OF LOGIC EQUATIONS IN RECOGNITION TASKS**

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**Abstract.** In logical recognition systems, logical methods are used to construct the recognition algorithms based on discrete analysis and propositional calculus based on it. In the general case, the logical method of recognition provides for the presence of logical connections expressed through a system of Boolean equations, in which the variables are the logical signs of objects or phenomena under recognition.

**Keywords:** recognition algorithms, object recognition, systems of logical equations, discrete analysis, logical signs, Boolean algebraic equations, methods of logical algebra.

**Аннотация.** Мантикий тимсолларни аниқлаш тизимлари учун тимсолларни аниқлаш алгоритмларини яратишда дискрет таҳлилга ва мулохазаларни ҳисоблашга асосланган мантикий усуллардан фойдаланилади. Умумий ҳолатда мантикий тимсолларни аниқлаш усуллари аниқланувчи объектлар ёки ҳодисаларнинг мантикий белгилари ўзгарувчи сифатида қатнашадиган бул тенгламалар системаси орқали кўрсатиладиган мантикий боғлиқликни назарда тутди.

**Калит сўзлар:** тимсолларни аниқлаш алгоритмлари, тимсолларни аниқлаш, мантикий тенгламалар тизими, дискрет таҳлил, мантикий белгилар, бул алгебраик тенгламалар, мантикий алгебра усуллари.

**Аннотация.** В логических системах распознавания для построения собственно алгоритмов распознавания применяются логические методы, основанные на дискретном анализе и базирующемся на нем исчислении высказываний. В общем случае логический метод распознавания предусматривает наличие логических связей, выраженных через систему булевых уравнений, в которой переменными являются логические признаки распознаваемых объектов или явлений.

**Ключевые слова:** алгоритмы распознавания, распознавание объектов, системы логических уравнений, дискретный анализ, логические признаки, булевы алгебраические уравнения, методы алгебры логики.

**Introduction.** The logical signs of recognizable objects can be considered as elementary propositions that have two values of truth: truth and false.

The logical signs, first of all, are the signs that do not have a quantitative expression. These signs are the statements of a qualitative nature (the presence or absence of certain properties or certain elements in recognizable objects or phenomena). The following symptoms may be logical signs, for example, in medical diagnostics: sore throat, cough, runny nose, etc. The type of engine in a aircraft under recognition - jet, turbo-prop or piston one - can also be considered as a logical sign. In

geology, the solubility or insolubility in certain acids or in some mixtures of acids, the presence or absence of odor, color, etc., can be the logical signs.

The signs that have a quantitative expression can also be attributed to the logical ones, however, it is not the value of the sign of the object being recognized that is important (and taken into account), but the fact of its falling (or not falling) into a given interval. In practice, logical signs of this kind are found when measurement errors can either be neglected or the intervals of characteristic values are chosen in such a way that measurement errors have practically no effect on the reliability of the decisions made regarding the measured value falling into a given interval.

A new area of application of the methods of logical algebra, found recently, is the problem of recognizing a set of objects and phenomena, which can be reduced to solving the systems of logical equations. The basic principles to solve the systems of logical equations are described in this paper and the algorithms to obtain the solutions of maximal joint subsystems of Boolean equations are built.

When constructing the algorithms to solve the recognition problems, logical methods are used; here not only the quantitative relations between the quantities characterizing the processes under consideration are significant, but also the logical dependencies that link them. Object recognition algorithms based on logical methods were developed by Yu.I. Zhuravlev [1]. For the software implementation of a specific algorithm, we use the formula obtained in [2]:

$$A = \left( \sum_{i=1}^l \sum_{S^t \in K_j} B(S^t) C(C_1, C_2) \right). \quad (1)$$

An operator  $B$  is the sum  $q$  of the operators from the model for calculating estimates described by a set  $\varepsilon_{nv}$ ,  $\rho_{nv}$  of numerical parameters.

The methods of logical algebra can be used to establish various sets of signs of a recognizable object, the account of which, along with the already known ones, would lead to a definite conclusion about the type of object. The only condition for constructing a specific algorithm is the consistency of the learning and control samples. The algorithm carries out a classification based on the analysis of the data structure; its



importance for the classification is the problem of recognition of many objects and phenomena, which can be reduced to solving the systems of logical equations. In this paper, a method for solving the systems of logical equations is considered and an algorithm for obtaining maximum joint subsystems of the systems of Boolean equations is built.

**Main part. Statement of the problem.** The use of logical methods of recognition involves the presence of logical relationships expressed through a system of Boolean equations in which the variables are the logical signs of recognizable objects, and the unknown values are the thresholds of the proximity function  $\varepsilon_{uv}$  for the recognition algorithm. Information is presented in the form of a learning table. The task is as follows. It is necessary to find such  $\varepsilon_{iK}$ , that each pair of  $(S^u, S^v)$  is separated at least once. The solution to this problem can be reduced to finding Boolean algebraic equations

$$\varepsilon_{i_1 K_1}^1 \cdot \varepsilon_{i_2 K_2}^2 \cdot \dots \cdot \varepsilon_{i_p K_p}^{r_1} \vee \varepsilon_{i_2 K_2}^1 \cdot \dots \cdot \varepsilon_{i_2 K_2}^{r_2} \vee \dots = 1. \quad (2)$$

To maintain the form of logical connection in written form, we introduce a restriction for each group of logical terms  $(i_1, K_1) (i_2, K_2)$ : only one logical variable  $\varepsilon_{iK}$  takes a value equal to 1, and the rest are 0.

If such Boolean algebraic equations with introduced restrictions on Boolean variables are written for all objects from the control sample, then we get a system of Boolean algebraic equations:

$$\begin{aligned} &\varepsilon_{i_1 K_1}^{-1} \cdot \varepsilon_{i_1 K_1}^{-2} \cdot \dots \cdot \varepsilon_{i_1 K_1}^r \vee \varepsilon_{i_1 K_1}^1 \cdot \varepsilon_{i_1 K_1}^{-2} \cdot \varepsilon_{i_1 K_1}^3 \cdot \dots \cdot \varepsilon_{i_1 K_1}^r \vee \dots \vee \varepsilon_{i_1 K_1}^1 \cdot \dots \cdot \varepsilon_{i_1 K_1}^{r-1} \cdot \varepsilon_{i_1 K_1}^{-r} = 1; \\ &\varepsilon_{i_1 K_1}^{-1} \cdot \varepsilon_{i_2 K_2}^2 \cdot \dots \cdot \varepsilon_{i_1 K_1}^r \vee \varepsilon_{i_2 K_2}^1 \cdot \varepsilon_{i_2 K_2}^{-2} \cdot \varepsilon_{i_2 K_2}^3 \cdot \dots \cdot \varepsilon_{i_2 K_2}^r \vee \dots \vee \varepsilon_{i_2 K_2}^1 \cdot \dots \cdot \varepsilon_{i_2 K_2}^{r-1} \cdot \varepsilon_{i_2 K_2}^{-r} = 1; \\ &\varepsilon_{i_n K_n}^{-1} \cdot \varepsilon_{i_n K_n}^2 \cdot \dots \cdot \varepsilon_{i_n K_n}^r \vee \varepsilon_{i_n K_n}^1 \cdot \varepsilon_{i_n K_n}^{-2} \cdot \varepsilon_{i_n K_n}^3 \cdot \dots \cdot \varepsilon_{i_n K_n}^r \vee \dots \vee \varepsilon_{i_n K_n}^1 \cdot \dots \cdot \varepsilon_{i_n K_n}^{r-1} \cdot \varepsilon_{i_n K_n}^{-r} = 1. \end{aligned} \quad (3)$$

The solution to this system provides a set  $\hat{\varepsilon}$ , that separates all pairs of the control sample.

A system of Boolean equations is necessary to maintain the basic construction of the numerical method for the synthesis of a specific algorithm, in which any pair of

control objects  $(S^u, S^v)$  are divided into one pair, which allows us to fully implement on a computer the method of determining the values of proximity function parameters for a recognition algorithm [3, 4].

**Solution methods.** The problem is solved by two methods [5, 6]. At large values of  $N$ , the reduced basis method is used; in other cases, the image numbers method is used.

Algorithm for solving the image numbers method consists of the following steps:

1. Plot a table of binary numbers  $\{0,1\}$ , which is a basis, the image numbers  $(\#x_i)$  are in the rows of this table.

2. Calculate the system of the image numbers  $f$ , where  $\#f$  is the set  $(\beta_1, \beta_2, \dots, \beta_{2^n})$  of all digits of  $\beta_i$ , for which  $f(\alpha_i) = \beta_i$ .

3. Find inconsistent equations, i.e. maximum joint subsystem.

4. Determine the digit order  $\alpha_K$  of the maximum joint subsystem of the image numbers of function  $f$  from the identity

$$\#f_1(\alpha_K) = \#f_2(\alpha_K) = \dots = \#f_l(\alpha_K) = 1, \quad (4)$$

where,

$l$  – is the length of the maximum joint subsystem;

$K$  – is the number of digit order of the image numbers;

5. The number of digit order is transferred to binary form.

6. Write the solution in the form of a perfect disjunctive normal form (DNF).

7. The end of the algorithm.

The feature of the algorithm is that it operates in stages, since the set of all digits of the image numbers of the argument  $x_i$  and function  $f$  rapidly grows with an increase in the number of variables. The reduced basis method [6].

1. Plot a table  $TT(I)$ ,  $i = \overline{1, m}$  in the basis  $\{0,1,2\}$  of the function of the system.

2. Multiply functions  $f_1 \wedge f_2 \wedge \dots \wedge f_m$ , i.e. compare the tables  $[TT_1, TT_2, \dots, TT_m]$ .

3. Find dependent equations having identical solutions and eliminate them from the system.
4. Find inconsistent equations that do not have a general solution and eliminate them from the system.
5. Reduce to an irredundant table.
6. Proceed from Table  $TT$  to DNF.
7. Write the solution in the basis  $\{0,1,2\}$  and in arbitrary DNF.
8. The end of the algorithm.

**Program description.** Consider the programs  $RLSV - 1$  and  $RLSV - 2$ , with functional block diagrams shown in Figures 1 and 2. The programs consist of control blocks and auxiliary procedures.

A program  $RLSV - 1$  consists of four procedures.

The procedure  $IZOBR$  aimed to form the image numbers of the argument  $x_i$ ,  $i = \overline{1, n}$  of the function  $f_j$  ( $j = \overline{1, m}$ ).

The appeal to her has the form

$$IZOBR(N, B1),$$

where,

$N$  – is the number of function variables;

$B1$  – is the array of generation start on internal procedure  $NR$ .

The procedure  $NR$  aimed to generate the sets of  $N1$ , coordinates of which take values from the set  $\{0,1\}$ .

The appeal to her has the form

$$NR(G, G1, N1, M1, H),$$

where,

$G$  – is the initial parameter of the cycle,

$G1$  – is the generation step,

$N1$  – is the generation length,

$M1$  – is the generation final boundary,

$H$  – are the input and output arrays for the generation start and result.

The procedure  $WHCY$  aimed to determine and printout the numbers of inconsistent equations. The appeal to her is as follows:

$WHCY(I, M, LL, L, S, L3)$ ,

where,

$I$  – is the number of equations,

$M5, S$  – are the checking parameters,

$LL, L, L3$  – are the input auxiliary procedures.

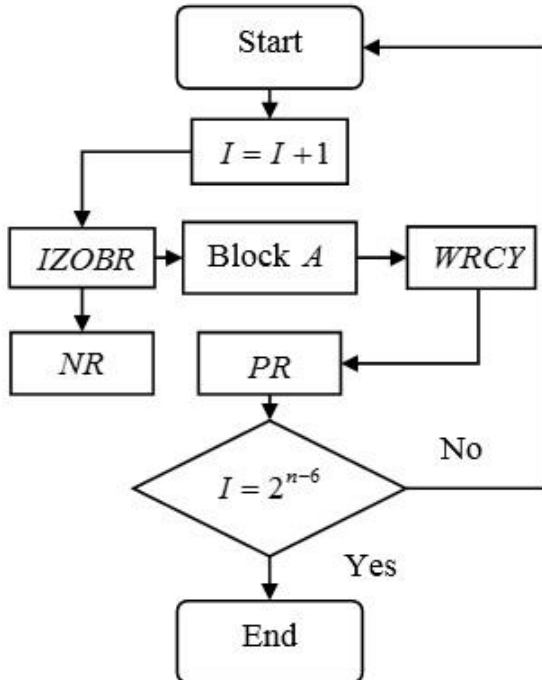


Figure 1

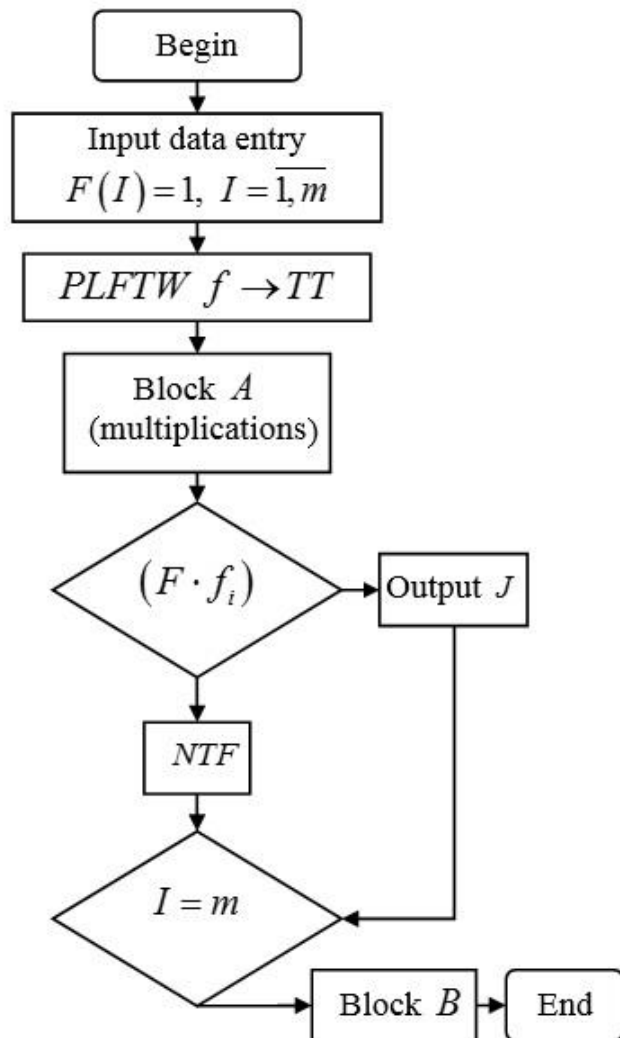


Figure 2



The procedure  $PR$  aimed to determine the number of unit digits from the product of the joint image numbers of function  $f_i (i - \overline{1, K})$ ;  $K \leq m$  and transfer the number of digits from a decimal number to binary.

The appeal to her has the form

$$PR(R, J),$$

where,

$R$  – is the product of the joint image numbers of functions,

$J$  – is the number of program iterations.

The block  $A$  aimed to organize sequential operations of the program in parts:

- multiplication of the image numbers,
- management of auxiliary procedures.

A program  $RLSV - 2$  consists of two procedures.

The procedure  $PLFTW$  aimed to build a reduced basis in the form of matrices.

The appeal to her is as follows:

$$PLFTW(A, FP, J, N, NN),$$

where,

$A$  – is the output array  $(A[I, J], I = \overline{1, N}; J = \overline{1, N})$  of reduced basis,

$FP$  – is the initial function in the form of DNF,

$J$  – is the equation number,

$N$  – is the number of function variables,

$NN$  – is the number of elementary conjunctions of this equation.

The procedure  $NTF$  is designed to build a dead-end DNF table in the basis  $\{0, 1, 2\}$ . The appeal to her is as follows:

$$NTF(N1, NN1, A),$$

where,

$N1$  – is the number of function variables;

$NN1$  – is the number of elementary conjunctions;

$A$  – is the input array  $(A[I, J], I = \overline{1, N1}; J = \overline{1, NN})$ , implementing DNF.

The block  $A$  aimed for the multiplication of two functions, the block  $B$  – for the transition from the reduced basis to DNF and the derivation of solutions of joint logical equations.

**Instructions for the programs.** The described programs operate independently. The program  $RLSV - 1$  solves systems of Boolean equations for 10 variables with a different number of elementary conjunctions.

Information for calculation:  $N$  – number of variables,  $M$  – number of equations. The system of logical equations to be solved  $Z(I)$ ,  $I = \overline{1, M}$  is introduced analytically as a subprogram  $IZOBR$ .

As a result of the program implementation, the following are printed:

- the number of inconsistent equations  $I$ ;
- the solution of joint subsystems in the form of binary sets  $C$  and DNF  $F$ .

The program  $RLSV - 2$  solves a system of Boolean equations with up to 30 variables set in the form of DNF with the same number of elementary conjunctions. Information for solving problems is as follows:

$M$  – number of equations;

$NN2$  – number of variables;

$N2$  – number of elementary conjunctions;

$FF(I, J)$ ,  $(I = \overline{1, M}; J = \overline{1, N2})$  – the system of Boolean equations.

The information is introduced from source storage. The results are obtained in the form of a reduced basis and DNF  $F$ .

**Test example.** As an example, a system of logical equations set in the form of DNF is considered for the program  $RLSY - 1$ :

$$Z(1) = \neg x(1) \vee \neg x(2) \vee x(3);$$

$$Z(2) = x(1) \vee x(2) \vee \neg x(4);$$

$$Z(3) = \neg x(1) \vee x(2) \vee x(3);$$

$$Z(4) = x(2) \vee \neg x(3) \vee x(4);$$

$$Z(5) = \neg x(2) \vee \neg x(4);$$

$$Z(6) = x(1) \vee x(3) \vee x(4);$$

$$Z(7) = \neg x(1) \vee \neg x(3) \vee x(4);$$

$$Z(8) = x(2) \vee x(3) \vee \neg x(4);$$

$$M = 8; N = 4.$$

As a result of the program *RLSY* – 1 operation, the following were obtained:

$I = \{5\}$  – the numbers of inconsistent equations:

$C = \{0111, 1111\}$  – the solutions of joint subsystems in binary code;

$F = \neg x(1) \& x(2) \& x(3) \& x(4) \vee x(1)x(2)x(3)x(4) = x(2)x(3)x(4)$  – the solution of joint subsystems in the form of DNF.

For the program *RLSY* – 2, the following system of Boolean equations was considered:

$$FF(1) = x(1) \& \neg x(3) \& x(15) \& \neg x(20) \vee x(10) \& x(15)x(21) \& x(25) \vee x(7);$$

$$FF(2) = \neg x(1) \& x(7) \& \neg x(15) \vee x(3) \& x(17) \& \neg x(25) \vee \neg x(15) \& x(20);$$

$$FF(3) = \neg x(7) \& \neg x(10) \vee x(5) \& \neg x(7) \& x(20) \vee x(1) \& x(23);$$

$$FF(4) = x(5) \& \neg x(8) \& x(11) \vee x(17) \& x(25) \vee \neg x(1) \& \neg x(20);$$

$$FF(5) = x(2) \& \neg x(7) \vee x(3) \& x(15) \neg \& x(25) \vee x(14) \& \neg x(20) \& \neg x(24);$$

$$M = 5; NN2 = 25; N2 = 3.$$

As a result of the program *RLSY* – 2 operation, a solution to the system is obtained in the form of a reduced basis  $C$  and DNF  $F$ , where

$$C = \left\{ \begin{array}{l} 1212121022122212122222120 \\ 1222121022122122122022100 \end{array} \right\},$$

$$F = x(1) \& x(3) \& x(5) \& x(7) \& \neg x(8) \& x(11) \& \\ \& x(15) \& x(17) \& x(23) \& \neg x(25) \vee x(1) \& x(5) \& \\ \& x(7) \& \neg x(8) \& x(11) \& x(14) \& x(17) \& \neg x(20) \& \\ \& x(23) \& \neg x(24) \& \neg x(25).$$

**Conclusion.** A method, algorithm, and program for solving systems of logical equations are developed in the paper and an algorithm for obtaining the maximum joint subsystems of the Boolean equations systems are constructed. The application of logical recognition methods is proposed, which provides for the presence of logical connections expressed through a system of Boolean equations, where the variables are the logical signs of recognizable objects, and unknown values are the thresholds of the proximity function.

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## ABOUT THE PROBLEM OF SEARCHING FOR SETS OF ESSENTIAL VARIABLE LOGIC FUNCTIONS AND TESTS OF TABLE

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**Abstract.** In this paper, we study the problems of finding minimal tests, testers, and a set of variables that are essential for not everywhere defined functions. Such problems are discrete extremal problems of one class, and in algorithms that implement methods for solving them, at each step, a set of variables of not everywhere defined functions is selected. We prove a theorem on the equivalence of the search problems for minimal tests, testers and a set of variables that are essential for not everywhere defined functions, the problem of finding the maximum upper zero of monotone Boolean functions.

**Keywords:** minimal tests, testers, set of variables, everywhere defined functions, discrete extremal problems, algorithms, functions, monotone Boolean functions

**Аннотация.** Ушбу маколада аниқланмаган функциялар учун зарур бўлган минимал тестлар, синовчилар ва ўзгарувчилар тўпламини топиш муаммолари ўрганилган. Бундай муаммолар бир синфнинг дискрет экстремал муаммолари бўлиб, уларни ечиш усуллари амалга оширувчи алгоритмларда ҳар қадамда ҳамма жойда аниқланмайдиган функцияларнинг тўплamlари танланган. Минимал тестлар, синовчилар ва ҳар хил аниқланмаган функциялар учун зарур бўлган ўзгарувчилар тўплами, монотон Буль функцияларининг максимал юқори нолини топиш муаммолари учун тенглик ҳақидаги теоремани исботланган.

**Калит сўзлар:** минимал тестлар, тесторлар, ўзгарувчилар тўплами, ҳамма жойда аниқланган функциялар, дискрет экстремал муаммолар, алгоритмлар, функциялар, монотон Буль функциялари

**Аннотация.** В этой статье изучается проблема поиска минимальных тестов, тестеров и набора переменных, которые необходимы для не везде определенных функций. Такие задачи являются дискретными экстремальными задачами одного класса, и в алгоритмах, реализующих методы их решения, на каждом шаге выбирается набор переменных не везде определенных функций. Доказана теорема об эквивалентности задач поиска для минимальных тестов, тестеров и набора переменных, существенных для не везде определенных функций, задачи нахождения максимального верхнего нуля монотонных булевых функций.

**Ключевые слова:** минимальные тесты, тестеры, множество переменных, везде определенные функции, дискретные экстремальные задачи, алгоритмы, функции, монотонные булевы функции.

**Introduction.** The synthesis of minimal testers, table tests, and a set of variables essential for not everywhere defined functions is one of the important tasks of mathematical cybernetics [1-6]. A common solution to such problems is that in algorithms that implement many methods for solving them, at each step, a set of

variables of not everywhere defined functions is selected. In [3,4] it was shown that each table of not everywhere defined functions, tests and testers can be associated with a Boolean monotonic function.

**Statement of the problem and proof of identity.** Let us prove the identity of the problems of searching for minimal tests, testers and the totality of variables that are essential for not everywhere defined functions, the problem of finding the maximum upper zero of monotone Boolean functions.

Suppose that a not everywhere defined Boolean function  $f(\tilde{x}) = f(x_1, x_2, \dots, x_n)$  is defined on a subset  $M \subseteq E_n^2$  of all vertices of a  $n$ -dimensional unit cube:

$$f(x_1, x_2, \dots, x_n) = \begin{cases} 1, & \text{if } \tilde{x} \in M_f^1 \\ 0, & \text{if } \tilde{x} \in M_f^0 \end{cases},$$

where  $M_f^1 \cup M_f^0 = M$ ;  $M_f^1 \cap M_f^0 = \emptyset$ .

We say that a  $M$  totality made up of arguments  $x_{i_1}, x_{i_2}, \dots, x_{i_k}$  ( $M \subseteq \{x_1, x_2, \dots, x_n\}$ ) is essential for a  $f(\tilde{x})$  function not everywhere defined, if there is not a function  $\varphi(x_{i_1}, x_{i_2}, \dots, x_{i_k})$  that is defined everywhere such that  $f(x_{i_1}, x_{i_2}, \dots, x_{i_k}) \equiv \varphi(x_{i_1}, x_{i_2}, \dots, x_{i_k})$ .

A collection  $M$ ,  $M \subseteq \{x_1, x_2, \dots, x_n\}$  is said to be dead-end for  $f$  if it is essential for  $f$  and no collection  $M' \subset M$  is essential for  $f$ .

Let  $f(x_{i_1}, x_{i_2}, \dots, x_{i_k})$  given in table 1.

It is easy to notice that the totality  $M$ ,  $M = \{x_{i_1}, x_{i_2}, \dots, x_{i_k}\}$  is essential for  $f$ , if and only if in the sub table consisting of the  $i_1, i_2, \dots, i_k$ -th columns of table 1 there are no pair of rows  $(\alpha_{i_1}^j, \alpha_{i_2}^j, \dots, \alpha_{i_k}^j)$  and  $(\beta_{i_1}^p, \beta_{i_2}^p, \dots, \beta_{i_k}^p)$  such that  $\alpha_{i_1}^j = \beta_{i_1}^p, \alpha_{i_2}^j = \beta_{i_2}^p, \dots, \alpha_{i_k}^j = \beta_{i_k}^p$ .

The concept of a set of variables essential for  $f$ , is directly generalized to not everywhere defined functions of  $k$ -significant logic.

Let not a definite function  $F(x_1, x_2, \dots, x_n)$  of  $k$  – significant logic be given on a subset of the  $n$  – dimensional  $k$  – lattice [1].

$$F(x_1, x_2, \dots, x_n) = \{i_j, \text{ if } \tilde{x} \in M_F^i\}$$

where  $i_j \in \{0, 1, \dots\}$ ;  $\bigcup_{i=1}^m M_F^i = M$ ;  $j = \overline{1, m}$ ,  $m \leq k$ .

Moreover

$$M_F^j \neq M_F^t, \quad i_j \neq i_t, \quad \text{at } j \neq t.$$

A collection  $M$ ,  $M = \{x_{i_1}, x_{i_2}, \dots, x_{i_k}\}$  is called essential for a not everywhere defined function  $F(x_1, x_2, \dots, x_n)$  of a  $k$  – significant logic if there is not a everywhere defined function  $\varphi(x_{i_1}, x_{i_2}, \dots, x_{i_k})$  such that.  $F(x_1, x_2, \dots, x_n) = \varphi(x_{i_1}, x_{i_2}, \dots, x_{i_k})$

**Table 1**

$x_1$	$x_2$	$\dots$	$x_n$	$f(x_1, x_2, \dots, x_n)$
$\alpha_1^1$	$\alpha_2^1$	$\dots$	$\alpha_n^1$	0
$\dots$	$\dots$	$\dots$	$\dots$	$\dots$
$\alpha_1^l$	$\alpha_2^l$	$\dots$	$\alpha_n^l$	0
$\beta_1^1$	$\beta_2^1$	$\dots$	$\beta_n^1$	1
$\dots$	$\dots$	$\dots$	$\dots$	$\dots$
$\beta_1^q$	$\beta_2^q$	$\dots$	$\beta_n^q$	1

We say that an aggregate  $M$ ,  $M \subseteq \{x_1, x_2, \dots, x_n\}$  – is dead end for  $F$  if it is essential for  $F$  and no aggregate  $M' \subset M$  is essential for  $F$ .



Let  $F(x_1, x_2, \dots, x_n)$  is given in table 2, where  $i_j \in \{0, 1, \dots, k-1\}$ ;  $j = \overline{1, k}$ ;  $i_j \neq i_l$ ,  $l \neq t$  and each line of arguments  $x_1, x_2, \dots, x_n$  forms the top of the  $n$ -dimensional  $k$ -lattice  $E_n^k$  [7].

In the case where the population  $M$ ,  $M = \{x_{i_1}, x_{i_2}, \dots, x_{i_k}\}$  is essential for  $F$ , in table 2 there are no pairs  $(\alpha_1, \alpha_2, \dots, \alpha_n)$  and  $(\beta_1, \beta_2, \dots, \beta_n)$  such that  $F(\alpha_1, \alpha_2, \dots, \alpha_n) \neq F(\beta_1, \beta_2, \dots, \beta_n)$  and  $\alpha_{i_1} = \beta_{i_1}, \alpha_{i_2} = \beta_{i_2}, \dots, \alpha_{i_k} = \beta_{i_k}$ .

Let  $E_p = \{0, 1, \dots, p-1\}$  also  $T_1, T_2, \dots, T_\omega$  – rectangular tables with elements from  $E_p$ , containing  $n$  columns and,  $m_1, m_2, \dots, m_\omega$  rows, respectively, and  $\sum_{i=1}^{\omega} m_i = m$ .

According to generally accepted terminology, rows are called standards, and columns are called attributes. By  $\omega$  defining tables, some set of standards is defined and their division into  $\omega$  classes. Thus, the element  $\alpha_{i_j}$  in  $i$ -th table is the value of the  $j$ -th attribute on  $i$ -th object from the  $l$ -class. We assume that each standard is contained in one class.

Let  $S_1, S_2, \dots, S_m$  – the standards and  $x_1, x_2, \dots, x_n$  – signs, then  $x_j(S_i) = a_{ij}$  – the  $x_j$  value on  $S_i$ .

We call the set  $M = \{x_{i_1}, x_{i_2}, \dots, x_{i_k}\}$  a tester if, for any pair of standards  $S_i$  and  $S_j$  belonging to different classes, there is a sign  $x_t \in M$  such that  $x_t(S_i) \neq x_t(S_j)$ .

In the case when  $m_1 = m_2 = \dots = m_\omega = 1$ , the tester is called a test. A tester (test) is called deadlock if, after removing any feature from it, it ceases to be a tester (test).

Obviously, if in table 2 by  $x_1, x_2, \dots, x_n$  we denote by signs taking values from the set  $(0, 1, \dots, k-1)$ , and through the lines the  $\alpha_{i_1}^j, \alpha_{i_2}^j, \dots, \alpha_{i_n}^j$  – standards belonging to the  $j$ -th class  $i = \overline{1, q_j}$ ,  $j = \overline{1, k}$ , then the definitions of the tester for the tables and the set of essential partial functions coincide.

We associate a partial function  $F(x_1, x_2, \dots, x_n)$  with a Boolean function  $\mu_F(y_1, y_2, \dots, y_n)$ .

Let  $\alpha_{i_1}^j, \alpha_{i_2}^j, \dots, \alpha_{i_k}^j$  all the zero coordinates of the set  $\alpha_1, \alpha_2, \dots, \alpha_n$  be the essence.

Put

$$\mu_F(y_1, y_2, \dots, y_n) = \begin{cases} 0, & \text{if } x_{i_1}, x_{i_2}, \dots, x_{i_k} - \text{set} \\ & \text{essential function variables } F. \\ 1 & - \text{otherwise} \end{cases}$$

**Table 2**

$x_1$	$x_2$	$\dots$	$x_n$	$F(x_1, x_2, \dots, x_n)$
$\alpha_{11}$	$\alpha_{12}$	$\dots$	$\alpha_{1n}$	$i_1$
$\dots$	$\dots$	$\dots$	$\dots$	$\dots$
$\alpha_{q_1 1}$	$\alpha_{q_1 2}$	$\dots$	$\alpha_{q_1 n}$	$i_1$
$\beta_{11}$	$\beta_{12}$	$\dots$	$\beta_{1n}$	$i_2$
$\dots$	$\dots$	$\dots$	$\dots$	$\dots$
$\beta_{q_2 1}$	$\beta_{q_2 2}$	$\dots$	$\beta_{q_2 n}$	$i_2$
$\dots$	$\dots$	$\dots$	$\dots$	$\dots$
$\lambda_{11}$	$\lambda_{12}$	$\dots$	$\lambda_{1n}$	$i_k$
$\dots$	$\dots$	$\dots$	$\dots$	$\dots$
$\lambda_{q_k 1}$	$\lambda_{q_k 2}$	$\dots$	$\lambda_{q_k n}$	$i_k$

It is clear that if  $S = \{x_{i_1}, x_{i_2}, \dots, x_{i_k}\}$  – the totality of variables is essential for  $F$ , then the totality  $S'$  is such that  $S \subseteq S'$  it is also essential for  $F$ .

The converse is true: in the case when  $S$  it is not essential for  $F$ , an arbitrary population  $S'$  is such that  $S' \subseteq S$  it is also not essential for  $F$ .

Hence a  $\mu F(\tilde{y})$  – monotone Boolean function.

Consider the class  $M_n$  of monotone functions of the algebra of logic in  $n$  variables [8]. A binary tuple  $\tilde{\alpha} \in E_n^2$  is called the upper zero of a function in  $f \in M_n$ ,

if for  $f(\tilde{\alpha}) = 0$  and any tuple  $\tilde{\beta} \in E_n^2$  such that  $\tilde{\alpha} \leq \tilde{\beta}$  we have  $f(\beta) = 1$ . The top zero  $\tilde{\alpha}$  of a function  $f$  will be called its maximum top zero if, for any top zero  $\tilde{\beta}$  of a function  $f$  fair inequality  $|\tilde{\beta}| \leq |\tilde{\alpha}|$ , where  $|\tilde{\delta}|$  – is the number of unit coordinates of the set  $\tilde{\delta} \in E_n^2$ .

We consider the problem of finding the maximum upper zero of an arbitrary function  $f \in M_n$  using a number of calls to the operator  $A_f$ , which calculates a value  $\tilde{\alpha}$  from any set  $f(\tilde{\alpha})$ . Let the set  $\{B\}$  – of all algorithms that solve this problem.

Let the family  $\{A\}_F$  – of search algorithms of a minimal set of variables be essential for  $F$ . We assume that at each step of the algorithm  $A$ , the value of the operator  $O(S) = 0$  is calculated from  $\{A\}_F$ , if  $S$  it is essential for  $F$ , and  $O(S) = 1$  – otherwise.

We denote by  $r_A$  the complexity (number of steps) of the algorithm  $A$  when constructing the minimum set of variables essential for  $F$ . It was shown in [3] that for any monotone Boolean function  $\mu(y_1, y_2, \dots, y_n) \equiv 1$  there exists a function that is not everywhere defined such that.  $\mu(y_1, y_2, \dots, y_n) = \mu_F(y_1, y_2, \dots, y_n)$ .

In solving the problem of constructing the maximum upper zero of a monotone function  $f$ , the elementary step of an arbitrary algorithm  $B \in \{B\}$  is, as is known, the calculation of the value of a function at a given vertex  $E_n^2$ . By the definition of a function  $\mu_F$ , each vertex  $\alpha = (\alpha_1, \alpha_2, \dots, \alpha_n)$  that  $\alpha_{i_1}, \alpha_{i_2}, \dots, \alpha_{i_k}$  has zero coordinates is one-to-one associated with a set  $\{x_{i_1}, x_{i_2}, \dots, x_{i_k}\}$  of sets  $\{x_1, x_2, \dots, x_n\}$ . And, it is obvious that the minimum set of variables, essential for  $F$ , is mapped to the maximum upper zero  $\mu_F$ . Therefore, if the algorithm  $A$  at the next step calculates the value  $O(S)$ , then there is an algorithm  $B \in \{B\}$  that calculates at the next step the value  $\mu_F$  at the vertex  $\tilde{\alpha}$  corresponding to  $S$ . And, therefore, each algorithm  $A$  from  $\{A\}_F$  with complexity  $r_A$  has a one-to-one correspondence with an algorithm  $B \in \{B\}$  of such complexity.

Thus, the following theorem is proved.

**Theorem.** Each algorithm for solving the problem of finding the minimum set of variables that is essential for a function  $F(x_1, x_2, \dots, x_n)$  not everywhere defined has a one-to-one correspondence algorithm for finding the minimum upper zero of a Boolean monotone function  $\mu_F(y_1, y_2, \dots, y_n)$ . In this regard, the task of finding the minimum set of variables that are essential for  $F$  is identical to the problem of finding the maximum upper zero of a monotonic function  $\mu_F$ .

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## FEATURES OF CURRENT TRANSFER IN $n\text{-GaP-p-(InSb)}_{1-x}(\text{Sn}_2)_x$ HETEROSTRUCTURE

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**ABSTRACT:**  $n\text{-GaP-p-(InSb)}_{1-x}(\text{Sn}_2)_x$  ( $0 \leq x \leq 0.05$ ) heterostructures were fabricated and their current-voltage characteristics were studied. At low voltages  $V < 0.5$  V the current-voltage characteristic is described by the exponential law:  $I = I_0 \cdot \exp(qV / ckT)$  with an exponent  $c = 3.6$ , and at large voltage from 0.5 to 1.8 V by power laws:  $I = A \cdot V^m$  with different values of coefficient  $A$  and exponent  $m$  at various voltages. At higher voltages - from 2.10 to 2.48 V a sublinear section is observed, it is described by the law:  $V = V_0 \cdot \exp(Iad / S)$ . The results are explained by the diffusion-drift mechanism of current transport conditions of dielectric relaxation, as well as the effect of injection depletion.

**Keywords:** solid solution, epitaxial layer, indium antimonide, current-voltage characteristic, current transport, heterostructure, charge carriers.

**АННОТАЦИЯ:** Были изготовлены  $n\text{-GaP-p-(InSb)}_{1-x}(\text{Sn}_2)_x$  ( $0 \leq x \leq 0.05$ ) гетероструктуры и исследованы их вольт-амперные характеристики. При малых напряжениях  $V < 0.5$  В вольт-амперная характеристика описывается экспоненциальным законом:  $I = I_0 \cdot \exp(qV/ckT)$ , с показателем экспоненты  $c = 3.6$ , а при больших – от 0.5 до 1.8 В степенными законами:  $I = A \cdot V^m$ , с различными значениями коэффициента  $A$  и показателя степени  $m$  при различных напряжениях. При более высоких напряжениях – от 2.10 до 2.48 В наблюдается сублинейный участок, который описывается законом:  $V = V_0 \cdot \exp(Iad/S)$ . Результаты объясняются диффузионно-дрейфовым механизмом переноса тока в

режиме диэлектрической релаксации, а также эффекта инжекционного обеднения.

**Ключевые слова:** твердый раствор, эпитаксиальный слой, антимонид индий, вольт-амперная характеристика, перенос тока, гетероструктура, носители заряда.

**АННОТАЦИЯ:** n-GaP–p-(InSb)<sub>1-x</sub>(Sn<sub>2</sub>)<sub>x</sub> ( $0 \leq x \leq 0.05$ ) гетероструктуралар тайёрланди ва уларнинг вольт-ампер характеристикалари тадқиқ қилинди. Вольт-ампер характеристика  $V < 0.5$  В кичик кучланишларда  $c = 3.6$  кўрсаткичи  $I = I_0 \cdot \exp(qV/ckT)$  экспоненциал қонун билан, 0.5 дан 1.8 В гача бўлган катта кучланишларда  $A$  коэффициенти ва даража кўрсаткичи  $m$  турли кучланишларда ҳар хил қийматларга эга бўлган  $I = A \cdot V^m$  даражали қонун билан тавсифланади. 2.10 дан 2.48 В гача бўлган юқорироқ кучланишларда  $V = V_0 \cdot \exp(Iad/S)$  қонун билан тавсифланадиган субчизикли соҳа кузатилади. Натижалар диэлектрик релаксация, шунингдек, инжекциявий камбағаллашиш эффекти режимида ток ўтказишни диффузион-дрейф механизми билан тушунтирилди.

**Калит сўзлар:** қаттиқ қоришма, эпитаксиал қатлам, индий антимониди, вольт-ампер характеристикаси, ток ўтказиш, гетероструктура, заряд ташувчилар.

## Introduction

Narrow-gap semiconductor compounds of group A<sup>III</sup>B<sup>V</sup> are promising materials for the creation of optoelectronic devices based on them that operate in the middle and far infrared (IR) regions of the radiation spectrum. Intensive search work is underway to create and study various device structures based on InSb, InAs, GaSb, GaAs and their solid solutions [1–4]. Among these materials InSb compounds are of particular interest since the mobility of electrons and holes in them is great [5], therefore, high-speed optoelectronic devices can be developed on their basis. In addition solid substitutional solutions of (InSb)<sub>1-x</sub>(Sn<sub>2</sub>)<sub>x</sub> make possible to expand the spectral range of action of structures based on them to 10 μm [6]. However the practical use of device



structures made on the basis of III-V compounds is at the initial stage of development, which is connected with the economic inexpediency of large-scale use of massive elements of such device structures and, on the other hand, with insufficient knowledge of the electrophysical and photoelectric properties of such materials and structures on their basis.

### Research Methodology

In order to identify some electrometric parameters of the epitaxial layer of the  $(\text{InSb})_{1-x}(\text{Sn}_2)_x$  ( $0 \leq x \leq 0.05$ ) solid solution and to study the mechanisms of electric current transport in heterostructures based on this solid solution, we studied the current-voltage characteristics of  $n\text{-GaP-p-(InSb)}_{1-x}(\text{Sn}_2)_x$  ( $0 \leq x \leq 0.05$ ) heterostructures. The structures were fabricated by growing the epitaxial layer of the  $p\text{-(InSb)}_{1-x}(\text{Sn}_2)_x$  solid solution on  $n\text{-GaP}$  substrates by liquid-phase epitaxy according to the technology described in [7]. In a vertical graphite cassette two horizontally located substrates were installed – upper one and lower one. The substrates were gallium phosphide washers with diameter of 20 mm and thickness of  $\sim 350 \mu\text{m}$ , cut from a single-crystal GaP electron type conductivity with (111) orientation and carrier concentration of  $(5\text{--}7) \cdot 10^{17} \text{ cm}^{-3}$ . The growth of the epitaxial layer was carried out from a limited volume of the indium melt solution by forced cooling in the atmosphere of hydrogen purified by palladium. The composition of the melt solution was obtained on the basis of preliminary studies of the In-InSb-Sn system and published data [8–9]. Samples were grown at various values of the parameters of liquid epitaxy. The distance between the upper and lower substrates, the beginning and end of the crystallization temperature, and the cooling rate of the indium melt solution were varied. Epitaxial layers with the best parameters were obtained with the distance between the upper and lower substrates of 1 mm, a temperature range of crystallization of the indium melt solution of 325–250°C, and the substrate cooling rate of 1 deg/min. The grown films had hole type of conductivity and thickness of 14  $\mu\text{m}$ .

To study the current-voltage characteristics ohmic contacts were applied to the  $n\text{-GaP-p-(InSb)}_{1-x}(\text{Sn}_2)_x$  heterostructure by silver dusting in vacuum - solid contacts

on the substrate side and four-angle contacts with an area of 12 mm<sup>2</sup> on the epitaxial layer side. The current-voltage characteristics was recorded in the dark at temperature of 300 K.

## Analyses and Results

Figure 1 shows the typical current-voltage characteristic of the studied structure. It is seen from fig. 1 that the structure has rectifying properties. Analysis of the direct branch of the current-voltage characteristic shows that it can be divided into several sections. In the initial section at bias voltages (V) from 0.08 to 0.50 V the current-voltage characteristic is well approximated by the exponential dependence (Fig. 1, b) of the form [10]:

$$I = I_0 \cdot e^{\frac{qV}{ckT}}, \quad (1)$$

inherent in the so-called “long” p-n- structural diode with the rear ohmic contact, i.e. when  $d / L_n > 1$ , where  $d$  is the base length,  $L_n = \sqrt{D_n \tau_n}$  is the diffusion length of minority charge carriers. The process of electric current transport through the structure is mainly determined by the electrophysical properties of the substrate-film transition layer and the epitaxial layer of the p-(InSb)<sub>1-x</sub>(Sn<sub>2</sub>)<sub>x</sub> solid solution. Therefore, the thickness of the epitaxial layer, which was 14 μm, was taken as the base thickness.

The exponent “c” in the exponent in equation (1) is described by the expression [11]:

$$c = \frac{2b + ch \left( \frac{d}{L_n} \right) + 1}{b + 1}, \quad (2)$$

where  $b = \mu_n / \mu_p$  is the ratio of the mobilities of electrons and holes. The mobility ratio  $\mu_n / \mu_p$  for pure binary compound InSb is  $b \approx 21$  [5]. When InSb is doped, the carrier mobility decreases; therefore, we took  $b = 15$  to estimate the characteristic parameters of the base of the studied structure. Based on the results from the exponential part of the current-voltage characteristic, the exponent was determined  $c = 3.6$ . Knowing the

values of  $b$  and  $c$ , we can find the value  $d/L_n = 3.98$ . Then one can calculate the diffusion length -  $L_n = 3.52 \text{ } \mu\text{m}$  and the product of mobility by the lifetime -

$$\mu_n \tau_n = \frac{qL_n^2}{kT} = 4.79 \cdot 10^{-6} \text{ cm}^2/\text{V} \text{ of minority charge carriers.}$$

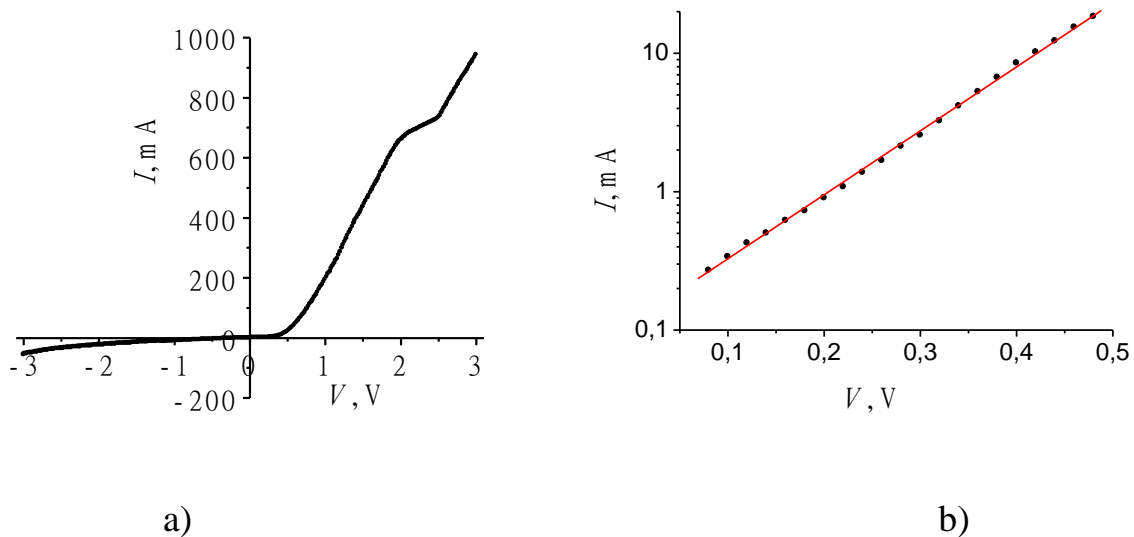


Fig. 1. The dark current-voltage characteristic of the n-GaP-p-(InSb)<sub>1-x</sub>(Sn<sub>2</sub>)<sub>x</sub> ( $0 \leq x \leq 0.05$ ) (a) heterostructure and its direct branch on the semilogarithmic scale (b) at temperature of 300 K.

The preexponential coefficient  $I_0$  in expression (1) can be described by the following relation [10]:

$$I_0 = \frac{kT}{q} \cdot \frac{Sb \cdot ch(d/L_n)}{2(b+1)L_n \rho \cdot tg(d/2L_n)}, \quad (3)$$

where  $k$  is the Boltzmann constant,  $T$  is the absolute temperature,  $S$  is the area of the sample,  $q$  is the elementary charge, and  $\rho$  is the resistivity of the base of the structure. The numerical value of  $I_0$ , determined from the exponential part of the current-voltage

characteristic was  $I_0 = 1.1 \cdot 10^{-4}$  A. Based on relation (3) the calculated value of the resistivity of the high-resistance sublayer of the base region of the investigated structure was found, which was  $4.46 \cdot 10^3 \Omega \cdot \text{cm}$  at room temperature. The resistivity of the high-resistance sublayer at the selected temperature is determined by the mobility ( $\mu_p$ ) and concentration ( $p_p$ ) of the main charge carriers (holes):  $\rho = 1/(q\mu_p \cdot p_p)$ . The value of the product  $\mu_p \cdot p_p$ , calculated from the value of  $\rho$ , at room temperature was  $\sim 1.4 \cdot 10^{15} 1/(\text{V} \cdot \text{cm} \cdot \text{s})$ .

The exponential section on the current-voltage characteristic is followed by the power-law dependences of the type  $I = A \cdot V^m$  with different values of the exponent - m and coefficient - A. At  $V = (0.60 - 0.80) \text{ V}$ , the section  $I = A \cdot V^3$  with coefficient  $A = 220 \text{ mA/V}^3$ , at  $V = (0.80 - 0.90) \text{ V}$   $I = A \cdot V^{2.5}$  with coefficient  $A = 195 \text{ mA/V}^{2.5}$ , at  $V = (0.90 - 1.40) \text{ V}$   $I = A \cdot V^2$  with coefficient  $A = 195 \text{ mA/V}^2$ , at  $V = (1.40 - 1.80) \text{ V}$   $I = A \cdot V^{1.5}$  with coefficient  $A = 232 \text{ mA/V}^{1.5}$ . Further, at bias voltages from 2.10 to 2.48 V, the sublinear section is observed, there the current weakly depends on the applied voltage. Apparently, this section of the current-voltage characteristic can be well described within the framework of the theory of the “injection depletion effect” [12]. In the case of this effect, the current-voltage characteristic is described by a law:

$$V = V_0 \cdot e^{\frac{I_{ad}}{S}}, \quad (4)$$

It is known (see [12]) that such current-voltage characteristic (4) is realized in semiconductor structures containing high concentrations of deep capture for minority carriers centers under conditions of opposite directions of ambipolar diffusion and drift, and in this case parameter a is described by the simple expression:

$$a = \frac{1}{2qD_p N_t}, \quad (5)$$

where  $N_t$  is the concentration of deep capture centers,  $D_p$  is the diffusion coefficient of the main carriers (holes) -  $D_p = \frac{kT}{q} \mu_p$ .

To implement this law, later called the injection depletion effect, the condition  $I_{ad} / S > 2$  must be met. In our case, this requirement is fulfilled.

The parameter  $a$  can be easily calculated from the corresponding sublinear section of the current-voltage characteristic:

$$a = \frac{\ln\left(\frac{V_2}{V_1}\right) \cdot S}{(I_2 - I_1) \cdot d}, \quad (6)$$

where  $(I_1, V_1), (I_2, V_2)$  are the points selected on the experimental curves of the injection depletion section. The value of parameter  $a$ , calculated on the basis of the experimental points of the sublinear part of the current-voltage characteristic, was  $a = 3,03 \cdot 10^3$  cm/A.

Knowing the value of  $a$  allows one can to calculate the product of the mobility of the main carriers  $\mu_p$  and the concentration of deep impurities  $N_t$  (expression (5)), which are responsible for the appearance of the sublinear section (4), which in our case was  $\mu_p \cdot N_t = 4 \cdot 10^{16} \text{ cm}^{-1} \cdot \text{V}^{-1} \cdot \text{s}^{-1}$ .

The sublinear section of the current-voltage characteristic is again followed by the section of the power dependence  $I = 207 \cdot V^{1,38}$ .

## Conclusion

Thus, the study of the direct branch of the current-voltage characteristic of the n-GaP–p-(InSb)<sub>1-x</sub>(Sn<sub>2</sub>)<sub>x</sub> ( $0 \leq x \leq 0.05$ ) heterostructure shows that, under weak excitations, the current transport is determined by the diffusion mechanism with allowance for charge modulation in the space charge part of high-resistance sublayer of the solid solution located in the transition part between the substrate and the surface part of the epitaxial layer. At increase of injection level of charge carriers, an important role in the current transport mechanism is played by both dielectric relaxation of the space charge in the base of the heterostructure and scattering of charge carriers at deep centers. This feature of n-GaP–p-(InSb)<sub>1-x</sub>(Sn<sub>2</sub>)<sub>x</sub> ( $0 \leq x \leq 0.05$ ) - heterostructures must be taken into account when developing device structures based on them.

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**UDK: 004.42****RESULTS OF INTEGRATION OF INFORMATION SYSTEM IN  
CORPORATE NETWORK OF TASHKENT UNIVERSITY OF  
INFORMATION TECHNOLOGIES**

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**Annotation.** In this article, models and solutions for the integration of such educational automated systems as the information library system (ILS) and the anti-plagiarism system are examined. Integration of systems is based on the compatibility of databases, if more precisely in the metadata of different information models. At the same time, Cloud technologies are used - data processing technology, in which computer resources are provided to the user of the integrated system as an online service. ILS creates e-library of graduation papers and dissertations on the main server. During the creation of the electronic catalog, the communication format MARC21 is used. The database development is distributed for each department. The subsystem of anti-plagiarism analyzes the full-text database for the similarity of texts (dissertations, diploma works and others). Also it identifies the percentage of coincidence, creates the table of statistical information on the coincidence of tests for each author and division, indicating similar fields. The integrated system was developed and tested at the Tashkent University of Information Technologies to work in the corporate mode of various departments (faculties, departments, TUIT branches).

**Keywords** Cloud technologies, metadata, integration, information system, library system, plagiarism, e-library, e-catalog.

**Аннотация:** Ушбу мақолада ахборот-кутубхона тизими ва плагиатга қарши кураш тизими каби ўқув автоматлаштирилган тизимларини

интеграциялаш моделлари ва эчимлари кўриб чиқилган. Тизимларнинг интеграцияси маълумотлар базаси даражасида, аниқроғи, турли хил маълумот моделларининг метамалумотлари мослиги асосида амалга оширилади. Шу билан бирга, булутли технологиялар қўлланилади - маълумотларни қайта ишлаш технологияси, унда компьютер ресурслари интеграциялашган тизим фойдаланувчисига онлайн хизмат шаклида тақдим этилади. Ахборот-кутубхона тизими асосий серверда тезислар ва диссертацияларнинг электрон кутубхонасини яратади. Электрон каталогни яратишда MARC21 коммуникатив формати қўлланилади. Маълумотлар базасини яратиш ҳар бир бўлим учун тақсимланади. Плагиатга қарши қуйи тизим матнларнинг (диссертациялар, диссертациялар ва бошқалар) ўхшашлиги учун тўлиқ матнли маълумотлар базасини таҳлил қилади. Шунингдек, у гугуртларнинг фоизини аниқлайди, ҳар бир муаллиф ва бирлик учун ўхшаш майдонларни кўрсатган ҳолда гугуртлар тўғрисидаги статистик маълумотлар жадвалини тузади. Интеграциялашган тизим Тошкент ахборот технологиялари университетида турли бўлимларда (факултетлар, кафедралар, ТАТУ филиалларида) корпоратив режимда ишлаш учун синовдан ўтказилди.

**Калит сўзлар:** Булутли технологиялар, метамалумот, интеграция, ахборот тизими, кутубхона тизими, плагиат, электрон кутубхона, электрон каталог

**Аннотация:** В этой статье рассматриваются модели и решения для интеграции таких образовательных автоматизированных систем, как информационно-библиотечная система и система борьбы с плагиатом. Интеграция систем основана на совместимости баз данных, точнее в метаданных различных информационных моделей. В то же время используются облачные технологии - технология обработки данных, при которой компьютерные ресурсы предоставляются пользователю интегрированной системы в виде онлайн-сервиса. Информационно-библиотечная система создает электронную библиотеку дипломных работ и диссертаций на главном сервере. При создании электронного каталога используется коммуникативный формат MARC21.

Разработка базы данных распространяется для каждого отдела. Подсистема антиплагиата анализирует полнотекстовые базы данных на предмет сходства текстов (диссертации, дипломные работы и др.). Также он идентифицирует процент совпадений, создает таблицу статистической информации о совпадениях для каждого автора и подразделения с указанием аналогичных полей. Интегрированная система была разработана и апробирована в Ташкентском университете информационных технологий для работы в корпоративном режиме на различных кафедрах (факультеты, кафедры, филиалы ТУИТ).

**Ключевые слова:** Облачные технологии, метаданные, интеграция, информационная система, библиотечная система, плагиат, электронная библиотека, электронный каталог

**Introduction.** Recently, a number of international projects are being implemented throughout the world to improve higher education by introducing innovative ideas, enriching the material and technical base, and introducing the latest information and communication technologies into the education process. Advanced training practices are being mastered; curricula and training programs are compared with leading educational institutions of the world.

Methods, systems and software for assessing knowledge and monitoring the educational process play a large role in the preparation of competitive personnel. One of such systems is the information system for detecting borrowing of texts, which is necessary not only for detecting plagiarism, but also for searching for typical texts, themes, and analogues. Currently, there are a fairly large number of services and programs that allow in any way to identify borrowing. These include the APLIS system, Antiplagiat, Advego Plagiatus, miratools.ru, istio.com, Praide Unique Content Analyzer II Plagiatinform, Copyscape [1-8].

**Literature review:** Antiplagiat system developed by Forexis. [5] The system searches online for a large number of documents stored in its own database. It has a number of drawbacks, such as: the lack of search for documents available on the

Internet; restriction of the text being checked to 3,000 characters and 5,000 characters after registration and limiting the ability to check only on the basis of existing work.

The Advego Plagiatus program performs online checks using search engines [3]. Unlike similar systems, Advego Plagiatus does not use Yandex.XML (a free service that provides the ability to perform automatic search queries to “Yandex” and publish its issuance on your resource). The program gives the percentage of text matches and displays the sources found. The program does not convert letters, that is, there is no case conversion, there is no processing and change of Latin letters in Russian words into similar letters of the Russian alphabet for texts in Russian. Also there is no support for searching on its own database; Because of the peculiarities of the work, there are situations when the test results differ from time to time.

The [www.miratools.ru](http://www.miratools.ru) service allows online text verification for plagiarism [1]. The system uses search engine results. The advantages include the possibility of replacing English letters in Russian. It is also possible to change the length and pitch of the shingle used for verification. Based on the results of the check, the percentage of matches and the sources found are given. The disadvantage is that the system does not work with its own database, there is a limit on the text length of 3000 characters and a limit on the number of checks per day.

The [www.istio.com](http://www.istio.com) service checks text for borrowed content using search engines Yandex.XML and Yahoo.com [2]. The capabilities of the service are somewhat weaker compared to Miratools. According to the results of the check, a message is issued about whether the text is unique or not, and a list of similar pages of sites is displayed. The service provides additional tools for analyzing texts, for example, spell checking, analysis of the most frequent words, etc. The system does not have letter conversion and search by its own database.

The Praide Unique Content Analyzer II program has extensive text verification capabilities using search engines [4]. There is a choice of used search engines, contains tools for adding new search engines. Check is carried out by shingles which length can be changed. You can set the number of words Shingles' overlap. Displays a detailed

verification report in each search engine. The program has no letter replacements, processing of stop words and no support for working with its own database.

Plagiatinform checks documents for borrowing in both the local database and the Internet [8]. The system is able to find plagiarism in the form of documents composed of “mixed” pieces of text from several sources. Verification can be performed using a quick or in-depth search. The test results are given in the form of a visual report. The disadvantage is the lack of letter conversion. Also, the authors do not provide opportunities for free use or testing of the system, and it is impossible to assess the quality of its work.

Copyscape allows you to search for copies of web pages on the Internet [3]. The system returns a list of web pages that have similar text content. The service checks for the presence of borrowed content using search engines Google and Yahoo!. Only the content of the web page is checked, that is, in order to clarify the uniqueness of the text, it is necessary to publish the text on the site and enter the page address in the system. Without registration, there is a limit on the number of checks per month and on the number of displayed results - 10 sites. For registered users there are no restrictions on the number of checks and output results, but each request costs 5 cents.

According to the results of a comparative analysis of the above systems, we can point out the following common problems of these systems:

- There is no support for searching on its own database;
- Lack of case conversion, there is no processing and change of Latin letters in Russian words for similar letters of the Russian alphabet for texts in Russian;
- There is a limit on the length of the checked text in 3000-5000 characters;
- There is no possibility of integrating databases with electronic libraries.

The purpose of this study is on the basis of a comparative analysis of existing information systems for determining text borrowing, the development of an optimal information model for checking theses and dissertations by integrating anti-plagiarism systems and electronic libraries into the education process.

## **Research methodology.**

Since 2013, a system for defining text borrowing in theses has been launched at the Tashkent University of Information Technologies named after Muhammad al-Khwarizmi (hereinafter referred to as TUIT) and its regional branches. In the system database entered defended theses and master's theses from 2013 to the present. From the 2014-2015 school year every work of students and undergraduates of TUIT is checked. To test the work of students and masters, several experimental models for checking theses and dissertations on the presence of plagiarism were developed (Fig-1,2). Based on the two previous experimental models, a third model was developed for checking theses and dissertations for plagiarism.

This article is written on the basis of practical experience developed, the results of experiments, the analysis of documents of implemented projects on the creation of corporate networks of libraries and literature on the creation of electronic libraries.

In the period 2018-2021, a project will be implemented in Uzbekistan called “Integrated Management System for the Educational Process TUIT” with Korean partners. Within the framework of which an integrated learning management system will be developed on the basis of modern software and hardware.

*ARMAT ++ is a system designed to automate basic library processes and form an electronic library database. This system organized the corporate network of all information resource centers (libraries) at universities of Uzbekistan. In the database of this system there are more than 1 million bibliographic records in the MARC21 format and more than 50 thousand full-text scientific educational resources.*

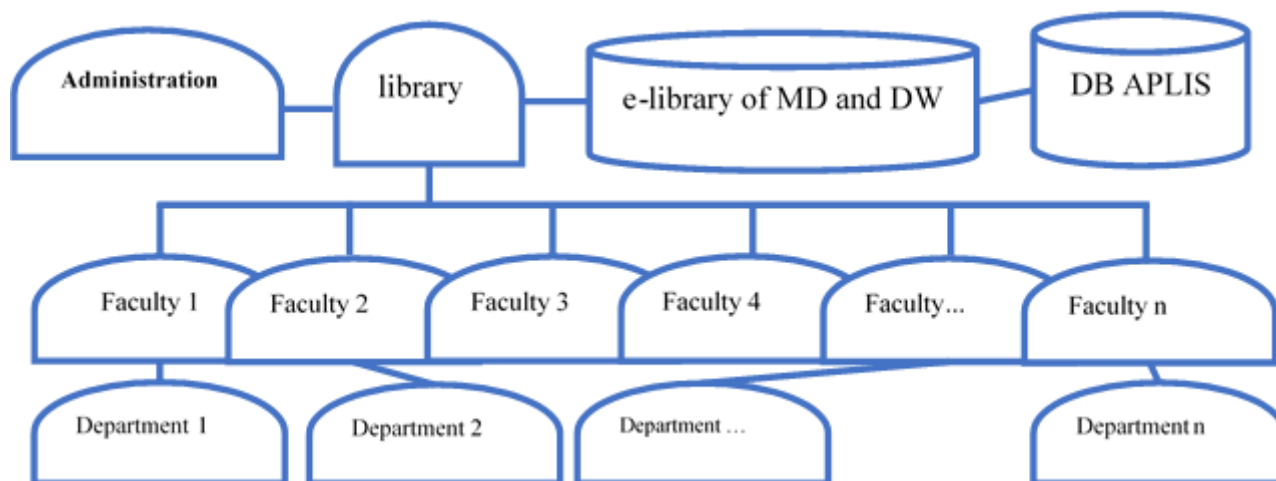
The APLIS system (a system for defining similar texts) was developed by teachers of the Tashkent University of Information Technologies. This system differs from others in that it is integrated with the database of the electronic library ARMAT ++.

Below we consider the experimental approaches and the result of the system integration model for solving the problems of determining text borrowing, intended for use in universities and for work in corporate information networks. The approach involves the formation of electronic libraries of theses, dissertations, scientific articles,



etc., in the mode of corporate interaction of departments, faculties and even branches of one university. A software package uses this database to determine the borrowing of texts, their authors, the formation of statistical information.

In these experiments, the organizational structure of the Tashkent University of Information Technologies and its regional branches was used. The first model of verification of master's dissertation (hereinafter - MD) and diploma works (hereinafter - DW) students developed in 2013 (Fig. 1).



**Figure 1. The first information model of checking for plagiarism of diploma works and master's dissertations**

After preliminary protection, all works are collected in the information resource center (university library), entered into the database of the electronic library and checked for plagiarism in the APLIS system. It takes a long time to prepare the database. Since the gap between the preliminary protection and the provision of the conclusion of the state attestation commission (SAC) is very short. Checking and cataloging 1500 works in a short time is not an easy task. In some cases, due to a hasty conclusion, “similar” work is skipped and recalling such work creates many problems.

The second information model for checking MD and DW for plagiarism was developed in 2014 (Fig. 2).



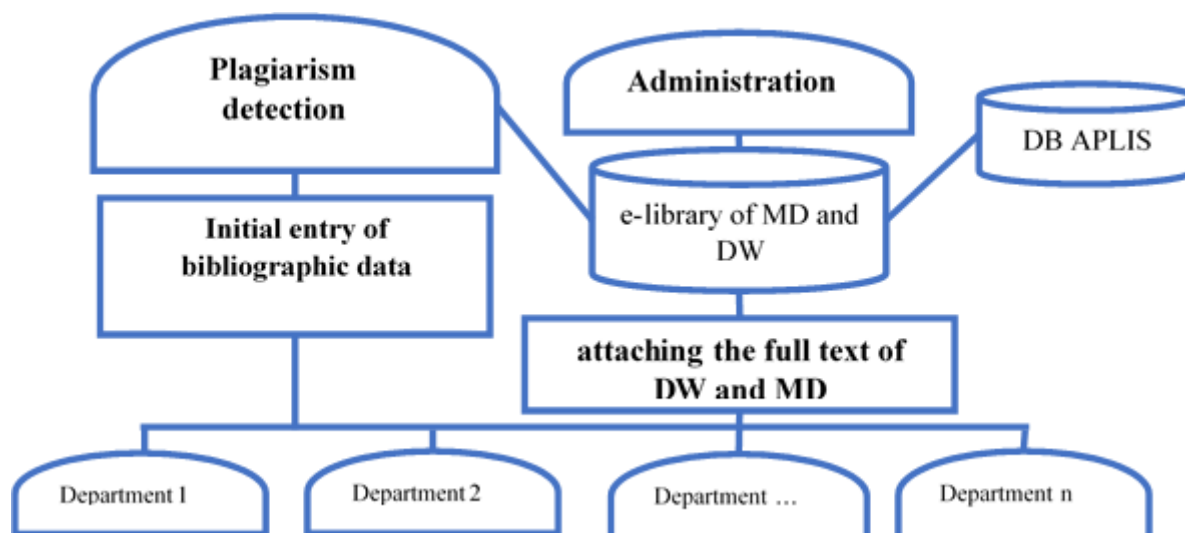


## Figure 2. The second information model of checking for plagiarism of diploma works and master's dissertations

Prepared works are reviewed by supervisors, reviewers and recommended for preliminary protection. After preliminary protection, electronic versions of the works are entered into the database of the electronic library located on the IRC server. Works are checked for plagiarism in the library itself using the APLIS system. Conclusions admission to the protection issued by the cathedral committee.

**Experimental results.** As a result of the two previous models, a third information model was developed for testing MD and DR for the presence of plagiarism in 2016 (Fig. 3). A department is organized for the collection, storage, systematization, cataloging and checking for repetition of topics, theses and master's theses. The department collects primary data on jobs from the deans.

After the approval of the topics, the department employees enter the primary data (scientific supervisor, author and other bibliographic elements) into the electronic catalog of the system. The process of forming an electronic catalog of works will not last later than the month of November, which prevents fussing over protection. An expert group is set up in areas of study to check for plagiarism. The department is provided to a group of experts to do the work. Certain results are provided to a group of experts for a final conclusion. The quality of the work performed is determined by a group of experts. The chairman of the group proposes the vice-rector of the school for academic affairs. A new organized department monitors the progress of work and checks for production recommendations for the topic.



### Figure 3. The third information model of checking for plagiarism of diploma works and master's dissertations

On table 1 and figure 4 we can see the results of the influence of models on the average rate of plagiarism.

Table 1.  
Results of the influence of models on the average rate of plagiarism

Year	Count of BR	works with more 55% plagiarism
2013-2014	1863	1541
2014-2015	2342	1346
2016-2017	3641	768
2017-2018	4935	974

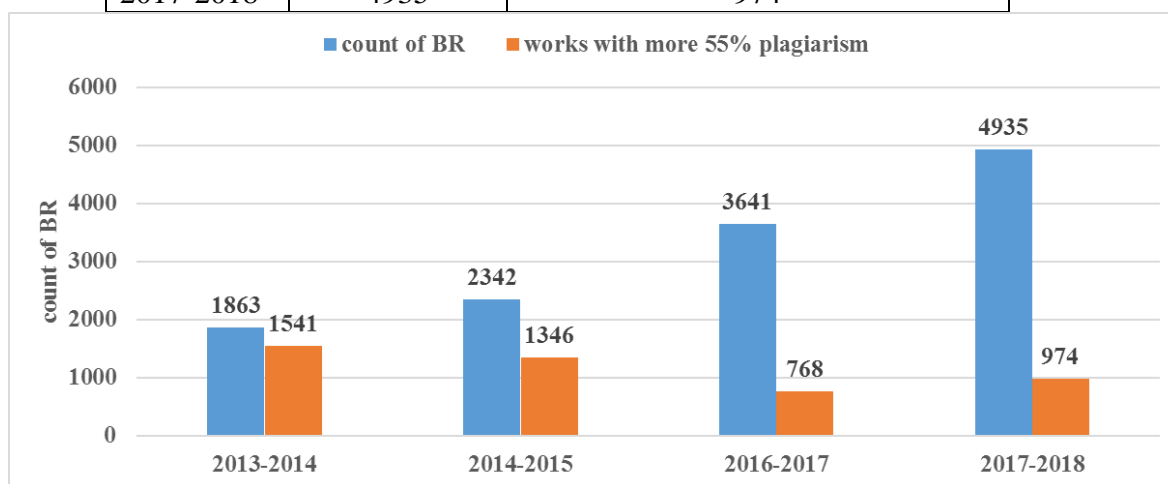


Figure 4. Results of the influence of models on the average rate of plagiarism

If you organize the work on the first model, then, all the works of the university are collected in one place, for cataloging and further verification. In this case, 4 employees of the IRC are exempt from daily duties for cataloging and checking all the works.

Organization of work on the example of the second model shows great confidence in the departments of graduating specialists. In such cases, errors are observed in the cataloging process and the work does not hit the database itself. In some cases, students took the job late.

The organization of works on the example of the third model, the cataloging process of theses and master's theses is carried out on time and efficiently, as it begins at the beginning of the school year and it becomes possible to check topics for repetition

regarding work done in previous years. The database of the electronic library of MD and theses is formed on time, as a result of which, it becomes possible to timely issue an expert group opinion on the presence of plagiarism of the SAC.

**Conclusion.** Organization of the work by the first model does not yield significant results, since in a short time it is necessary to collect a huge amount of information, catalog and check all the work on the presence of plagiarism. The certification commission does not receive the results of the examination of master's dissertations and diploma theses on time. As a result, plagiarism may arise after the award of diplomas to students.

Organization of work on the example of the second model shows great confidence in the departments of graduates. In such cases, there are many mistakes in the process of cataloging and not getting the work into the database itself. In some cases, students were late in their work. This all leads to the routine work of the departments in which even without this many responsibilities. Checking the work on the presence of plagiarism does not facilitate, but increases the scope of duties of the departments. In this model, too, there is not enough time, as a result of which information is not provided in time by the state attestation commission.

Organization of works on the example of the third model, the process of cataloging the theses and master's theses is carried out on time and qualitatively, since it begins at the beginning of the academic year and it becomes possible to check the topics for the existence of a repetition, with respect to the work done in previous years. The database of the electronic library of master's dissertations and diploma works is formed on time, as a result of which, it becomes possible to issue the expert group's opinion on the availability of plagiarism of the attestation commission in time. After the completion of the cataloging of this year's work, the department's employees begin to enter the work (annotation, titles, content and output data) in the chronological order of the last years thereby enriching the database of the e-library of diploma works and master's theses. After the creation of the e-library of diploma works and master's theses, it is possible to integrate the database of e-books related to the study areas for determining the scope of the study and the degree of analysis of the teaching aids for

the work. It will be possible for the supervisor of a fair evaluation for the recommendation of the student's work.

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UDC 666.1:552.12

## ANORTHITE-STRUCTURAL GLASS-CERAMICS ON THE BASE OF DIABASES OF ARVATEN DEPOSIT

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### ABSTRACT

The article investigates obtaining anorthite structural glass-ceramic materials from diabase rocks. According to x-ray data, the main crystalline phase in them is anorthite-like solid solutions.

**Key words:** diabase, structure, mineral, anorthite, augite, glass, crystallization, sitall.

### АННОТАЦИЯ

В статье приведены, получены и исследованы анортито структурное стеклокристаллические материалы из диабазовы горных пород. В них основной кристаллической фазой по рентгенографическим данным являются анортитоподобные твердые растворы.

**Ключевые слова:** диабаз, структура, минерал, анортит, авгит, стекло, кристаллизация, ситалл.

## ANNOTATSIYA

Maqolada diabaz tog' jinslari asosida anortit strukturali shishalristall materiallar olish va o'ganishga oid masalalar keltirilgan. Rentgenografik ma'lumotlar asosiy kristall faza anortitsimon qattiq eritmalarga xosligini ko'rsatadi.

**Kalit so'zlar:** diabaz, struktura, mineral, anortit, avgit, steklo, kristallizatsiya, sitall.

## Introduction.

Economic and social development of Uzbekistan involves the reasonable use of local raw materials in the production of building materials, including the most common mountain (basalt, diabase, gabbro, quartz, porcelain, feldspar, etc.) and sedimentary (soil, lyric, bentonite, kaolin, bauxite. etc.) rocks and various industrial wastes (phosphogyps, aluminum oxide wastes in the production of polyethylene, caprolactam, etc.).

At present, due to the fact that the raw material deposits are limited for the traditional ceramic industry and their cost of production is constantly increasing, acquisition of ceramic products and their replacement glassware on the base of widespread mountain rocks, such as, basalt, diabase, gabbro, etc., is one of the most important issues.

The demand for high-strength, friction-proof, fire-resistant and acid-resistant materials in chemical, construction and other sectors is very high in our republic. The crystalline materials and products from cheap local raw materials like diabase can partially meet these needs and ensure wide application in the economy of the Republic of Uzbekistan.

The iso- and heterovalent isomorphism event of atoms to improve the physical and chemical properties of the products is one of the important theoretical directions in the transfer of compositions from two-, three- and four-phase states to mono-phase states. As a result, great practical achievements can be made - the creation of new

materials with a mono-phase composition, a preview of their properties, and a targeted change of basic operating characteristics.

Currently, the Government of Uzbekistan pays great attention to the program of localization, which is one of the topical issues of widespread use of local raw materials and reduction of costs for imported raw materials. One of the key issues is to identify and expand the scope of local raw materials, to expand the mineral resource base and to create modern high-tech industries. In the production of various new industrial products, the base of non-ore raw materials, which are defined as raw materials, such as, rocks and industrial wastes can be widely used.

There is a large stockpile of diabase in our country. Reserves and geological and technological properties of the rocks of Asmansay, Sarymsak, Chimkurgan, Yangikishlak, Uzunbulak and Arvaten deposits in Jizzakh region have been studied extensively in the Institute of Mineral Resources of the State Committee of Geology of the Republic of Uzbekistan [1-3]. Diabases belong to the basaltic rocks. Basalt rocks are considered to be common rocks of the stratum.

Minerals of the feldspar group belong to framework silicates, in which the infinite crystal structure consists of a three-dimensional framework of tetrahedron [4]. In their structures, the disordered arrangement of Al and Si in tetrahedral positions, and Na, K, and Ca in non-tetrahedral positions are noted. Therefore, it is very difficult to distinguish low-temperature forms from high-temperature ones. They crystallize in 2syngonies: monoclinic and triclinic.

The main types of monoclinic feldspars are sanidin and adularia with the general formula  $\text{KSi}_3\text{AlO}_8$ , barbierite  $\text{NaSi}_3\text{AlO}_8$  and Celsian  $\text{BaSi}_2\text{Al}_2\text{O}_8$ . In the triclinic syngonies, the microcline  $\text{KSi}_3\text{AlO}_8$  and the albite  $\text{NaSi}_3\text{AlO}_8$  crystallize, as well as the anorthite  $\text{CaSi}_2\text{Al}_2\text{O}_8$ . The microcline  $\text{KSi}_3\text{AlO}_8$  plays a significant role in the formation of the structure of solid porcelain, including domestic porcelain. The role of the triclinic anorthite  $\text{CaSi}_2\text{Al}_2\text{O}_8$  is even more noticeable in the production of glass metals, since this phase ultimately provides outstanding material properties (mechanical strength, heat resistance, etc.).



Feldspars form the main phase of rocks such as basalt, diabase and gabbro. In basalts, the ratio of feldspar and pyroxene phases is approximately equal. In diabase rocks, the feldspar phase predominates (feldspar: pyroxene ratio 55:45). The synthesis of ceramics with feldspar crystalline phase can be carried out in different ways [5].

The first way is to obtain glasses of stoichiometric composition with the addition of a nucleator, for example anorthite, then their crystallization according to a special program.

The second way is the use of double state diagrams with the obligatory articulation of a compound with feldspar structure.

The third way is to use the principles of iso- and heterovalent isomorphism in the construction of a specific feldspar mineral. In this case, there are opportunities for the use of different composition of rocks and sedimentary rocks.

**Research methodology.** The study used the X-ray diffraction (XRD) method.

**Object research.** The object of the study was derived from the Arvaten deposit diabase rocks.

In this work, the charge composition of the glasses was selected to obtain dark tones of glassy materials tailored to the anorthite composition.

In Uzbekistan, such breeds are quite widespread. One of the promising objects is the Arvaten diabase deposit, located in the Jizzakh region, 9 km north-west of the Jizzakh lime plant, 1.5 km from the Kuyabash village. Confined to the northeastern slopes of the mountains of Northern Nurata. Given the parameters of the work site, the predicted diabase resources of the Arvaten site can be calculated:

$$350 \times 3000 \times 30 \times 3 \approx 95 \text{ mln.ton.}$$

where: 350 - the average body power of diabases, m;

3000 - visible length, m;

30 - mining depth equal to the average excess over the level of the say, m;

3 - rock density, t/m<sup>3</sup>.

Analysis of diabase compositions of the Arvaten field indicates their multiphase nature. According to microscopic, radiographic, IR spectroscopic and electron microscopic data, it is clear that in diabase there are several main phases in the form of

oligoclase with the formula **(Ca, Na) Al<sub>2</sub>Si<sub>2</sub>O<sub>8</sub>**, orthoclase **K(AlSi<sub>3</sub>O<sub>8</sub>)**, and an iron-containing pyroxene solid solution like aughite **(Mg,Fe<sup>2+</sup>)[Si<sub>2</sub>O<sub>6</sub>·CaFe(AlSiO<sub>6</sub>)]**, calcite **CaCO<sub>3</sub>**, chlorite (clinachlor) with the formula **Mg<sub>4.5</sub>Al<sub>2.5</sub> [OH]<sub>8</sub>(Si<sub>3</sub>AlO<sub>10</sub>)** and a very small amount of quartz **SiO<sub>2</sub>** [6-9]. The results obtained indicate the multiphase nature of crystallized glasses from rocks of the Arvaten deposit after their heat treatment [10-12]. In this regard, to obtain a monomineral product, their trimming is necessary.

### Experimental procedures.

The charge composition of sitalls in this work based on diabase rocks was selected:

1. Taking into account the principles of iso- and heterovalent isomorphism of atoms in the structural types of feldspars;
2. Taking into account the good crystallizability of anorthite-like phases, they strove to maintain the ratio “crystalline phase: glass phase” from 85:15 to 90:10.

The charge composition was selected in order to obtain anorthite composition from glasses of monomineral crystalline materials. Diabase rocks, Angren kaolins, and aluminum-containing waste from the chemical industry were chosen as sources of the required oxides.

Taking into account the principles of iso- and heterovalent substitution, a transition was made from polyminer aldiabase (kaolin is also polymineral) to the synthesis of monomineral anorthite-like glass.

First, we make a grouping of diabase ions, taking into account the average chemical composition and recalculation of diabase compositions to a 100% state, which gives the following chemical compositions, mass. %: **SiO<sub>2</sub>-47.98; Fe<sub>2</sub>O<sub>3</sub>-5.85; FeO-7.70; TiO<sub>2</sub>-1.79; MnO-0.1; Al<sub>2</sub>O<sub>3</sub>-13.48; CaO-8.46; MgO-5.81; Na<sub>2</sub>O-2.86; K<sub>2</sub>O-1.28; SO<sub>3</sub>-0.25; L.O.I-4.34. Σ=100 %.**

We determine the molecular compositions taking into account molecular weights and obtain: **0.798SiO<sub>2</sub> · 0.022TiO<sub>2</sub> · 0.151CaO · 0.145MgO · 0.001MnO · 0.117FeO · 0.132Al<sub>2</sub>O<sub>3</sub> · 0.037Fe<sub>2</sub>O<sub>3</sub> · 0.046Na<sub>2</sub>O · 0.014K<sub>2</sub>O · 0.003SO<sub>3</sub>.**

Now we group the components of diabase taking into account the principles of iso- and heterovalent isomorphism:

1) Five-component diabase formula:



2) Combining  $\mathbf{RO_2}$  and  $\mathbf{RO_3}$  we take the four-component diabase formula:



3) Combining  $\mathbf{R_2O}$  and  $\mathbf{RO}$  we get the three-component formulas of diabase:



Design was carried out for the transition from the three-component formula of diabase to a monophasic product - feldspar  $\mathbf{CaAl_2Si_2O_8}$  formula type. Therefore,  $\mathbf{RO}$  is equal to one:



As can be seen from the above formulas, diabase rocks lack 1.272 mol of  $\mathbf{Al}$  atoms to obtain feldspar structure; 0.226 mol of  $\mathbf{Si}$  atoms and 2.36 mol of  $\mathbf{O}$  atoms. Therefore, additives must be added to the diabase charges, such as AKF-78 enriched kaolin of the Angren deposit and aluminum-containing waste from polyethylene production.

A similar grouping is performed for kaolin AKF-78, having the following chemical composition, wt.%:  $\mathbf{SiO_2-48.27; Fe_2O_3-1.01; Al_2O_3-36.12; CaO-0.14; MgO-0.28; K_2O-0.57; Na_2O-0.50; L.O.I-12.83; \Sigma = 99.72}$ . Recalculating the composition of kaolin to a 100% state gives the following chemical composition, wt.%:  $\mathbf{SiO_2-48.41; Fe_2O_3-1.01; Al_2O_3-36.22; CaO-0.14; MgO-0.28; K_2O-0.57; Na_2O-0.50; L.O.I-12.87. \Sigma=100 \%}$ .

Now we are rearranging the composition for kaolin AKF-78.

1) Four-component kaolin formula AKF-78:

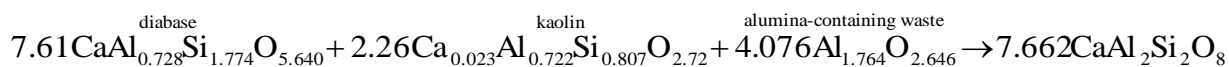


2) Combining  $\mathbf{R_2O}$  and  $\mathbf{RO}$  we get a three-component formula:



The three-component formula of kaolin AKF-78 contains 0.023 **RO**; therefore, appropriate amendments should be made to the diabase formula.

When heating a mixture of the above components, the following reaction proceeds:



We determine the amount of ingredients - diabases of Arvaten deposit, AKF-78 paper brand kaolin and aluminum-containing waste from the polyethylene production of the SHGCH complex in wt.%.

$$\text{diabase} = \frac{7.61 \text{CaAl}_{0.728} \text{Si}_{1.774} \text{O}_{5.64}}{7.662 \text{CaAl}_2 \text{Si}_2 \text{O}_8} \cdot 100\% = 71.30\% ;$$

$$\text{kaolin AKF - 78} = \frac{2.26 \text{Ca}_{0.023} \text{Al}_{0.722} \text{Si}_{0.807} \text{O}_{2.72}}{7.662 \text{CaAl}_2 \text{Si}_2 \text{O}_8} \cdot 100\% = 9.18\% ;$$

$$\text{aluminum - containing waste} = \frac{4.076 \text{Al}_{1.764} \text{O}_{2.646}}{7.662 \text{CaAl}_2 \text{Si}_2 \text{O}_8} \cdot 100\% = 19.52\% .$$

The prepared blends were heated in an electric furnace with silicon heaters in corundum crucibles with a volume of 100-500 g, with a temperature rise rate of 250-300 deg/h. The glass melting temperature was 1450°C with an exposure of 1 hour. The welded glass was poured into special steel molds in the form of racks and discs. No annealing of the glasses was carried out to avoid inducing crystallization.

Physical-technical properties such as density, coefficient of thermal expansion, temperature of softening onset, and thermal, were studied. Density - 2700 kg/m<sup>3</sup>, CTLE-64.04·10<sup>-7</sup> deg<sup>-1</sup>, heat resistance -400 °C, softening temperature-780°C and refractive index-1.56.

The results of the physical and technical tests showed high thermal stability, light-refracting ability of the obtained glasses. This is due to the presence of a large number of alkaline earth metal oxides and aluminum, as well as a smaller amount of alkali metal oxides.

The crystallization ability of glasses was studied by mass crystallization [13] in the temperature range of 600-1100°C every 100°C. The exposure time at each temperature was 1 hour. In glasses, the onset of crystallization is observed at 700°C. At a temperature of 800°C, these samples exhibit surface crystallization in the form of

a continuous film passing with a further increase in temperature to 900°C into a continuous thick crust with a partial crystal propagation deep into the sample. At a temperature of 1000°C in glasses, crystallization is observed throughout the volume, the crystalline phase is at least 50-60%. In this group of glasses, complete crystallization is achieved at 1100°C.

In the process of obtaining glass crystalline materials, the crystallization properties of glasses are of great importance. According to several authors [14, 15], the crystallization process consists of two more or less independent phenomena: spontaneous formation of crystallization centers and crystal growth.

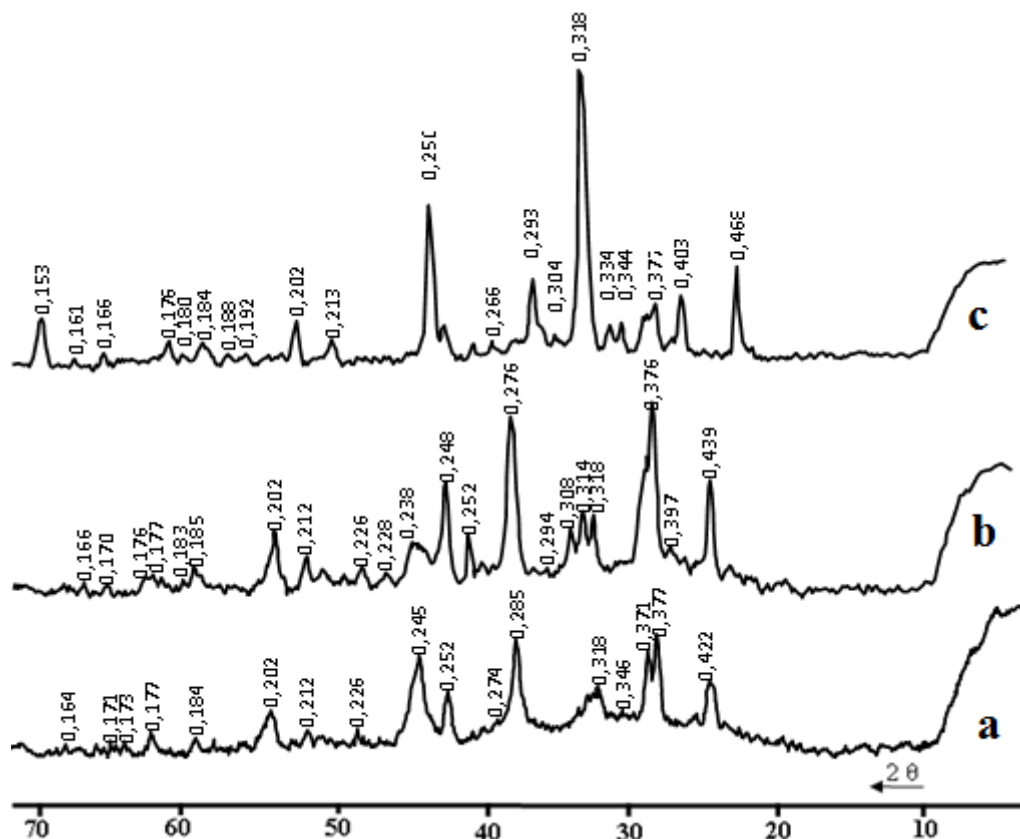
In the process of continuously lowering the temperature of the main silicate melt, there is a temperature range in which crystalline nuclei appear. In this case, a crystal-liquid interface with a certain free energy appears in a super cooled liquid. The source of energy required for the formation of the interface is the excess of free energy possessed by the metastable super cooling of a liquid. The possibility of the formation of stable nuclei in a liquid super cooled to a temperature below its equilibrium crystallization. Crystal growth is greatly influenced by diffusion processes. The crystallization process is also influenced by the segregation phenomena that exist in certain systems.

A number of factors affect the processes of formation of crystallization centers and subsequent crystal growth; it is obvious that the dimensions of the factors for each individual composition are different. Therefore, despite the presence of general theoretical principles regarding crystallization processes, for the successful synthesis of glass crystalline materials, it is necessary to study the crystallization properties of glasses for each composition separately.

### **Results.**

In this work, studies of crystallization processes of the obtained glasses based on Arvaten diabbases were carried out after heat treatment was carried out by mass crystallization in the temperature range of 600-1100°C every 100°C. The exposure time at each temperature was 1 hour. The results showed that glass samples begin to crystallize from the surface in the form of small disconnected areas at a temperature of

600-700°C. Surface crystallization in the form of a continuous thick crust with a partial crystal propagation deep into the sample occurs at temperatures of 800-900°C. Full crystallization is achieved at 1000-1100°C. X-ray diffraction patterns of heat-treated glasses at different temperatures based on Arvaten diabase are shown in Fig. 1.



**Fig.1-X-ray diffraction patterns of heat-treated glass samples at a-900°C, b-1000, c-1100 °C temperatures.**

The change in the relative number of crystalline phases was estimated by the intensity of the main diffraction lines belonging to a particular crystalline phase, since at constant parameters of the X-ray setup, the intensity of the diffraction lines is proportional to the content of the corresponding crystalline phase.

As it can be seen, in the heat-treated samples at a temperature of 900°C (Fig. The peaks experimentally obtained by us and their intensities 0.376 (8.4), 0.346 (0.5), 0.285 (10), 0.274 (1.8), 0.252 (4.8), 0.245 (9.6), 0.226 (2), 0.202 (4.3), 0.184 (2.4), and 0.71 nm (1.8) shows surprising similarities with the literature data of rankinite cited in the source of V.I. Mikheev [16] - 0.376 (10), 0.351 (5), 0.285 (7), 0.273 (3), 0.254 (8), 0.247 (7), 0.225 (2), 0.222 (2), 0.184 (7) and 0.117 nm (2). Presence of weak peaks 0.318 (10); 0.251 (5) and 0.202 nm (1) indicate the beginning of the formation of the



feldspar phase. Peaks of 0.422 were also detected; 0.371; 0.245; 0.211 and 0.171 nm, related to the melilite phase.

Glass exposure at a temperature of 1000 °C for one hour, peaks (Fig. 1.b.) of anorthite ( $d = 0.376$ ; 0.318; 0.308; 0.294; 0.252; 0.238; 0.226; 0.202; 0.183; 0.176; and 0.170 nm) were found in the samples, rankinitis ( $d = 0.439$ ; 0.397; 0.376; 0.294; 0.252; 0.248; 0.238; 0.226; 0.202; 0.171 and 0.166 nm). Samples heat-treated at 1100 °C contain only X-ray peaks (Fig.; 0.184; 0.180; 0.176; 0.166; 0.161 and 0.153 nm).

**Conclusion.** The results obtained on decoding the diffraction patterns of samples of crystallized glasses based on Arvaten diabase indicate that in almost all cases there is a simultaneous crystallization of the same phases - anorthite, melilite and rankinitis, i.e. multiphase products are formed. During crystallization of glass after heat treatment at a temperature of 900°C, X-ray diffraction patterns show the prevailing diffraction lines of melilite and rankinite, with relatively weak lines of anorthite. After heat treatment at 1000°C, the melilite lines disappear, the anorthite remains weak, and the rankinitis lines are strengthened.

After heat treatment at 1100°C, the rankinite lines also disappear, and the diffraction pattern is represented by clearly pronounced intense lines of the anorthite phase. Some deviations of the interplanar spacings from the reference data are obviously associated with isomorphic substitutions in the crystal lattice of the anorthite phase.

Thus, crystallization of glass at a temperature of 1100 °C yielded a glass-crystalline product with anorthite-based solid solution as a monomineral phase, which in turn provides high physicochemical properties of the material, especially in terms of their resistance to alkalis and acids.

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## PROSPECTS OF THE USE OF STIMULATORY BIO PREPARATIONS ON CULTIVATION OF POTATO IN SALINE SOIL CONDITIONS

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### ABSTRACT

The research based on several years of screening, strains resistant to NaCl and Na<sub>2</sub>SO<sub>4</sub> salts (up to 200 mM) were selected from the cotton rhizosphere, it is identified that the strains of the Pseudomonas and Bacillus strains are classified as Pseudomonas stutzeri SKB-308, Bacillus subtilis SKB-309, and Bacillus megaterium SKB-310, as well as it is identified that under stress conditions (pH -9) they separate Indolyl acetic acid (IAA)  $19.4 \pm 0.79$ ;  $20.7 \pm 1.01$ ;  $17.74 \pm 0.85$  mg / l respectively, and it is identified that stamps of pseudomonas stutzeri SKB-308 synthesis 1-bromine-2-phthalimidetane compound with strong antagonistic activity against phytopathogens. On the basis of these bio preparations it is developed Zamin-M, as well as data on the effectiveness of this bio preparation on potato cultivation on degraded soils was analyzed. Studies have shown that, under the influence of the bio preparation, potato yield increased by 1.2 t/ha in Agrab variety and by 3.1 t / ha in Tuyimli variety.

**Key words:** complex biopreparations, rhizobacteria, indole acetic acid (IAA) *Pseudomonas stutzeri* SKB-308, *Bacillus subtilis* SKB-309, *Bacillus megatherium* SKB-310, bromine 2-phthalimidetane, commodity yield, total productivity.

### Аннотация

В статье приведены данные о том, что в результате многолетних скринингов из ризосферы хлопчатника были получены штаммы ризобактерий, относящиеся к родам *Pseudomonas* ва *Bacillus*, устойчивые к воздействию солей NaCl и Na<sub>2</sub>SO<sub>4</sub> (200мМ гача), которые были идентифицированы как *Pseudomonas stutzeri* СКБ-308, *Bacillus subtilis* СКБ- 309 ва *Bacillus megatherium* СКБ-310, а также определено, что в условиях стресса (рН -9) они синтезируют индолил уксусную кислоту (ИУК)  $19,4 \pm 0,79$ ;  $20,7 \pm 1,01$ ;  $17,74 \pm 0,85$  мкг/л, соответственно и штамм *Pseudomonas stutzeri* СКБ-308 продуцировал 1-бром-2-фталимидэтан, вещество высокой антагонистической активностью против фитопатогенов, на основе которых создан биопрепарат “Замин-М”, а также данные об эффективности биопрепарата при выращивании картофеля в условиях деградированных почв Республики Қорақалпақстана. В результате исследований было отнесено, что под воздействием биопрепарата урожайность картофеля сорта Акраб повысилось до 1,2 т/га и сорта Тўйимли 3,1 т/га.

**Ключевые слова:** комплексные биопрепараты, ризобактерии, индолил уксусная кислота (ИУК), штаммы ризобактерий-*Pseudomonas stutzeri* СКБ-308, *Bacillus subtilis* СКБ- 309, *Bacillus megatherium* СКБ-310, бром-2-фталимидэтан, товарная урожайность, общая урожайность.

### Аннотация

Мазкур мақолада бир неча йиллик скрининглар асосида ғўза ризосферасидан NaCl ва Na<sub>2</sub>SO<sub>4</sub> тузлари таъсирига (200 мМ гача) чидамли штаммлар танлаб олинган ва *Pseudomonas* ва *Bacillus* туркумларига кирувчи штаммларни *Pseudomonas stutzeri* СКБ-308, *Bacillus subtilis* СКБ- 309 ва *Bacillus megatherium* СКБ-310 турларига мансуб эканлиги аниқланганлиги ҳамда стресс шароитда (рН -9) мос равишда  $19,4 \pm 0,79$ ;  $20,7 \pm 1,01$ ;  $17,74 \pm 0,85$  мкг/л га тенг индолил сирка кислотаси (ИСК) ажратиб чиқариши ва *Pseudomonas stutzeri* СКБ-

308 штаммининг фитопатогенларга қарши кучли антагонистик фаолликка эга бирикма *1-бром-2-фталимидэтан* синтез қилиши ва улар асосида “Замин-М” биопрепарати ишлаб чиқилганлигига, шунингдек, ушбу биопрепаратни деградацияга учраган тупроқларида картошка етиштиришдаги самарадорлигига оид маълумотлар таҳлил қилинган. Тадқиқотлар натижасида биопрепарат таъсирида картошканинг Ақраб навида картошка ҳосилдорлиги 1,2 т/га ва Тўйимли навида 3,1 т/га ортганлиги қайд этилган.

**Калит сўзлар:** комплекс биопрепаратлар, ризобактерилар, индолил сирка кислотаси (ИСК) *Pseudomonas stutzeri* СКБ-308, *Bacillus subtilis* СКБ- 309, *Bacillus megaterium* СКБ-310, бром-2-фталимидэтановарбоп ҳосилдорлик, умумий ҳосилдорлик.

### **Introduction.**

After adoption of the decree № 301 "On measures to deepen market relations in potato growing and increase potato production in the Republic" by the Cabinet of Ministers of the Republic of Uzbekistan in August 30, 1996 [1], In 1997 the total potato crop was 692 thousand tons, potato production reached 30 kg per capita and the import of consumer potatoes was stopped. In recent years, large-scale reforms implemented in the agricultural sector of the country are providing the population with high-quality agricultural products, including potatoes. Currently, 84 varieties and hybrids of potatoes are planted on 77,000 hectares and an average crop capacity is not more than 20 tons (instead of 50-60 tons) [2].

This is because one of the most abiotic factors - soil salinity, bring damage to the growth of potatoes, both to consumable or crop material. The presence of salts of 0.1% in soil or more than 0.25% in the dry residue is toxic to plants in saline conditions [3].

On the soils of the Republic of Karakalpakstan, such salts are generally found in the form of salinity of chloride-sulphate and sulphate-chloride and one of the main problems is the preparation of potato crop materials that are resistant to them.

**The purpose** of the study is to increase soil fertility and crop yields using stimulatory microbial drugs as a new innovative development of potato cultivation technology in saline soils.

**Object and methods of research.** The research objects were Agrab and Tuyimli varieties of potatoes and microbial composition "Zamin-M".

Experiments were conducted on the basis of "Methods of conduction of experiments in vegetable cultivation, gardening and potato cultivation" by B.J. Azimov and B.B. Azimov's(2002); "Statistical analysis of experimental results" by B.J. Azimov and B.B. Azimov(2006) and "Methodology of field experience in vegetable cultivation and gardening"(1997) [4-7].

### **Research results and their discussion.**

It is well-known from the scientific literature that in plants tolerant to stress factors, there are many mechanisms that help stimulate metabolic processes and limit the effects of stress factors.

The literature indicates that the amount of osmoprotectant of saline-resistant microorganisms has increased and based on the technology for the preparation of NaCl-resistant dry bacterial preparations has been developed [8-10].

It should be noted that in the agricultural practice of our country so far, monocultures of microorganisms have been used in crop production, the present study provides for the application of complex cultures and testing of their effectiveness in various saline soils of the Republic of Karakalpakstan.

Based on several years of screening, chloride and sulphate salinity resistant strains (up to 200mM) were selected from the cotton rhizosphere, identified that they belong to *Bacillus subtilis*, *Bacillus megatherium* and *Pseudomonas Stutzer* types, deposited and bio technically grounded for the production of a complex bio preparation "Zamin-M". It has been established that local strains of the "Zamin-M" biopreparation show high levels of indole acetic acid (ISK) synthesis even under stress (pH-9). In particular, for *Pseudomonas Stutzeri* SKB-308, *Bacillus Subtilis* SKB-309, and *Bacillus Megatherium* SKB-310 stamps this index was recorded accordingly,  $19.4 \pm 0.79$ ;  $20.7 \pm 1.01$ ;  $17.74 \pm 0.85$  mkg / ml. Also due to the results of mass spectrometry analysis of

the synthesis of phytohormone - indolyl acetic acid, the main stimulant of the drug-forming strains,

1-bromine-2-phthalimidetane, which gives a peak in 160 spectra, is separated as an intermediate compound, and according to scientific literature, this compound is a compound with strong antagonistic activity.

The patent of the Intellectual Property Agency of the Republic of Uzbekistan (IPA 0021 2014) is obtained for this drug, which consists of the Association of Microorganisms, which increases the fertility of saline soils.

Zamin-M preparation is included to the "List of permitted pesticides and agrochemicals for use in agriculture of the Republic of Uzbekistan for 2015-2019" by the State Chemical Commission of the Republic of Uzbekistan (Certificate of the State Chemical Commission of the Republic of Uzbekistan №1A1005; №5.11.155; 23.01.2015).

In order to study the effect of microbial composition "Zamin-M" on saline soils, we conducted field experiments at the Nukus branch experimental station of the Tashkent State Agrarian University in Karakalpakstan.

The soil of the experimental site belongs to grassy alluvial soils with light mechanical properties. The cotton fields of the area consist of grassy soils and meadow soils, with a humus content of 0.71-0.90%. The amount of toxic salts in the arable soils is 1.02 t / ha and this area belongs to the saline soils of chloride and sulfate.

Studies of growth and development of potato plants treated with the microbiological composition of "Zamin-M" showed that its soil is inextricably linked to climatic conditions, methods of preparation and preparation of seed material for planting, and biological properties of potatoes. It should be noted that experiments at the facilities presented in the Materials and Research Methods have shown that the variants in the ZAM-M treatment and development options are slightly different from those of the control options (Table 1).



### Average data on the indicators of Agrab and Tuyimli varieties of potatoes

Option	Plant height, cm (the average of 10 plants)	Flowering time, in days		Node average weight, gr	Vegetation period	Productivity, t / ha	Total productivity, t / ha
		10%	75%				
Agrab (control)	95	50	62	65	152	0,7	22,3
Agrab (bio preparation)	102	48	60	77	146	1,9	23,5
Tuyimli (control)	80	42	54	75	145	9,3	20,1
Tuyimli (bio preparation)	89	41	56	83	140	2,4	23,2

As it is seen from the table, the length of the potato plants under the influence of the "Zamin-M" bio preparator increased by 7 cm in the Agrab variety and by 9 cm in the Tuyimli variety, the flowering period was reduced by an average 2% per day on the Agrab variety and by 1-2% on the Tuyimli variety, the average weight of tubers was 77 gr in Agrab variety and 83 gr in Tuyimli variety and it was noted that these indicators were 12 and 8 grams higher than control. Taking into account the importance of the vegetation period, the study showed that under the influence of the bio preparation it is reduced by 6 days in the Agrab grade and 5 days in the Tuyimli varieties.

One of the most important indicators of any crop is its productivity.

As a result of the experiments, this indicator in the control variants of the Agrab was 20.7 t / ha and productivity increased by 1.2 t / ha under the influence of bio preparation as well as it was noted that in the Tuyimli variety, the control yield was 19.3 t / ha, and when it is given the "Zamin-M" bio preparation, productivity has reached 22.4 t / ha and it was almost 3.1 t / ha higher than the control.

Based on the results of the study, there were significant differences in the experimental characteristics of the potatoes of Agrab and Tuyimli varieties, both in the

used and non-used variants of the drug. Specifically, the crop yield in the Agrab variety increased by an average of 1.2 tons per hectare and 3.1 tons per hectare in the Tuyimli variety. The study also showed that according to the growth rate of the varieties which are treated with microbial composition differed significantly from non-processed variants. Plants that are treated with microbial composition were 1.2-1.4 times higher than control and differentiated by vegetative development intensity.

### Conclusion

Based on the results we can conclude that the use of “Zamin-M” bio preparation under saline soils has led to the growth and development of plants, the formation of large quantities of phytomass, as a consequence, higher yields. The positive effect of bio preparation on potato plants is that the synthesis of biologically active substances improves root nutrition.

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**BIO-ECOLOGICAL CHARACTERISTICS OF THE MOST COMMON  
DOMINANT SPECIES PECULIAR TO THE YOUNGER FAMILY OF THE  
IPIMORPHINAE (BECK, 1989), OCCURRING IN THE AGROCENOSIS OF  
THE LOWER AMU DARYA REGION**

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**Annotatsiya** Ushbu maqolada Quyi Amudaryo okrugi agrotsenozida ushlangan Ipimorphinae kenja oilasiga mansub eng ko'p tarqalgan tunlam kapalaklarining biologik va ekologik xususiyatlari jumladan kapalaklarning uchish muddatlari, ozuqaga bo'lgan ixtisosligi hamda avlodlar soni keltirilgan.

**Kalit so'zlar:** tur, tunlamlar, tangachaqanotlilar, yorug'likushlagich, g'umbak, qurt, monosiklik, lepidoptera, monofag, polifag.

**Аннотация.** В статье рассматриваются биоэкологические особенности наиболее распространённых совки под семейства Ipimorphinae пойманных агроценозах в Нижнем Амударьинской округе.

**Ключевые слова:** вид, совки, чешуекрылые, светаловушка, куколка, гусеница, моноциклик, лепидоптера, монофаг, полифаг.

**Annotation:** This article describes biological and ecological features of the most common night-time butterflies peculiar to the Ipimorphinae subspecies, caught in the

Lower Amu Darya agrocnosis, including time of their flight, the food specialization of butterflies and the number of generations.

**Key words:** species, night-time butterflies, coin shaped wings, light holder, pupa, larva, monocyclic, lepidoptera, monophagous, polyphagous.

**Introduction.** The insect class is the richest in the world by the number of species than any other ones. One of the main categories of this class is the Lepidoptera family, with 128 families worldwide, with more than 180,000 species with 4200 generations. The largest families of this category include the Noctuidae (night-time butterflies) family of 35,000 species. The information given above is changing and their number is increasing every year. One of the main reasons for this is that the biocenosis and agrocnosis haven't been fully understood.

Although a great deal of investigations has been done by scientists, more than 100,000 species have not been fully described. The Noctuidae family, according to the new systematics, includes several families and sub-families.

The members of this family have a wide range of species and we can say that the species have spread out from the Antarctic and Arctic glaciers to even tropical and subtropical regions.

Night-time butterflies, mainly winters under the ground in their pupa stage in diapause condition and in spring, butterflies begin to fly out of their pupas when the temperature rises from 15–16<sup>0</sup>C to 18–20<sup>0</sup>C on the places where the level of the ground is 10 cm deep. Some of the flowering plants' nectars are necessary for the feeding of the flying butterflies and to form their reproduction glands [1,9,10]. The female butterflies fed during this period lay their eggs on a variety of weeds and therefore the period of reproduction begins. The family of night-time butterflies (Noctuidae) also differs with the reproduction periods.

**Literature review.** If we look at the history of studying noctuidae family, exactly according to the species peculiar to night-time butterflies, mainly scientists from Uzbekistan – V.V. Yakkontov studied wild night-time butterfly, cotton butterfly, clover butterfly, E.N. Ivanov studied wild night-time butterfly, exclamation shaped butterfly (1944), R.O. Olimjonov and Bronstein studied butterflies in Zarafshan valley

(1956), A.M. Muminov studied underground butterflies (1968, 1981), A.Sh. Khamroyev is an important researcher in the study of the biology and ecology of karadrina, cotton butterfly and circuflexa (1967). S.B. Bekmurotov (1967) investigated the ecological features of underground night-time butterflies in the Samarkand region.

B.A. Muminov explored night-time butterflies in Tashkent region. As a result of his research, 35 species belonging to 8 subgroups of night-time butterflies were found in the cultural landscapes of Tashkent and its suburbs. L. Bobokhonova studied the bio-ecological features of exclamation shaped night-time butterflies. In the recent years, we have been conducting studies on the fauna and bio-ecology of the Lower Amudarya night-time butterflies.

### **Materials and methods**

The experiments were mainly conducted on various agrocenoses of the Lower Amudarya region during 2016-2019. In particular, locations in Khonka district of Khorezm region are Sarapayon, Karamazi, Khonqaobod, Navoi, in Bagat district: Azad. Navoi, Khitoy, in Yangiaryk district: Chikirchi, Astana in Khiva district: Shamakhulum, in Turtkul district: Shurakhon, Miskin, in Ellikkala district: Buston, Akchakul in Khojeyli district the National Bank of Uzbekistan, in Karauzak district Karauzak Furniture and Restaurant, Koyatosh in Takhyatosh district.

We used special methods besides common general common-entymological methods for collecting and capturing butterflies belonging to insect species and night-time butterflies (Noctuidae). At night, we used the DRL-400 moderated illumination holder to catch and collect active insecticides. The amount of flying butterflies towards the light and the time of flying was also identified. This appliance is only for use where there is electricity service. There, where's no electricity, other light fixtures were used, such as battery lamps and white gauze, which was 2 meters wide. The methods Yakhontov 1964, Sachkov 2002, Nikonorova 2007, Khrisanova 2006 and Sachkov 2002 were used depending on the feed specialization of night-time butterflies.

### **Results and analysis of the scientific work**

#### **Younger Family: Ipimorphinae Beck, 1989**

**Generation: Xylena Ochsenheimer, 1816****1.X. exsoleta Linnaeus, 1758.**

**Place and time of catching:** 300 meters north of the cotton plant in Sarapayon village of Khanka district on 10.09.2016, 12.08.2018, 24 copies (10♀-14♂); Azad village of Bagat district 800 meters south of school number 31, 11.09.2016, 27.08.2018, 41 copies (19♀ -22♂); Navoi village of Bagat district, close to desert area 1600 meters south of school number 21, 29.09.2017, 22.08.2019, 34 copies (17♀-17♂); Karamazi settlement of Khonka District, 11.09.2018, 05.09.2019, 36 copies (17♀-19♂); Shurakhon village of Turtkul district, 1500 meters south of school number 21, 10.08.2018, 06.08.2019, 76 copies (41♀-35♂); 700 meters northeast of Buston city of Ellikkala district, 11.07.2019, 10.08.2019, 36 copies (17♀-19♂); Khodjeyli district, 1300 meters north of National Bank of Uzbekistan, 12.08.2019, 13.06.2019, 16 copies (8♀-8♂); Karauzak district, 700 meters south of Karauzak furniture 16.08.2019, 14.08.2019, 26 copies (14♀-12♂); Takhyatosh district 400 meters north of Koyatosh restaurant, 18.08.2019, 19.08.2019, 77 copies (39♀-38♂); (active flight time from 8 till 11 PM).

**Distribution:** Europe, Small and Central Asia, Siberia, Kazakhstan, Japan

**Biology:** The butterflies of this kind fly mainly from the first decade of spring until the end of autumn. It develops during one season only with one generation, that is, it is considered as monovoltine species. The worms are polyphagous and feed on many species of plants: rumex, sambucus, euphorbia, iris, murica, silena, geranium, stachus, sedum, petosites, mar. its imago mainly winters under the soil [2,3,7].

**Generation: Pseudohadena Aliheraky, 1889****1.P.siri ershov, 1874**

**Place and time of catching:** Navoi village of Khonka district, 20.05.2015, 07.06.2016, 26 copies (12♀-14♂); Shamakulum village of Khiva district, 04.06.2017, 08.05.2018, 33 copies (16♀-17♂); Azad village of Bagat district, 800 meters south of schools number 31, 17.05.2018, 27.08.2018, 35 copies (17♀-18♂); Miskin settlement of Turtkul district, 23.06.2019, 21.06.2019, 45 copies (23♀-22♂); Akchakul settlement of Ellikkala district, 23.06.2019, 25.06.2019, 25 copies (15♀-10♂); .Austona village



of Yangiariq district, 11.06.2019, 15.06.2019, 20 copies (10♀-10♂); Khonkaabad settlement of Khonka district, 15.06.2019, 19.06.2019, 30 copies (14♀-16♂); (active flight time from 8 till 11 PM).

**Distribution:** Central Asia, Kazakhstan, Mongolia

**Biology:** butterflies fly from the first decade of May till the end of June, and from the first decade of July, butterflies pass to the condition of summer diapause. From early October, butterflies continue flying and they make two generations during one season i.e. it is considered as bivoltine species. When it gets cold, the worms winter under the egg shell. Worms are oligophagous, i.e. they are representatives of shuradash family (Salsola) and it has been established that worms feed only on beets (*Beta vulgaris*) [3,6].

## **2. *P. laciniosa* Christoph, 1887**

**Place and time of catching:** Yangiariq district, village Chikirchi, 02.06.2018, 05.06.2018, 76 copies (41♀ -35♂); Shamakhulum village of Khiva district, 08.05.2018, 05.06.2018, 42 copies (20♀-22♂); village Astana of Yangiariq district, 30.05.2019, 01.06.2019, 22 copies (12♀-10♂); Khonkaabad settlement of Khonka district, 15.06.2019, 19.06.2019, 25 copies (22♀-23♂), 700 meters northeast of Bustan city, Ellikkala district, 11.06.2018, 22.05.2019, 40 copies (20♀ -20♂); Shurakhon village, Turtkul district, 1500 meters south of school number 21, 28.05.2019, 06.06.2019, 35 copies (16♀-19♂); (active flight time from 8 till 11 PM).

**Distribution:** Central Asia, Mongolia

**Biology:** butterflies fly from the third decade of May till the first decade of June. Its imago is considered as a monocyclic type living only one season and monovoltine species that evolves with only a single generation. Worms are oligophagous and feed on only one family plants – buckwheat (*Atraphaxis*) [4].

## **Generation: *Platyperigea smith*, 1894**

### **1. *P. albina* eversmann, 1848**

**Place and time of catching:** Navoi village of Khonka district, 20.05.2016, 07.06.2018, 25 copies (12♀-13♂); Sarapayon village, Khonka district, 300 meters north of the cotton factory, 13.08.2017, 12.08.2018, 30 copies (16♀-14♂); village

Astana, Yangiariq district, 30.05.2019, 01.06.2019, 25 copies (15♀-10♂); Shamakulum village of Khiva district, 08.05.2018, 08.06.2018, 32 copies (16♀-16♂); Azad village, 800 meters south of school number 31, Bagat district, 27.06.2018, 18.05.2019, 25 copies (15♀-10♂); Navoi village, Bagat district, 2019, 22.08.2019, 25 copies (13♀-12♂); Khitoy village of Bagat district, 11.07.2019, 22.08.2019; 27 copies (15♀-12♂); Miskin settlement of Turtkul district, 06.08.2019, 10.08.2019, 20 copies (10♀-10♂); Akchakul settlement, Ellikqala district, 25.06.2019, 14.08.2019, 25 copies (15♀-10♂); Takhyatosh district, 400 meters north of Koyatosh restaurant, 18.08.2019, 19.08.2019, 40 copies (19♀-21♂); (active flight from 8.30 till 11 PM).

**Distribution:** South-Eastern Europe, Iran, Small and Central Asia, South-Western Siberia, China, Kazakhstan.

**Biology:** butterflies of this species fly mainly from the first decade of April till the third decade of October. Butterflies are a bivoltine species that make 2 generations a year. On the basis of carried experiments it was identified that its worms feed on leaves and stems of various plants, that is, they are considered polyphagous [5,8].

### Conclusion

According to research data, the most common species of the Ipimorphinae subspecies, caught in various agrotensoses of the Lower Amu Darya region in 2016-2019, covers 4 species. It was found that the caught species belong to 1 subfamily peculiar to 2 generations and a map of their distribution in the region was created. It was found out depending on the type of feed that, the species of polyphagous contained in this subspecies of the agrotensoses is 2 species and oligophagous is also 2 species. According to active flight time, it was identified that 1 species' fly from 8.30 till 11 PM and 3 species fly from 8 till 11 PM. There are 3 monovoltine species that make one generation mainly during the flight season and one biovoltaic species that produce two generations.

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## **HARMFUL LOCUSTS AND THEIR NATURAL PESTS IN THE SOUTH ARAL SEA REGION**

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**Аннотация:** Мақолада жанубий оролбўйи худудидаги агроценозларда ва яйловзорларда катта зарар келтирувчи зараркунанда чигирткаларнинг тарқалиши морфологияси ва физиологияси ҳақида маълумотлар келтирилган. Шу билан бир қаторда мазкур худудда тарқалган зарарли чигирткаларнинг табиий кушандалари ҳақида ҳам қисқача маълумотни кўриш мумкин.

**Annotation:** The article provides information on the morphology and physiology of the spreading vermin locusts, which cause great damage to agrocenoses and pastures in the Southern Aral Sea regions. It also provides a brief overview of the natural pests of harmful locusts spread throughout the area.

**Калит сўзлар:** Жанубий оролбўйи, Зарарли чигирткалар, Осийё чигирткаси, итальян пруси, Катта саксовул букур чигирткаси, табиий кушандалар, паразит энтомофаглар.

**Key words:** Southern Aral Sea region, harmful locusts, Asian locust, Italian prus, large haloxylon humpbacked locust, natural pests, parasitic enthomophages.

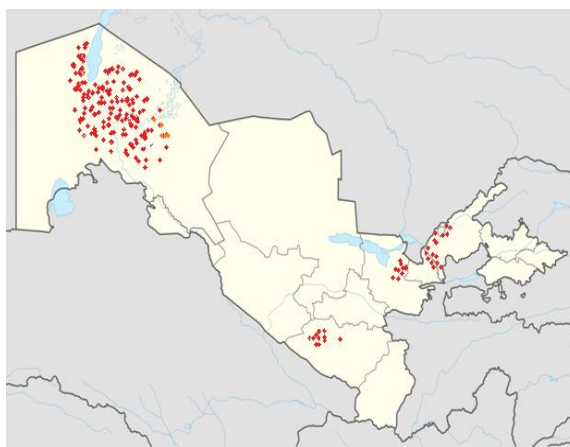
**Introduction.** There are more than 150 kinds of locusts in our Republic, 10 of which can cause significant damage to crops, pastures, reeds and other plants. Among them, mainly Asian locust (*Locusta migratoria* L.), Italian prus (*Calliptamus italicus* .L), large haloxylon humpbacked locust (*Dericorys albidula* Aud.-Serv.) are wide spread and damages the territories of the Southern Aral Sea a lot.

**Literature review.** Asian (brushwood) locust (*Locusta migratoria migratoria* L.) lives in our Republic, namely in the territory of Aral Sea region of Karakalpakstan - the largest historical development cradle of Asian locusts. They can also be found in reeds around lakes and rivers of other regions of our Republic. [1] Most of them are considered as kinds not making piles and they can easily pass to the form making piles in favorable condition. Body of Asian locust body is dark brown, yellowish-green or gray-black mixed green, upper jaw is blue. Length: Males 35-50 mm, females 45-55 mm. their pots are large – it is 8 cm in length. The eggs range from 55 to 100 eggs[2].

Locusts are highly mobile, and usually fly with the wind at a speed of about 15 to 20 kilometers per hour (9.3 to 12.4 mph). Swarms can travel 5 to 130 km or more in a day. Locust swarms can vary from less than one square kilometer to several hundred square kilometers with 40 to 80 million individuals per square kilometer. An adult locust can consume its own weight (several grams) in fresh food per day. For every million locusts, one ton of food is eaten.



A



B

Figure 1 Asian locust (A) and its distribution throughout Uzbekistan (B).



Italian (oasis) locusts (*Calliptamus italicus* L.) – are common in almost all regions of the country, especially in mountainous areas, where wheat and various species of grasses grow. The mature (imago) of the locust is dark brown or yellowish-gray, its shoulder part is flattened. At the bottom of the chest there is a typical sprout of the species of *Calliptamus*, with the main wing being pink. Body's length of males is 14.5-28.7 mm and females 21.9-41.6 mm. The pot of eggs is 35 mm, slightly bent, the bottom is filled with 20-50 eggs, and the upper part is full with dried foam. Mature species damage most of the crops. These types of locusts can infect the following crops: clover, grain-leguminous plants, melons, peanuts, sunflower, sesame, flax, safflower, tobacco, essential oils, maize, corn, cotton, wheat, barley, oats and pastures. In addition, these locusts also gnaw and damage branches of grapes, leaves of fruit trees, young twigs, stalks of fruits and leaves [1], [2], [3], [4], [5], [6].

In recent years, because of the fact that there is not being carrying out control against weeds on the edges of fields, larvae of locusts' egg are penetrating fields and eventually damaging seedlings. Large haloxylon humpbacked locust (*Dericorys albidula* Aud.-Serv.) can be found in all saxauls in the Republic. Their largest cradle centers are common in the north of Karakum and Kyzyl-Kum (Karakalpakstan, Khorezm, Bukhara, Navoi regions) [7], [8], [9].

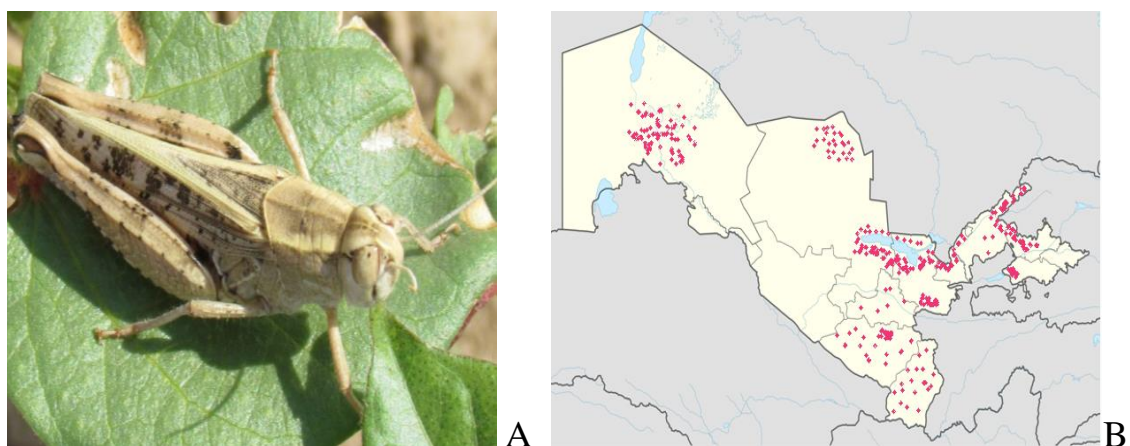


Figure 2. Mature Italian locust (A) and its distribution throughout the Republic (B)

Their body is ash-gray, surface of wings are covered with dark spots and straight and transverse veins; straight veins are blackish colored and transverse ones are light colored. Their mustache is like a string and yellowish. The inner part of lower thighs

is bluish, the ends are red, the thorns are red, the ends are black and the bottom is white. There are 3 bluish black spots on the thighs of hind legs[10], [11].

There is a high, arch shaped edge (hump) and 3 furrows on the front side of its shoulder, the first two of these furrows are only visible on the shoulders and the third one is deep. On the lower front of the chest there is a spur shaped protuberant.



*Figure.3. The imago of a large haloxylon humpbacked locust*

Pitchers of eggs are laid in the places where saxauls grow in relatively hard ground where cattle walked a lot. Walls of pitchers are strong, the appearance is elongated, and a little bent, and the bottom is slightly thickened. The length of the pitcher is 41 to 45 mm, with 18 to 28 eggs inside. Eggs are almost 6.8 - 7.5 mm long, the color is pink or yellowish. Haloxylon humpbacked locusts live under the bushy vegetation that is present in sand-hills and in the sands where saxauls and calligonums grow[12].

Large haloxylon humpbacked locusts damage shrubs of saxauls and calligonum that block mobile sands in their permanent habitat. In the years of mass multiplication, one can find hundreds in a group of saxaul bushes.

There are natural pests of locusts occurring in the nature, which constantly affect locusts from their eggs till all development stages of them.

The natural pests of locusts are divided into 2 groups [1], [2].

1. Feeding with locust eggs.
2. Feeding with locust larvae.



In the southern islands, the larvae of flies jujal, the larvae of Mylabris beetles parasitizes in the eggs of harmful locusts' pitchers, while the larvae of takhin flies and ticks parasitize in the imagoes of Asian locusts and destroy them. The 10 species of birds, lizards, foxes, spiders, scorpions, tortoises, single-celled parasitic amoebas, nematodes and a number of other vertebrates and invertebrates also play an important role in reducing the number of locusts.

**Analysis and results.** Natural pests can destroy eggs and larvae of locusts resulting in a natural reduction of up to 10-90%. In natural condition, very few part of population of locusts are damaged by amoebas and it can be approximately 1%. If additional sources of infection are included in the population, the insect damage can reach up to 5%.

The role of natural pests is very important in controlling the normal number of locusts.

Considering this, it is highly recommended to use toxic insecticides to preserve the natural populations of their enthomophages.

**Conclusion.** In conclusion, Asian locust (*Locusta migratoria* L.), Italian prus (*Calliptamus italicus* .L), large haloxylon humpbacked locust (*Dericorys albidula* Aud.-Serv.) are wide spread and damages the territories of the Southern Aral Sea a lot. Natural pests can destroy eggs and larvae of locusts. The role of natural pests is very important in controlling the normal number of locusts.

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**UDK: 930.85****KHIVA IS A WHEAT-GROWING REGION, DESPITE THE FACT THAT  
THE LAND NOT FERTILE.***(Based on the materials by O.O. Shkapsky)*

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**Аннотация:** Ушбу мақолада Хива хонлиги аҳолисининг иқтисодий-сиёсий ҳаёти ҳақида сўз юритилган. Мақолада рус ҳарбийси О.О. Шкапскийнинг материаллари асосида хиваликлар етиштирган экинлар, улар томонидан ерга қандай ишлов берилганлиги ҳамда далаларнинг қандай суғорилганлиги тўғрисида маълумотлар берилган.

**Калит сўзлар:** деҳқончилик хўжалиги, буғдой, арпа, жўхори, кунжут, тарик, мош, ловия.

**Аннотация:** В этой статье подробно даны сведения о социально-экономической жизни Хивинского ханства. Даны сведения о растениях, которые сеяли хивинцы, как обрабатывались земли и как орошались поля на основе материалов О.О. Шкапского.

**Ключевые слова:** полевое хозяйство, пшеница, ячмень, джугары, кунджут, просо, маш, фасоль

**Annotation:** In this article, the socio-economic life of the Khiva khanate is spoken about and basing on the materials and given information about the plants sowed by the people of Khiva, the ways of land cultivation and techniques of land irrigation by O.O. Shkapsky.

**Key words:** field economy, wheat, barley, sorghum, sesame, millet, mung-bean, haricot-bean.

**Introduction:** Khorezm is a country with ancient agricultural economy. The development of agriculture in Khorezm followed a different path than in the southern zone of Central Asia. The earliest agricultural settlements of Khorezm should be attributed to the second half of the second millennium BC and are still developing.

Farming monuments in Khorezm provide information on how the people of this area planted their crops and their irrigation systems. Many scholars point out that Khorezm farming is unique. Farming on this land requires a thousand hardships. In his day, the First President of the Republic of Uzbekistan I. Karimov said that every day in Khorezm is a hero. President Sh.M. Mirziyoev [1]. Modernization and accelerated development of agriculture has been accepted as a state program. Thus, we should not underestimate the importance of studying agriculture and its traditions at the level of public policy. Certainly, the study of the ancient farming traditions of Khorezm is very important for the development of agriculture in the area.

**Literature review:** Literature review. The literary sources on Khorezm's agriculture are numerous. Even in the distant and recent past, there have been works that summarize the agricultural practices of this land. After all, the presence of the post 'Mirob'(responsible official to the irrigation system in the khanate) in the Khiva khanate testifies the enormous attention paid to the land and water. The book of 'Riyad-ud-Davla', the most famous masterpiece in the Khiva khanate, is an example of this. [2] Although the work is devoted to the political history of the Khiva Khanate, it contains valuable information about built irrigation systems and land types of that time. The materials on Khorezm farming can also be found in "Firdavs-ul-iqbol" [3]. But in

the second quarter of the 19<sup>th</sup> century Russian researchers began to study the Khiva lands. Many works were written, notebooks, as well as essays on the life, economy and socio-economic life of the Khiva Khanate. A lot of data was left by Russian travelers and ambassadors like M.I. Ivanin, Gladyshev, Muravin, N.N. Muravyov, G. Danilevsky, O.O. Shkapsky and others. They wrote that the lands of Khiva were not fertile, but the country was grainy. Among the researchers, O.O. Shkapsky speaks about this in his book “How the Khivans conduct field farming on their waterless lands”. [4] The author writes, “If you travel along the Khiva Khanate in spring or summer, you will see endless fields and gardens everywhere. Wastelands and sands are rare”. [5].

Shkapsky's materials have been used extensively in further research. For example, K.L.Zadihina and M.V.Sazonova have written about the traditions of Khorezm farming in the early 20<sup>th</sup> century [6], Ya. Ghulamov and M. Yuldashev [7] wrote about land ownership and irrigation facilities in Khiva khanate.

**Research methodology:** In this article, why the Khiva country is wheat-growing, despite the fact that the land in it is not fertile, the positive and negative impact of this process on the life of Khiva country as a whole are methodologically analyzed socio-philosophically. Their basis is the comparative and structural-analytical methodology of the study of traditional culture and human culture in the context of the period in Khiva khanate.

**Analysis and results:** The theme was analyzed basing on the principle of realism and objectivity in learning and teaching history.

Many authors of the 19<sup>th</sup> century wrote that the lands in the Khiva khanate were infertile, but the local people were able to produce a higher crop in the land. In this article we have analyzed the materials of O. O. Shkapsky about the Khiva khanate.

O.O. Shkapsky praising the industriousness of the Khivian people, wrote that from the joyless desert, not being afraid of the hot sun burning grass, the Khivian people were primarily helped by their hard work and the great Amu-Darya river, which

can be called the mother-nurse in turning Khiva into a rich country. Because, the Amu-Darya fed mainly with what allowed the Khivian people to sow bread, not hoping for rain. People of Khiva poured water to their arable land from this river. The author compared the Amu Darya with the Volga River. The Volga was useful with the fact that bread was carried along it where the amount of bread was little and also because it gave work to many people.

O.O. Shkapsky wrote not only about the cultivated plants of the Khivans, but also told in detail about how they looked after fields and how the Khivans harvested crops.

Russian researchers claim that in Khiva country, summer lasts 5 months, and that it was very important for agriculture, as this allows the peasants to do and get two crops on the same field in summer. In those days, the Khiva sowed many plants. O.O. Shkapsky divided the plants cultivated by them, into the following groups:

1) People used as food: wheat, sorghum, millet, rice; from bread and legumes: mung-bean and haricot-bean, in addition to onions, carrots, melons: melons, watermelons and pumpkins;

2) Used as livestock feed: barley, clover and densely seeded sorghum;

3) For oil: sesame seeds, flax, and partly cotton and hemp;

4) Spinning: cotton and hemp

5) For paints – madder. In later times, little by little they began to sow potatoes, beets, and even cabbage. For each plant, arable land was prepared in different ways and watered in different ways. The Russian traveler Gladyshev, who visited Khiva in the middle of the 18<sup>th</sup> century (1740-1741), provides a list of garden, horticultural and field crops and describes methods of farming: “They (Khivian – M.S.) sow bread, wheat, barley, millet, zyungar, masses, sesame seeds, cotton paper and tobacco, they fill it with water from ditches; plowed it with help of the bulls ...” [8]

In addition, more detailed information about agriculture and agricultural technology is available in the works relating to the period of the Russian conquest. Special articles of participants in the Khiva campaign of 1873 were dedicated to this issue and representatives of the military administration of the newly formed in the right-bank part of the Khorezm oasis of the Amu Darya district (later the department of the Syrdarya region). [9]

Shkapsky gave more detailed information about plants such as wheat. As at present, it was sown in winter and spring. Winter sowed in September, and spring in March. For that and another arable land plowed 10 times, or even more; 800 carts of manure were transported per hectares and during the cultivation the fields were watered about five times. After the seedlings rose by a quarter *arshins* (a yard measure), the first watering was carried out. There were three such irrigations during the growth of wheat. Winter wheat was watered only after spring emergence, but was not watered in autumn. Winter crops were harvested a week or a half before spring. Wheat was sown in five varieties, of which three varieties of winter and two varieties of spring. He says that only spring barley was sown in March. 1,300 carts of manure had to be transported to arable land under barley; the field was plowed and watered as many times as for wheat. [10] Barley was watered when it rose by a quarter *arshins*. There were four such irrigations during the whole growth of barley. Barley was harvested in July at the same time as spring wheat. A dozen of the field yielded up to 130 pounds of barley. Barley, as O.O. Shkapsky mentioned earlier, was spent to feed horses instead of oats. Corn is also considered a favorite plant of Khivans. It reaches a height of 3 to 5 *arshins*, depending on grade. The stem of corn is thick and the leaves are like reeds, but only wider. At the top of the stalk, the corn carries a large brush of white greens, each pea-sized. The brush is large, thick, densely strewn with grains, reaches a weight of more than a pound. The bright green fields of corns resemble thickets of reeds. Corn was sown in May on well-cultivated soil. 1.000 carts of manure with sand were transported to the arable land under corn, the field was plowed up and down 5-6 times, the same number of times watered and after sowing, another 1,000 carts of salt marsh were transported to the field. Corn began to be watered in June after it grew by a quarter or



even half of one '*arshin*'. During the whole growth period, corn was watered four times. Corn was harvested at the beginning of October. It was removed with a sickle, which they cut it to the root, guarded in barns either with whole cones or threshed and the stalk was put on the roofs to feed cattle in winter.

Since the stalks of corns are excellent fodder, almost every owner sows it directly for the feed, for which corns are sown denser. Such sowing is done most often on the field from which wheat was removed. Sometimes corns, which are sown for food, manage to ripen, and then, of course, the grain is harvested, but sometimes it happens that corns sown for grain do not have time to ripen before the first matinee and then it all goes to feed the cattle. This happens either when the crops are sown late, or when the bad year falls and the matinees begin earlier.

For example, in 1891, thanks to early frosts, all corns went to livestock breeding throughout the Khiva Khanate. Corn was a very productive plant. The entire crop was two pounds per hectare and it was collected from 130 to 260 pounds per hectare, depending on the variety. Corn grains were eaten by people in two forms: either ground into flour or whole.

Bread is baked from flour, which is eaten only fresh, since they are soon staling. This sour stew was the main food of the poor. Among beans, corn was used for cooking gruel. Such gruel was mainly eaten by the Kyrgyz, who roam the steppe, which was why corn was taken a lot to the steppe.

Another grain for the flour was '*buyana*', or '*Sorochin*' millet. This cereal, with ears of corn, looking a bit like oats, was grown only in water and therefore it requires special care. The rice field is not fertilized with manure, but with licorice grass, or as the local people called it as '*buyana*'. This '*buyana*' was taken out to field 54 of the cart for a hectare and spread in rows; then the field was flooded with water, and after it was dried up, it was plowed 8-9 times. Then they again filled the field with water and seeds were already scattered in the water. Rice was sown in May, a few days later than corn. All the time while rice was growing, it should be under water, which should

flow weakly through the field so that there was no standing water. When the rice spilled out and pours, they stopped letting water into the field, but went down from the field and the rice ripened without water. Rice ripens in September and yields a tithe crop of 130 pounds.

Rice is used to prepare a special pilaf dish in mutton fat with finely chopped lamb. Since rice needs a lot of water, it is sown more in places where water can be passed without '*chiqir*' – a wheel used for taking water out from riverbeds. It is difficult to cultivate rice with a *chiqir*, since then it would have been necessary for a rice field to have a separate '*chiqir*' and a lot of working cattle, so that it would be possible to work for a '*chiqir*' without a break all summer.

Millet was sown second in the field from which wheat had just been harvested. The earth for millet was not separately flavored and after harvesting the wheat, the field was watered, then it was plowed once up and down and then the millet was sown. After the emergence of seedlings, they began to be watered. Millet was harvested in September for 130 pounds from one tithe. In addition to ordinary millet, small millet was also sown, for which arable land was cultivated in the same way as for ordinary millet.

Mung-bean and haricot bean were sown as food plants, besides bread plants. Mung-bean and haricot bean was used along with dumplings from the corn bush to prepare chubby soup. This chowder was called '*sigmon*'.

Onions were sown among edible plants. For the most part, they sowed it in small areas that remained free. Sometimes they sowed onions between grapes, taking care not to empty a single inch of land. For onions, the field was fertilized once with sand and they watered and plowed the ground once or twice and sowed onions in April. During the summer, the onions were watered 15 times and they were harvested in September. Tithing yielded up to 300 pounds of onions, and you can use green onions the whole summer.

From oil plants, sesame, flax and hemp were sown. Oil from sesame seeds, flax and hemp was extracted in special small plants, which were arranged by wealthy owners. This plant consisted of a large wooden utensil, in which the seeds were ground with a wooden pestle. Pest was pressed from above by a curved column of a large scaffold, which was attached to a wooden slide below. Stones were laid on these sleds, which made the crooked knee of the woods more firmly pressed on the pestle. From the sled there were two poles around the wooden tool, to which a camel was attached. Walking around the wood, the camel also drove the sleigh around it, which was why a foreskin with a crooked knee, firmly pressing the pestle, tossed and turned the very pestle, which the seeds were rubbed. Oil was scooped out of the wood with buckets.

Sesame oil was used for food, and oil from other plants was used more for consecration, for the lubrication of cars and '*chiqir*'. The oil that went for lighting was poured into a wooden or clay bowl with a narrow toe. In this sock it was folding, a lamp from a paper strand. Squeezes from the oil were used to feed cattle.

Oil was also made from cotton seeds, although subsequently they were sown not at all because of the seeds, but because of the cotton wool from which the paper spinning was prepared, used for the textile of coarse calico and other fabrics.

**Conclusion:** At the same time, all Russian paper spinning and paper-weaving mills processed cotton imported from America, Turkestan, Bukhara and Khiva. Before, cotton was brought only from America, but a lot of it was also produced in Central Asia, that is, from Turkestan, Bukhara, Khiva and the Trans-Caspian region. Later, more than 3 million pounds of cotton were exported from Central Asia to Russia, but the Russian government wanted as much cotton as possible to be exported from Central Asia, that the latter was cheaper, and that calico would be cheaper. Encouraging breeding cotton, the Russian government achieved the fact that in Central Asia they began to breed cotton of American varieties, the best. Not in the Khiva Khanate, not in Russian lands in the Amu-Darya part, American cotton was not bred, because Khiva cotton was a little cheaper than cotton from American seeds, but more hardy. Khiva

cotton differed from the American one in that its cones did not open themselves, but only crack.

People picked cotton about three times in the summer, starting from half of August until the end of September. Tithing gave 100 pounds of cones, which in winter were peeled by hands of the shell, and then the cotton wool itself was cleaned of seeds on machines. Before, Khivian people cleaned cotton from seeds on hand-held machines, passing cotton between two wooden rollers that squeezed seeds; and then these hand-held machines began to be met less and less, as the Khivian people began to start special machines that sawed cotton from seeds. There were 14 such cotton-cleaning factories on one Russian coast and also on the Khiva side of Amu-Darya. The cleaned cotton was pressed at the factories in bales, pounds of 8-10 in each, and in this form they were carried either by camel or in cabins to the railway. Cotton was driven to Orenburg by camel, to Charjuy(place name) by cabins and through the railway to the Caspian areas.

From its cones, 8 pounds of pure cotton were obtained, and a beat like a tithe gives 100 pounds of cones, then, from a tithe, 20 pounds of pure cotton were obtained, which cost from 4 rubles to 7 rubles per pound, depending on grade. Tithing, therefore, gives from one pure cotton gross income from 80 to 140 rubles. Due to such profitability from cotton, many Khivian people sowed it, although for some reason they couldn't plant cotton, because most of people of Khiva had little land, but they still needed to sow wheat, corn and other plants.

According to Shkapsky, there were few forage grasses in the Khiva Khanate, so people themselves had to take care of fodder for cattle. Corn was sown for feeding cattle, according to Shkapsky, and for cattle, clover was also sown. This plant was good in that, once the sowing harvested for 8 or even 10 years, with good productiveness, the fields just needed to be fertilized with manure and sand every spring, 800 cats of fertilizers were used per tithing. Clovers gave good cuts only from the second year, and therefore the Khivian people tried to sow it so that in the first year the land under the

clover would generate income. To do this, clover was seeded on a field sown with wheat during the first watering, that is, it was sown in the mud.

Carrots, beets, potatoes and cabbages were sown in narrow beds and also near side ditches, into which they were let into water during watering.

Sandy soil was chosen for potatoes, and an ordinary, well-fertilized field was taken for the rest. Carrots and beets were sown not on the rows of ridges, but on the sides. When these plants grew, then manure was piled to the sides of the beds and in the middle of the ridge another ditch was breached, which was also covered with manure on the sides. While pouring carrots and beets, water was allowed both in the side of ditches and in the middle. From this treatment, carrots and beets turned out to be larger. According to Shkapsky, people of Khiva learned about potato and cabbage from Russians. As for the marena, whose roots gave a good red paint, the care of it mainly consisted in the fact that, having sown it in June, it was left on beds for two summers and collected in September the second year after sowing. Marena gave up to 300 pounds of roots from tithes, and therefore all expenses were well paid back. These are the plants that Khiva residents cultivated in their fields and gardens.

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**DIPLOMATIC ETIQUETTE AND PROCEDURE FOR THE RECEPTION OF  
AMBASSADORS IN RUSSIA IN THE 17-18 CENTURIES. (ON THE  
EXAMPLE OF RUSSIAN-DZUNGARIAN RELATIONS)**

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**Аннотация:** Ушбу мақолада XVII-XVIII асрларда Россия империясида дипломатик этикет ва элчиларни қабул қилиш жараёнлари расмий манбалар орқали таҳлил қилинади. Дипломатик масалалар ва алоқалар Рус ҳукуматининг жунғор-қалмиқ қабилалари билан олиб борган ҳамкорлик муносабатлари орқали ёритилади.

**Калит сўзлар:** Россия империяси, элчилик муносабатлари, дипломатик корпус таркиби, “Махфий ва Ошкор экспедициялар”, жунғар қабилалари, шарқона бошқарув, халқаро муносабатлар.

**Аннотация:** В данной статье, на основе официальных источников, анализируются дипломатический этикет и процесс приема послов в Российской империи в XVII-XVIII веках. Дипломатические вопросы и контакты освещаются на примере отношений российского правительства с калмыцкими племенами.

**Ключевые слова:** Российская империя, отношения, посольства, дипломатический корпус, «Секретная и Публичная экспедиции», юнгианские племена, восточная администрация, международные отношения

**Annotation:** This article analyzes diplomatic etiquette and the process of receiving ambassadors in the Russian Empire in the 17th and 18th centuries through official sources. Diplomatic issues and contacts are covered by the Russian government's partnership with the Kalmykian tribes.



**Keywords:** Russian empire, embassy, relations, diplomatic corps, “Secret and Public expeditions”, jungian jribes, eastern administration, international relations

## INTRODUCTION

Located in Europe and Asia, the Russian state had extensive experience in conducting business not only with European powers, but also with Eastern states, including nomadic ones, and had special structures for this. The organization and internal structure of the diplomatic bodies of Russia underwent radical transformations during the period under review, reflecting the changes that took place in the country. In the seventeenth century, as you know, the Ambassadorial order headed by the Duma(Government) clerks, clerks, clerks and translators was in charge of relations with foreign states. In 1667, instead of the Duma clerks, the heads of the Ambassadorial order were appointed boyars [1]. Ambassadorial clerks carried out various assignments in the embassy business. They prepared draft letters, negotiated, met ambassadors and introduced them to an audience with the kings, etc. The functions of the embassy clerk in diplomatic relations with Asian states were not so extensive. During the period of Peter's reforms (the beginning of the 18th century), bulky orders with functional confusion were replaced by colleges borrowed from Sweden. In the 1718-1720 years the formation of the College of Foreign Affairs, or, as it was also called, the "Ambassadorial Collegium", which was in charge of the state's foreign policy, was completed. The college consisted of two structures: the Secret Expedition and the Public Expedition. The duties of the first included the reception and leave of foreign ambassadors, sending Russian diplomats abroad, and conducting diplomatic correspondence. It consisted of four departments (or “expeditions”). It was in the latter, called “oriental,” that the affairs “conducted” with the countries of the East, including the Dzungarian Khanate, were concentrated. The Board was headed by the Chancellor (president) and his deputy (vice-chancellor). It consisted of: the secret chancellery counselor, chancellor counselor, two assessors, secretaries, translators and other lower servants.

## LITERATURE REVIEW

The first president of the board was the famous statesman Count G.I. Golovkin, the Office of the College of Foreign Affairs was located in Moscow, which was responsible for the stay of foreign ambassadors in this city, the purchase of gifts, their sending and other economic and partly political issues. Compared to the Dzungarian Khanate, Russia has Agala, therefore, was a special diplomatic institution, which put her in a more advantageous position. Already in the 17th century, and even more so in the 18th century, officials of the Ambassadorial Order and the College of Foreign Affairs that replaced him were, unlike their Dzungarian colleagues high-class professionals. In the era of Peter's reforms, the formation of a European-type diplomatic service began [2]. The basis of Russia's foreign policy approaches to the outside world now lay the European-Christian model of equal relations, mutual sovereignty personified in the person of the state governors. At the same time, in court etiquette, ceremonies, decoration of the royal chambers in the seventeenth century. As before, there was strongly Asian, primarily Byzantine and Tatar "Mongol influence. "Asian splendor reigned among our kings," A. Richter wrote, "the most rituals at the meeting of ambassadors, the most distrustfulness of foreigners, the timid politics of the court and the way of life of the kings were more like Asian ones, almost until the time of Peter the Great ... Kings, following the Asian to customs, they forced the ambassadors to fall to the ground before the throne, from which came the now-used expression to beat, speak, kneeling, and appear before the sovereign unarmed "[3]. In the second half of the XVII century Head of the Ambassadorial order Boyar A.S. Matveev noticeably changed the ceremony of receiving foreign ambassadors . The ceremonial took into account the significance and status of the state from which the ambassadors arrived. The ambassador's behavior at the entrance, and especially during the first audience, as well as the response of the receiving emperor or minister, symbolized the relations of the powers and their relative share in international life[4]. In relations with foreign powers, paramount attention was paid to the protection of the sovereign "honor", which was expressed, first of all, in the title, in observance of etiquette. Here are just some information about the first reception of the Oirat

ambassadors of the Dzungar Taisha Khar “Khula” on January 29, 1620 by King Mikhail Fedorovich: “Everyone received the emails from the emperor in the Ambassador’s Chamber.” Then, accompanied by the bailiff - Tatar translator Semyon Andreev - they were all carried to the Golden Chambers. "And as the Kalmyk ambassadors entered the sovereign, and showed their sovereign a brow to hit the embassy government deacon Ivan Gramotin, and he said - The great sovereign the king and grand duke Mikhailo Fedorovich, all Russia and the autocrat and many states of the state the ark and the possessor, the Karakulataysky Karakulatayshi ambassadors Anuchai with bribes, the great sovereign, hit the brow. And the sovereign gives the ambassadors of Kolmak to his hand, puts his sovereign's hand on them. "After the ambassador’s speech asking him to accept his lordship taisha Khar“ Hula clerk Ivan ” Gramotin showed the king gifts - “commemoration”: skins of sables, 2 irbises, leopards, which the king permits to accept. But as the speaker speaks, the emperor tells to the дума deacon Grigory Lvov, tell the ambassadors their sovereign salary - a dress ... "[6]. The reception of the Kalmyk and Oirat ambassadors in Tobolsk, the then actual capital of Siberia, is also evidenced by a number of archival and published documents. July 24, 1625" under the hill, in the Bessonkov’s courtyard of Zhukov, "one of them testifies, the Tobolsk governor . After that, the ambassadors reported on the specific purpose of their visit, which was to let the Russian authorities allow the Oirats to trade and then release them to Dzungaria. Then the ambassadors were served wine and honey, presented gifts - cloth, “three arshins” for each [7].

## RESEARCH METHODOLOGY

The reception of ambassadors was carried out, as a rule, first in the governor’s office, “move out” the hut, and then continued in the embassy yard. In 1656, a decree was received from Moscow on the construction of a special “Kalmyk yard” in Tobolsk. On which should "put ... two or three large huts and fence fences and create gates. And there will be Kalmyk ambassadors to Tobolsk winter, and they are ordered to put on that Kalmyk yard and to have a guard of Tobolsk archer and Cossack for them all the days, and take good care of it so that the Kalmyk people in Tatar yurts and to them, the Kalmyk ambassador, are not Tatars they went about and didn’t talk about anything,

and did not sell any goods. And they did not tell them any news[8]. During periods of political complications, the Oirat ambassadors in Russia (as well as the Russians in Dzungaria) were detained under various pretexts and without them for a long time. So, the first embassy of Galdan, from the time he became a khan, was detained in Tobolsk by the governor I.B. Repnin for three years. Having finally reached Moscow, the ambassadors complained to King Alexei Mikhailovich about the behavior of the Tobolsk governor. Justifying it, the clerks of the Siberian order reported to the king that the Oirat ambassadors were not allowed to go to Moscow, because “without the decree of the great sovereign, Kalmyk ambassadors were not allowed to go to Moscow, and therefore they did not let go, because the affairs of the Kalmyk ambassadors are small, and the treasury of the great emperor "In the feed and on weekends there are many rises, and the coachman in the carts has a great burden." Also, the Dzungarian ambassadors carry a large number of goods with them, and they do not take customs duties from them. Why the royal treasury incurs losses. In addition, sending ambassadors to Moscow, Galdan began to threaten war with Siberian cities. But despite all these circumstances, Moscow ordered nevertheless to send Mametelip and Chadyr to the capital [8].

## ANALYSES AND RESULTS

At this time, and, possibly, even earlier, standards of granted letters, their content and external design are being formed. Each of them began, as a rule, with the title of the Russian autocrat and listing of the principalities and lands that he owns (God's mercy from the great sovereign "the king and the great prince ... of the whole of Russia autocrat and many states of the sovereign and possessor). “God’s merciful mercy We, Peter the Great, All-Russian Emperor and Dominant, Kiev, Vladimir. Novgorod, King of Kazan ... "Such was the title of Emperor Peter I in 1721[9]. However, already in pre-Petrine times, along with such a lengthy title, a no less significant, but more capacious title appeared:" Great King All Great and Small I and White Russia are an autocrat and many states and lands of the eastern and western and northern stepfathers and grandfathers and heirs and owners [10]. After the title of king, there was, as a rule, the title of the Dzungarian khan. The treatment was fairly standard. So, in the letter of

Peter II of August 16, 1728, sent with M. Etygerov, it was said: "The Kalmyk owner Galdan Cherenyu with all ulus people [ 11]. Then followed the statement of the request and the highest decree on this request. The letter ended with an indication of the time and place of its writing. In the eighteenth century. There were two routes from Moscow to Tobolsk: northern and southern. In the summer, where possible, the embassies moved by water [12]. For example, the embassy of L.D. Ugrimova, the largest embassy from Russia to Dzungaria, sent from Moscow by water to Kazan and from there along the river. Came to Osinsky settlement. There it was reloaded onto the Yamskie carts and so reached Tobolsk. From him to Tara they again sailed on the planks, and from Tara to Semipalatinsk.

It was a necessary measure. The steppe turned out to be scorched by the Kazakhs in the fall, cattle from the nonsense were skinny and died. And the danger of the Kazakh attack was great [13]. It can be said that the administration of embassy affairs at that time was unsafe and required courage and military skill. Translator translated it from Russian into Oirat language Mungalov: Of all the mountains odes of Siberia and Russia, apparently, only in Tobolsk were special "Oirat" books - "Kalmyk Notebooks" [14]. In the affairs of the Siberian order, for example, such a "book" was preserved under the title: "Correspondence of the Tobolsk governor with Kalmyk taishas from 1636-1637". One of the subtitles of the "book" reads: "And in which month and day and by whom are the names from which Taish and from the labs (Lam) and who are the name day the Kolmak ambassadors came there and everything is written in this book in the original under the articles[15]

Unfortunately, the texts themselves, except for such detailed headings, were not preserved in the archive. But despite all his efforts, the trade It was not possible to sign the contract. From now on, not only embassies, but also individual trade caravans of Oirats were accepted for the full maintenance of the Russian state. Their ministers were provided with housing, "fodder money", wine, beer, firewood, etc. This was done "for inclination and caressing the owner Galdan "Chirin and for union with him" [6]. But, speaking about the content of ambassadors in Russia, it should be noted about the selective approach to them. So the Oirat embassies were provided with products, wine

and beer at a higher rate than Kazakh ones. For example, in the summer of 1730, the Dzungar embassy of Tsoi "Namki and the Kazakh embassy from the khan of the Younger Zhuz Abulkhair was in Moscow with a request to accept him into Russian citizenship. Despite all the significance of the Kazakh proposals, to his heads (Kutlumbet Koshtaev and Seitkul Kudaygulov), ordinary members and the servants were given food products an order of magnitude smaller than the Oirat embassy[7].

However, in the 18th century, as Dzungaria was transformed into a powerful nomadic empire, attitudes toward Oirat embassies changed markedly. Representatives of the Dzungar khans were received at the highest level, earlier than other Asian embassies and with great honors. The heads of the most significant Oirat embassies began to receive imperial audiences. The Dzungarian ambassadors were officially and advance notified of the time of its holding. Usually the time of the audience was scheduled for the first half of the day. So, in 1721, Peter the Great received the juntaiji ambassador Tsevan Rabdan Borokurgan in the Senate premises, and three years later, the king received Ambassador Dorje in the room ("Parliament") of the College of Foreign Affairs. Although Dorja handed the emperor 10 pieces of gold and four bundles of sable, which, as well as the letter from the huntaiji, was taken by the chancellor, but the royal envoy of Dzungaria was not admitted to his hand 30. The tradition of receiving the Eastern ambassadors, established by Peter I, was observed after him. For example, on May 21, 1728, the Oirat ambassador Bojir was received at the imperial palace in Petersburg by Peter II. Information about this technique has been preserved in archival documents. Early in the morning, five horses saddled by "German saddles" were sent to the house in the Konyushenny Dvor, where the Oirat embassy lodged, on the instructions of the Foreign Affairs College. The one that was intended for the head of the embassy was saddled "with an elegant saddle, velvet, with a golden braid, and on saddles there were simple saddles"[8]. It is curious that to the question of V.M. Bakunin on the status of Bojir — whether he is an ambassador or a messenger, the latter stated that "they have no such habit" to divide the ambassadors into ranks [6]. The ceremonial of the meeting of ambassadors described above was also in 1730, when the ambassador of Huntaiji Galdan "Tserena Tsoi" Namki arrived in Petersburg,



handing the message to Chancellor G.I. Golovkin in his house, and only then received an audience with the empress, which took place in the palace, where the ambassador was "granted to the hand", which was a great honor for him. The admission or admission to the king's hand for a kiss, as well as the deprivation of a solemn "meeting", etc., was used in many states, Russia was no exception. Thus, the attitude towards the ambassadors themselves was manifested, i.e. to their behavior and the nature of the mission.

This embassy was received three times by Empress Anna Ioannovna. The reception ceremony by the empress of the Zundui embassy "Zamsu was developed by the translator and secretary of the College of Foreign Affairs, the then leading specialist in Kalmyk and Dzungarian affairs V. Bakunin. This ceremony took place on March 24, 1734, its instructions by the Oirat ambassadors were strictly executed Oirat Ambassadors, among other Eastern embassies, were invited to coronations, namesakes and other solemn holidays. For example, on April 28, 1742, the Lama "Dasha's Embassy was invited to Moscow. Diplomatic etiquette and order a reception of ambassadors ... to the coronation of Empress Elizabeth Petrovna. "Those ambassadors," says one of the documents, "between other Asians, that is, Kalmyks, Solton-Tuls, Kirghis" Kassaks and Bashkirs, were admitted before the e.i.v. they brought congratulations and were admitted to the hand of the ee ..... Then, in Moscow and St. Petersburg, they were repeatedly in the palace at balls and masquerades, as well as the average ambassador Naures "Khazy, his wife was especially introduced before the e.i. trays were taken from her to the palace ...[7]. Oral representations of ambassadors and negotiations with them took place, as a rule, in Kolle's premises foreign affairs, the ambassadors were also given the return messages. Previously, the letters of the Oirat khans were translated into Russian, discussed, and a draft of the return message was collectively worked out. Depending on the importance and results of the negotiations, the return messages were certified with different denominations: large or small, which sometimes not only stamped, but also hung on the sheets. Often the messages were sent in a special box - the "Custodians", which was made out with a special art. Depending on the importance of the issues discussed, the response

messages were signed either by the kings, or by the heads of the Siberian or Ambassadorial orders, and later by the heads of the College of Foreign Affairs. The number of audiences depended on the nature of the embassy mission and also on relations between the two countries. As a rule, ambassadors and envoys were received by the king (empress) at least two times — their presentation and farewell to them (“leave”) were considered indispensable. It served as a kind of indicator, firstly, of the state and nature of relations between states; secondly, it was an indicator of personal relations between sovereigns; thirdly, it was an important tool for solving political problems. An integral part of the embassy ceremony was the sending of gifts. So, at the first visit by the Oirat ambassadors of Moscow, after an audience with King Vasily Shuisky, gifts were sent immediately to the Oirat princes[14].

## CONCLUSION

This generosity, as well as the willingness to give the Oirats hostages if the princes of the latter agree to come to Moscow, was dictated, on the one hand, by the weakness and small number of Russian forces in Siberia, and on the other, by the desire to persuade the Oirat princes to accept Russian citizenship. Traditionally, the parties presented the works of their country, various “wonders”. Oirats often presented Russian kings with wild camels, wild cows, horses, gold mined in Kashgar, materials produced in the cities of East Turkestan, known under the name "Irketchina", precious stones (jasper, diamonds), skins of sables, foxes, lynxes, korsaks, Manchurian deer. The behavior of ambassadors at the entrance, during an audience, symbolized the relations of states and their authority in the international arena. The parties considered the arbitrary change in the order of the ceremony as an indicator of the changed relationship. Diplomatic etiquette and the procedure for receiving ambassadors ... either as a sign of diminishing dignity, or, conversely, as a special respect for the state, shown to the ambassador as a personal representative of the head of state. These rules governed the entire external side of diplomatic relations; questions of politics, ideology, prestige of the state and its supreme authority arose behind the "little things" of embassy etiquette.

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**UDC: 94(47)****TRANSITION TO “FORWARD COURSE” IN FOREIGN POLICY OF THE UNITED KINGDOM IN THE MIDDLE EAST.****Gabrielyan Sofya Ivanovna****Candidate of historical sciences,****associate professor of History faculty,****National University of Uzbekistan****E-mail address: [ozodbek.radjabov.1994@mail.ru](mailto:ozodbek.radjabov.1994@mail.ru)**

**Аннотация:** Мақолада Буюк Британиянинг Шарқ мамлакатларига қаратилган ташқи сиёсатининг асосий йўналишлари таҳлил қилинади. XIX асрда Буюк Британия ҳукумати бошқарган консерваторлар томонидан “тажовузкор сиёсат” юритилиб, бу сиёсатнинг асосий мақсади мустамлакалар тармоғини кенгайтириш, Эронда инглизлар таъсир доирасини кучайтириш, Россия империясининг минтақага кириб боришини нейтраллаштиришдан иборат эди.

**Калит сўзлар:** Эрон, экспансия, имтиёзлар, Россия, Англия, “ёпик чегаралар”, либераллар, консерваторлар, «тажовузкор сиёсат»

**Аннотация:** В статье рассматриваются основные концепции внешнеполитического курса Великобритании на Среднем Востоке. Проводниками так называемого «наступательного курса», то есть завоевательной политики в XIX веке в правительстве Великобритании выступали консерваторы. Главным стержнем данной политики было – захват колоний, расширение сферы английского влияния в Персии и нейтрализация русского проникновения в данный регион.

**Ключевые слова:** Иран, экспансия, концессии, Россия, Англия, «закрытые границы», либералы, консерваторы, «наступательная политика»

**Annotation:** The article discusses the basic concepts of the foreign policy of Great Britain in the Middle East. The conservatives acted as the guides of the so-called “forward polic,” that is, an aggressive policy in the 19th century in the British government. The main core of this policy was the seizure of colonies, the expansion of

the sphere of English influence in Persia and the neutralization of Russian penetration into the region.

**Keywords:** Iran, expansion, concessions, Russia, England, “closed borders”, liberals, conservatives, “forward policy”

## INTRODUCTION

The second half of the 19th century was an extremely dramatic period in the history of English colonialism in the Middle East. The 50s were a turning point in the evolution of the contradictions of England and Russia in this region. Their relationship entered a new phase, which was largely associated with the socio-economic processes that took place in both countries.

At that time in the ruling circles of England there was no unified point of view as to what policy should be pursued in order to ensure the strengthening of England's position in India. Some politicians were adherents of active colonial seizures (representatives of conservatives) - the “offensive course”, demanding the inclusion of new territories in British possessions and the disarmament of their population. Others, liberals, advocated a “closed border” policy, believing that the main concern should be the establishment of English colonialism in India; therefore, they advised a restrained policy in the Middle East, showing a friendly attitude towards the local population. [1]

## LITERATURE REVIEW

In fact, both of them were supporters of the spread of British influence in the territory adjacent to the northwestern border of India. The creators of English colonial policy were also forced to reckon with the tense situation in India (especially after the popular uprising of 1857-1859). They took into account, of course, the sad results of the first Anglo-Afghan war of 1838-1842. All this determined the nature, form and methods of English politics in the Middle East.

British expansion in the Middle East resumed already in the late 1950s. However, the reaction of the peoples of the East to the first steps of England in this direction, the Herat conflict of 1857, the popular uprising in India and some other events influenced Anglo-Iranian and Anglo-Afghan relations and forced the British ruling circles to change the methods of colonial policy. [2].

However, from the end of the 60s, the British financial and industrial circles began to hatch plans to expand colonial expansion beyond the northwestern border of India and openly include Iran and Afghanistan in their sphere of influence. Such a policy was aimed at neutralizing the influence of Russia, which, as is known, intensified its activities in Central Asia, Iran and Afghanistan in the mid-60s. Preparations for a new round of offensive politics coincided chronologically with the end of the so-called “Palmerston era” in England, when a new generation of British politicians began to play a significant role in the political arena. It was they, these new politicians, who represented the direction that was called imperial politics in England itself, and insisted on pursuing an “offensive course” in the colonial policy of England. They moved to the forefront of the political struggle even at a time when the liberal cabinet was in power (1868 - 1873), advocating the continuation of the moderate course of the colonial policy of the “closed border.” [3]

Depending on the interpretation of the thesis of the “Russian threat” and the definition of the means by which it would be possible to strengthen the position of England in the Near and Middle East, British politicians and ideologists can be divided into two camps. Those who supported the thesis of the “Russian threat” and the need to expand British possessions, turned to supporters of imperial, or offensive, politics. Those who advocated a political solution to the Anglo - Russian contradictions without the use of military force called themselves adherents of the ‘closed border’ policy. The expression of their interests was in the 60s Gladstone.

Parliament became an arena of controversy over colonial issues in the 1960s. Fearing the penetration of liberation ideas from Russia into India and the strengthening of the revolutionary nature of the masses, the liberal cabinet (1868-1874), headed by Gladstone, insisted on granting independence to Afghanistan. Gladstone said that he “insists on the unification of the empire”, as well as on the provision of “colonial self-government” to dependent territories. [4]

## RESEARCH METHODOLOGY

The advancement of tsarist Russia in Central Asia as a phenomenon due to internal economic reasons, and not the foreign policy objectives of the invasion of



India. England should not have set the task of military expansion in Central Asia, but should have contributed to the creation of “buffer states”, or the so-called “neutral zone,” in Afghanistan and Iran. [5] Military advancement beyond the northwestern border of India was not considered appropriate. These statements reflected the position of that group of British statesmen who identified themselves as advocates of a “closed border” policy and advocated the gradual provision of self-government to the colonies. The entry of Central Asia into Russia contributed to the development of plans for an offensive policy in the Middle East, but, at the same time, to some extent hindered their military adventures. All British foreign policy in the Middle East was portrayed by British politicians as a reaction to Russia's actions in Central Asia. The existence of two political factions (liberals and conservatives) in the English parliament led to the fact that the implementation of plans to strengthen English policy in the Middle East was thought and took place in different forms. At the same time, the liberals stood closer to historical truth in assessing the real possibilities of Russia in the Middle East. Conservatives, in fact, rejected an objective and balanced approach. A return to the question of the “Russian threat” was beneficial to the ruling circles of Great Britain both to smooth out social contradictions both within the country and in its colonies, to divert the forces of the growing national liberation movement from solving their own domestic political problems.

The ruling circles of Great Britain conducted intensive preparation of public opinion for a new escalation of militaristic preparations in the Middle East. At this time, it was noted that in 1865 the colonial policy of England occupied public opinion more than ever before. [6]

## **ANALYSES AND RESULTS**

In the 1870 yaers, the conservative party gradually became the leading bourgeois party in England, expressing the interests of the magnates of heavy industry, the land aristocracy and banking capital. They pressed the liberals, whose party was undergoing an internal crisis.

Conservatives demanded a more active foreign policy to strengthen the empire. They rejected free trade and called for the conquest of new countries in the name of

expanding sales markets and creating conditions for new growth in industrial production. In 1868, the main principles of the “offensive course” were set forth by Henry Rawlinson in a memorandum, the text of which was distributed to the members of parliament in writing and therefore did not receive the resonance expected by the conservatives in those years.

In the parliamentary elections of 1868, conservatives were defeated. Despite this, their leader B. Disraeli constantly criticized Gladstone’s policies, which, in his opinion, made unforgivable concessions to Russia and did not try to consolidate the successes achieved as a result of the Crimean War. A supporter of colonial expansion, Disraeli launched a broad anti-Russian campaign.

On June 24, 1872, Disraeli delivered a speech in defense of strengthening the power of the British Empire. As a result of propaganda of an aggressive course in parliamentary elections in January 1874, the conservative party won. In his first speech to voters, Disraeli emphasized that he intended to “submit for consideration by the British” the question of the situation in India.

At parliamentary meetings, Disraeli outlined the doctrine of offensive politics. Its ultimate goal, in his opinion, was to turn Afghanistan, Iran and Central Asia into English colonies. Disraeli proposed to begin this task by conquering the Afghan (Pashtun) tribes living in mountainous areas on the northwestern Indian border (the so-called strip of tribes and principalities), and joining them to India. [7]

Ultimately, the final division of the world between the imperialist powers and the struggle for the re-division of the colonies, as well as the resulting sharp aggravation of the internal situation in India, led England to move from the 70s of the 19th century to an offensive policy. The reorganization of the Anglo-Indian army after the uprising in 1857-1859, allowed the British colonialists to begin the systematic conquest of new lands adjacent to North-West India, both by establishing political control over the tribes of the independent band and by direct annexation of their territories. This was supposed to facilitate the further penetration of the Anglo-Indian army into Afghanistan. The latter, in turn, was to become a springboard for military-political and commercial expansion in Iran and Central Asia. [8]

To turn Afghanistan into an English colony, it was recommended that neighboring states be used, Indian Punjab, on the one hand, and Central Asian khanates, on the other. To justify this program, the conservatives used the same thesis - about the threat of India from Russia, which supposedly increased as the latter advanced in Central Asia. [9]

In the end, the Russian government accepted or rather did not refuse to recognize the English line of demarcation of the conditional border, which gave Badakhshan and Wahan the emir of Kabul. Thus, at the beginning of 1873, an agreement was reached between the two powers, according to which Lake Wooda was recognized as the extreme eastern point of the northern border of Afghanistan. [10]

According to the Gorchakov-Granville agreement of 1872–1873, the only diplomatic act between England and Russia concerning the border in the upper reaches of the Oxus, it was decided that Badakhshan with its Wahan district, starting from Sary-Kul, in the east, before the Kokchi merger with Oxus (Panj), forming the northern border, designated the Afghan province throughout. Afghan Turkestan, which encloses the districts: Kunduz, Hulm and Balkh and whose northern border would serve as the Oxus flow from the confluence of Kokchi to the post of Khoja-Saleh inclusively, on the big road from Bukhara to Balkh. The Afghan Emir cannot claim any claim to the left bank of the Oxus below Khoja Saleh. And the internal districts: Akcha, Sarypul, Meimene, Shibergan and Andkhoy, the last of which forms the outskirts of Afghan possessions in the northwest, since the steppe that lies further belongs to independent Turkmen tribes.

As for the western border of Afghanistan between the districts, which are dependent on Herat, and the Persian province Khorasan, the English cabinet believed that it was well known and that there was no need for its definition.

The above data on many points did not agree with the information and conclusions delivered almost simultaneously by Adjutant General von Kaufman, according to which the Emir of Afghanistan did not have any right to classify Badakhshan and Vakhsh as his possessions. The ambassador in London was instructed to draw the attention of the British government to disagreements, but, soon after, due

to new representations of this government and in the form of an early establishment in Central Asia of lasting order and tranquility, it was decided to accept the outline of Afghanistan proposed by Lord Granville. As follows from the dispatch of the State Chancellor to Count Brunnov of January 19 (31), 1873, the reasons for this decision were the following considerations: the comparative convenience that the English government had at its disposal for the collection of accurate data on the distant lands referred to; our desire not to exaggerate the significance of this particular issue and, at the same time, to prove our precautionaryness to England and, finally, the pledge made by the power to keep Emir of Afghanistan from any offensive and aggressive plans. [11]

The agreement between the two powers did not remain, in any case, without affecting the general situation in Central Asia. Thanks to this, for ten years there were no reasons for misunderstanding between Bukhara and Afghanistan. The first confusion on the Bukhara-Afghan border appeared only in 1883. Due to a quarrel with the hereditary ruler of Shugnan and Roshan, Shah-Yusuf-Ali-Khan, Badakhshan Khan took his possessions and sent him captive to Kabul. Shugnan and Roshan were not among the territories to which, by virtue of the Russian-English agreement of 1872-1873, the power of the Emir of Afghanistan extended, and therefore the Imperial Cabinet was forced to appeal to the British government with an idea on the induction of Emir to withdraw from the two areas mentioned, both the governor appointed there by the Badakhshan Khan, and the Afghan garrison that was with him.

The Anglo-Russian agreement of 1873 on the delimitation of spheres of influence in Central Asia had a very long and stimulating effect on the formation of borders in the Pamirs, especially since only three years after the conclusion of this agreement, Russia took the next important step in expanding its Central Asian possessions: In 1876, after the suppression of the anti-Russian uprising, the Kokand Khanate, including the Pamiri beks, was included in the empire.

In 1893, the British government sent a special mission to Kabul for negotiations with Abdurrahman Khan, led by Secretary of the Vice-King of India for Foreign Affairs Mortimer Durand. Important tasks were set before the embassy: the settlement of

Anglo-Afghan relations, reaching an agreement on the "Pamir issue" and resolving the "problems" of the Afghan border tribes artificially created by the colonialists who inhabited the lands in the Suleyman Mountains. According to the cautious wording of the British official archaeographer Eichison, Durand was instructed to "come to a friendly agreement on the Indo-Afghan border."

Durand had great difficulty convincing the emir to include this part of Wahan in Afghanistan. [12] After long disputes, facing the threat of war, Emir Abdurrahman Khan was forced to agree to a new direction of the border between the British possessions in India and Afghanistan. The British Empire took possession of the most important part of the territory of the East Afghan tribes.

In November 1893, Abdurrahman Khan and Mortimer Durand signed an agreement to "achieve mutual understanding" on the Indo-Afghan border. According to its terms, Afghanistan was to "abandon any claims to Swat, Bajaur and Chitral, as well as rights to Waziristan and Chagai. The new border, which provided free access to the British armed forces in Afghanistan, passed mainly along the Suleiman Mountains and was called the "Durand Line".

A new attempt to capture Afghanistan could seriously aggravate relations between England and Russia, disrupt a certain stabilization of the situation in the Middle East and Central Asia, which the leading circles of the British Empire were not interested in. [13]

## CONCLUSION

All this determined the "Afghan" policy of England at the beginning of the 20th century. It came down to the political and economic enslavement of Afghanistan by "peaceful" methods: diplomatic intrigues, accompanied by military pressure, the imposition of enslaving treaties, the strengthening of British influence in the country's ruling circles, and the flooding of the Afghan market with English goods.

In August 1907, the rapprochement between England and Russia on the basis of the struggle against Germany found expression in the conclusion of the "Convention on the Affairs of Persia, Afghanistan and Tibet." This convention, directed, in particular,

against the revolutionary movement developing in the East, settled the most acute - Middle Eastern - problems in the Anglo-Russian relations of that period and was one of the cornerstones of the creation of the Entente. [14]

Thus, Great Britain was able to achieve on the part of tsarism in 1907 a clear recognition of its dominance over Afghanistan in the field of foreign policy.

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UDK 1-(091)

**MUNIS KHOREZMIY'S VIEWS ON SOCIAL JUSTICE****Sapaev G`ulomjon Bakhtiyarovich.****Independent researcher of****Urgench state university****E-mail: [gulom-bs@rambler.ru](mailto:gulom-bs@rambler.ru)**

**Annotation:** This article deals with the scholar Munis Khorezmiy's view points on social justice. Additionally, the genesis of ideas about social justice is analyzed.

**Key words:** Munis, social justice, patriot, political views, "Firdavs ul-ikbol" (The heavenly garden of happiness), "Munis ul-ushshoq", khanate, khan's palace, injustice, equality

**Аннотация.** Ушбу мақолада мутафаккир **Мунис Хоразмийнинг** ижтимоий адолат тўғрисидаги қарашлари ёритилган. Шунингдек, ижтимоий адолат тўғрисидаги ғояларнинг генезиси таҳлил қилинган.

**Калит сўзлар:** Мунис, ижтимоий адолат, халқпарварлик, сиёсий қарашлар, "Фирдавс ул-икбол", "Мунис ул-ушшоқ", хонлик, хон саройи, адолатсизлик, тенглик.

**Аннотация.** В статье раскрыто идеи социальной справедливости мыслителя Муниса Хорезми. А также, проанализирована генезис о социальной справедливости.

**Ключевые слова:** Мунис, социальное справедливость, гуманизм, политические взгляды, "Фирдавс ул-икбал", "Мунис ул-ушшак", ханства, дворец хана, несправедливость, равенства.

**Introduction:** Justice is the complicated philosophical category, and it concerns to all branches of social life. But, the idea of justice hasn't been investigated profoundly in our historical-philosophical literature. So, we consider the issue of studying the ideas of Khorezmian scholars' on social justice actual and significant.

Munis Khorezmiy was a poet, translator and scholar-enlightener had significant impact on the development of Khorezmian enlightenment in 18-19<sup>th</sup> century and the idea of social justice was an important issue in his works. The scholar forwarded his

ideas on social justice by describing current political government, injustice of governors, unfairness of officials, political atmosphere and people's social life. For that reason, the period, life-style had great impact on Munis Khorezmiy's ideas on social justice and merged with the social –moral ideas. Since, as the literary artist Y.Yunusov(Ayyomiy) claimed that Munis was the poet who worked and created in the social sphere full of complicated political views, socio-economic crisis, and discrepancy. [1]

**Literature review:** May be for this reason, the works by enlightener scholar such as “Devoni Munis”, “Munis ul-ushshoq”, “Firdavs ul ikbol” (“The heavenly garden of happiness”), in his poetry social-moral issues are harmonized with his political views. The importance of political issues is that he could create the picturesque description of the period he lived.

It is obvious from the history of philosophy from the in view points of the scholars in Central Asia, especially in state administration, we can see that he preferred the system of administration as monarchy. That is to say, he created the image of ‘just shah’ in his works, the honest king on the top of government ruling the state makes flourishing society and country.

Munis Khorezmiy made high hope on the image of honest ruler with political outlook of fair and patriotism. By approaching to this king he appealed him to be aware of the destiny of peoples, their misfortune, be honest, generous and candid to hardworking people and help meager widows and oppressed people. According to poet, if the governor is honest and loves his people, it is possible to establish peace, quiet and justice in the country.

*Sabot istasang mulk bunyodig 'a,*

*Adolat bila et ulus dodig 'a. [2]*

(*Meaning:* If you want the state, the country to be strong and stable, listen to the wishes of the people with justice.)

As the image of honest king and the ideas of social justice were always in the center of poet's political views, he appealed the administrators to be honest, rule over

the country with justice, be kind, patriot and generous. People love and respect the honest king:

*Qayu mulkkim shohi odildurur,  
Anga barcha el ko 'ngli moyildurur. [3]*

(Meanings: Where the king of a country is just, the people love and follow him).

Unfortunately, in his time, the poet was the opposite of his dreams, and he saw all the injustice and iniquities, the true look of the officials. In particular, the injustice of kings and officials, injustice against the people, cruelty, the struggle for crowns and wealth, and the ugliness of the palace are strongly condemned in his works. Even the chief priests, judges and officials, who have the basic wealth, land and water, the violence against the people were fearlessly criticized. For example, the poet in his ghazels (specific poetry) entitled "Peculiar to the Kingman," sadly wrote the following lines that as a result of the injustice and violence of kings and officials, no care of the people, the number of needy and poor in the country, the poor were in grief and pity, the ignorant and the noble were in living in clover, while scientists and scholars were in great trouble:

*Xos o'lib joh ahlig'a in'oim sohib tojlar,  
Zulmi omidin berib jon non uchun muhtojlar...  
Ahli donishlar to'sharga buryoye topmayin,  
Xayli nodonlar solib masnad uza debojlar. [4]*

(Meaning in English:

*The man of violence wore the crown,  
The poor in breadline died of their passion,  
While the wise men found no place, nothing to sit on,  
The ignorant men spread expensive cloth over the throne)*

He considers the king to be the main culprit of social injustice, as well as the misery and gloom of the civilian life. But the poet expresses his thoughts allegorically to the king, not openly:

*Ne umid ul shahdin o'lg'aykim, erur navkarlari,  
Sarsari alloflar, salloklar, hallojlar. [5]*

(Meaning: What a hope for a king whose merchants sell one for the price of ten and greedy, the spinnerets are clumsy and rump.)

In this way the poet tries to influence the king. For example, the sophisticated, able-bodied people in the society are like a queen on a chessboard, meaning they are always around the king, and honest and honest people always stay away from the king as rook in chessboard:

*To shah yonida erdur farzindin egrilarga,  
Muniski rostravdur, dur o`ldi uylakim ruh. [6]*

(Meaning: Those who walk near the king like a queen, (allegory to chess) they have an earth quality (no quality at all), the honest has been kept away far from the king as a rook)

Occasionally, with the arrogance of the king's power, and with the arrogance of the prince, the cunning officials of the palace around him are mocked, by saying humorously:

*Zamona shohlarini hiylagar zohid qilur tashir,  
Ajab davlatdurkim, sherlarni sayd etar tulku. [7]*

(Meaning: The kings of our time are being corrected by cunning hermits. How strange times is it that the foxes are hunting the lions)

Munis was familiar with the life of the palace and the bureaucrats as he served as the official on irrigation in the Khan's palace. According to the poet, the moral and spiritual image of the representatives of political power and human qualities naturally influence the political management of the country. He was well aware of the dignity and cruelty of the nobles and officials in the palace, and they witnessed their riches and their injustice and cruelty to the people, not taking care of the future of the country, and the people. Munis wrote about it in his poem "Ey Falak":

*Ey falak, muncha nedur aylamak izhori sitam,  
Urubon har nafas el bag`riga yuz nishtari g`am,  
Yozdurub ahli vafo boshig`a ofat toshin,  
Ko`p jafo birla vafo rasmini urding barham... [8]*

(Meaning: O man, what is the purpose of stroking the grief on every soul, and placing the stones of disaster upon the people of faith and kill the loyalty by your inquisition?)

The poet, in his ghazals, even he had hoped for justice and mercy of kings and officials, but in practice he saw that the poor people lived in hunger and despair, and those who asked for mercy for inequality and injustice were severely punished by the king and officials. Munis is despised and hated by the cruelty of those who oppress the people, who are replaced by inequality and injustice in the society. Therefore, while Munis' political views are centered on the ideals of justice and social justice, we can see rebellion against the existing political system, the royal court and officials in his literary works.

*Ahli davlatga bo'lsa ham maddoh,  
Topmas iqboldan nishon shuaro.* [9]

(Meaning: No matter how much they praise the government, the public does not succeed).

Even in his lyrical ghazels (specific poetry) the poet glorified the idea of social justice. He used his poems about love and embarrassment as a shared background in expressing his views. [10]

Munis expressed his dissatisfaction with the work of some religious leaders in the palace and the judges who should be the pillar of justice in their views on social justice, saying that they would eventually undermine public administration:

*Bu dard inshosining kulfat g'uzori,  
Bu gham devonining hasrat nigori.  
Siyahpuish musibat, yani xoma,  
Qilur tahrir mundog' so'g'noma.* [11]

(Meaning: These are judges who wrote the tragedies of the pain, the sorrow of the grief, and the questionnaire for the fiery distress).

In the 18th-19th centuries, there were many popular uprisings in the Khiva khanate due to the unfair and cruel treatment of officials and heavy taxation. The poet

explicitly condemns the rulers' crushing of the people who want justice instead of hearing for the people and taking care of them:

*Erur charx bir turfa berahmu qotil,  
Ki osmish qilich mohi navdin hamoyil.  
Shafaq demakim, mehr qoni to'lulmish,  
Ko'mar chighida erga qilib nim bismil.* [12]

(Meaning: O chariot, you are a brutal murder, carrying a sword as the new moon; with the scarlet dawn full of blood of kindness, as if the cattle cut imperfectly)

**Research methodology:** The methodological basis of this analysis is the use of general methods such as objective and systematic analysis, historical and comparative analysis.

**Analysis and results.** Munis' views on social justice are also detailed in his historical work, "Firdavs ul-iqbol". The poet's ideas about justice and injustice are expressed through a realistic portrayal of kings' public administration and public life. According to the researcher K.Munirov, "The book describes the history of the Khiva khanate, as well as the ancient Khorezm period, up to 1825, the struggle for wealth and crowns. There is also a lot of information about the relationship of the Khiva khans with the Turkmen and Karakalpak peoples." [13]

Munis tried to express his views on social justice in the country by informing the public about the political situation in the country, the status of the Khan's palace, the ugliness there, the cruelty and injustice of kings and officials, and the social status of the people. For example, in the section devoted to Ghayib Khan in the chapter of: "Firdavs ul-iqbol", it was written that the khan was unfair and excessively cruel, that the poor people did not cry out, and that the people of Beshkala were heavily taxed and the king tormented the people: "... The khan was brutal and cruel. Eventually the country crossed the border of oppression and cruelty, and imposed a tax for the people on the fortresses of the Besh kala amount of which was fourty thousand gold coins. He did not feel sorry for the oppressed people." [14]



So this work is not only a book that praises the rulers and informs them of positive actions, but also their misfortune, their violence, and their calamity, which is a testament to the bloody struggle for political power.

### **Conclusion:**

1. Munis considers that the most important qualities of the king and government officials are patriotism and justice.

2. The poet convinced that king and government officials guilty for all the injustice and violence in society.

3. Munis believes that the main cause of popular dissatisfaction and revolutions is unjust government, because instead of caring for the people and protecting them from injustice, they themselves tormented and abused the people.

4. The poet points to the human factor as the most important value in public life and believes that all works must serve human life, its peace and prosperity.

In summary, Munis' views on social justice are the leitmotiv of the writer's main works and are embodied in moral virtues such as fair king and fair society, compassion, humanism, equality, and honesty.

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**SHERBACHAS AND AFGHAN GROUPS IN THE EMIRATE OF BUKHARA**

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**Аннотация:** 1917 йилда советлар тузумининг ўрнатилиши, 1918 йилги Колесов воқеалари Амир Олимхон ҳарбий соҳага катта эътибор қаратишга мажбур этди. Амир уруш анжомлари ва аскарлар тайёрлаш киришди. Ҳарбийларнинг ойликлари бир неча марта оширилди. Амир Олимхон инглизлар, тибелисиликлар, афғонлар, хоразмликлар билан ҳарбий иттифок тузишда музокаралар олиб борди.

1917-1920 йилдаги янги ҳарбий гуруҳлар - афғон кўнгиллиларидан иккинчиси эса Иброҳимча саркардалигида зиндонбанд этилган маҳбуслар, ўғрилар озод этилиб қурол – яроғ, ҳарбий кийимлар берилиб, мингга яқин аскарлардан тузилган “Шербачалар” низомий гуруҳи эди. Бу гуруҳлар ўртасида низолар кеиб чиқиб, уларни бошқариш жуда қийинлашиб ҳатто, баъзи масалаларда амир Совет ҳукуматидан ёрдам сўрай бошлади. Мазкур ҳолат эса амирликнинг емрилиш жараёни янада тезлаштирди.

**Аннотация:** Установление советской власти в 1917 году и события Колесова в 1918 году заставили Амира Алимхана обратить пристальное внимание на военных. Эмир начал подготовку войны и солдат. Зарплаты военных были увеличены в несколько раз. Амир Олимхон вел переговоры с Великобританией, тибетцами, афганцами и хорезмийцами о создании военного союза. Новые военные группы в 1917-20 годах – это афганские добровольцы и строевой отряд «Шербачалар» («Смельчаки») под командованием Иброхимча, состоящий из освобожденных заключенных, воров. Между этими группами возникли конфликты. Их было очень трудно контролировать, и в некоторых

случаях эмир обращался за помощью к советскому правительству. Это обстоятельство ускорило процесс крушения эмирата.

**Annotation:** The establishment of the Soviet system in 1957 and the Kolesov events of 1918 forced Emir Alimkhan to focus on the military. Emir started the preparation of war tools and soldiers. The salaries of the military have been increased several times. Emir Alimkhan conducted negotiations with the British, Tibetans on the creation of a military alliance. New military groups of the 1917-1920 were the military-volunteer of Afghan groups, the second were Ibrahim's army which the Prisoners, thieves had been given military group of "sherbachas". It was very difficult to manage the conflicts of the groups, even they asked help from Soviet Government for some problems. These situations had accelerated the demolition process of Emirate.

**Таянч сўзлар:** Манғитлар сулоласи, Бухоро амирлиги, Шербачалар, Афғон гуруҳи, Колесов воқеалари, саркарда Иброҳимча, ҳарбий низомий гуруҳлар

**Ключевые слова:** Династия Мангитов, Бухарский эмират, Шербаччалар (Смельчаки), афганская группа, события Колесова, полководец Иброхимча, военные строевые отряды.

**Key words:** The dynasty of Mangits, Bukhara Emirate, Sherbachalar, (lionkids), Afghan groups, the events of Kolesov, commander Ibrohimcha, military groups.

### Introduction

During the first years of the Mangits dynasty the Emirate didn't have any regular army. The main function of those few military men existing in the Emirate was to protect the Emir and his advisors as well as to maintain peace in the city.

During the Mangits dynasty besides the commanders of Emir several new military groups had been set up by 1920. Historian Mukhamad Said Baljuvoni writes that the structure of army in the Emirate between 1917 and 1920 was as follows: The Bukharian army consisted of seven groups:

1. The men with guns 2. The cavalry kazaks 3. Shefski 4. Terski 5. Arabbachas (the generation of Arabs) 6. Turkman group 7. Ordinary warriors [1].

While examining the structure of the group warriors, the question about whether (if) there were Russians, Azerbaijanians, Armenians, Georgians and Kazakhs of Volga in

the group of cavalry Kazakhs was clarified. According to the archive data till 1918, it was found out that all the cavalry Kazakhs were the citizens of the Emirate [2]. But, since 1918 it became apparent that the Emirate army had Russian, English and other foreign troops opposing the Soviet Union.

The political position of the world has changed since 1917. In particular the establishment of the Soviet Union started causing threat to the Emirate. The events of Kolesov which occurred in 1918 is an obvious example of it. After it Emir Alimkhan began to pay all his attention to the military sphere.

### **Literature review**

The historian Mukhamad Said Baljuvoni describes the history of this period as the following: “ Even though it had a friendly relationship with the Russian Empire, actually he was rather afraid of it. Because Russia has taken some land of Bukhara into its own territory. During the reign of Emir Alimkhan the controversy and resistance was obvious and danger was increasing. That’s why all attention were drawn to the preparation of weapons and soldiers. The salaries of the military have been increased several times. Emir conducted negotiations with the English people, Tbilisians, Afghans and Khorezmians for the purpose of friendship and alliance [3].”

The factors given above caused for the formation of new military group between 1917 and 1920. After the events of Kolesov, the first thing that Emir did was to gather soldiers. Most of the soldiers gathered by Emir these days consisted of two groups. The first one consisted of Afghan volunteers, and in the second group there were the prisoners, thieves that had been arrested together with their leader Ibrokhimcha. They were released and they with guns and military uniforms. It was the group of “Sherbachas” which consisted of nearly a thousand of soldiers [4].

Realizing that the relation with the Soviet government were deteriorating, Emir Alimkhan fueled negotiations with foreigners for the purpose of military support. On this purpose, as mentioned above Domlo Kutbiddin Sudur and Turakhodja Nakib were sent to Afghanistan. A number of resolutions were made by the Emir of Afghanistan and his ministers, 6 elephants and 200 devoted soldiers were sent to Bukhara for help. The ambassadors were treated with honor and sent back with royal outfits [5].

However, ten thousand soldiers and other military aids that were being expected to be sent to Bukhara failed because of a serious politically intricate condition in Afghanistan. (3<sup>rd</sup> Anglo-Afghan war in 1919, the military support given by the Soviet Union in Afghanistan)

According to the information by Sadriddin Ayni, most of Afghan volunteers had come to Bukhara running away from Afghanistan. Some of them entered the army service as volunteers during the war and therefore they earned the Emir's respect. Others also joined them hearing about the respect and gifts, even new Afghan people came from Afghanistan to join the group.

### **Research Methodology**

The army groups of Afghan volunteers were independent, their leaders also belonged to their army groups. They eventually started doing things their own way and went beyond the limit. They would enter and sit at any house or garden, beat anyone they wanted calling him "jaded", delivered them to the government, and get anything they wanted from the government. They also began to oppress the children of the people. After a while the relations between Afghans and Sherbachas got worse[8]. The Afghans side was ready to make a rebellion. The Emir was for the Afghans and Sherbachas to Karmana from Bukhara. The Afghans who saw it got even more furious than before. They began to scare with weapons the one who showed a bit of contradiction. Even some cases of murder occurred. For example a tea merchant Khodji Rakhmat's man was beaten and killed. Consequently, the Afghans annoyed the people of Bukhara and people of Bukhara were fed up with them. They complained about Afghans everywhere.

While being busy with the Afghans issue, the government of Bukhara couldn't solve this problem and couldn't get back the weapons which were given to Afghans by the government itself. In September, 1918 The Bukharian government and the Kagan Resident of the Republic of Turkistan had a good relation of "friendship".

The Emir appealed to the Resident about the Afghan volunteers and urged him to take away the weapons in Kagan in case they were to leave Bukhara. Consequently, the Afghans were sent to Kagan from Bukhara with weapons. The Soviets took away



their weapons and sent them to the Bukharian government and the Afghans were transferred to the territory of Afghanistan. Thus the issue of Afghan volunteers was over[6]. It can be another reason for failure of the support and ten thousand military men of Afghanistan government.

Sadriddin Ayni didn't point out any positive views in the field of military affairs of the Emirate as well as in all the other fields. While expressing his opinion about Sherbachas he says: "All the famous thieves were gathered in this band. For being a member of this group one had to prove himself by numerous stealing actions and evidences of bad deeds. The more one stole the higher his status he got. Not only Bukharian thieves but also famous thieves of Samarkand were assigned to great positions by the government.

Sherbachas continued with their blood thirsty deeds with weapons given by the Emir after moving to Karmana. Even in Karmana they gathered their regular band and they organized attacks on the roads [7]."

Though during the period up to the middle of the 19<sup>th</sup> century some changes in the structure of the army could be noticed, these changes weren't worthy of praise for the development. The last rulers of the Emirate Emir Abdulakhadkhan and Emir Alimkhan have carried out some attempts to make positive changes in the structure of the army in the early 20<sup>th</sup> century. However, most of the changes referred to the structure of the army and did not provide adequate fighting spirit in the activity of the army[9]. Though since the end of the 19<sup>th</sup> century the Emirate army had started to stand in ranks, to have the military exercises, marshing, having service uniforms and accepted certain aspects of the military rules and service regulations of the Russian Empire, some progressive rules were neglected. For instance, the age of service of the ordinary warriors, admission to the army, applying the body punishment to the ordinary warriors and other medieval rules were conserved. In the years 1917-1920, a considerable amount of attention was paid to the work of the army. If we point out the political independence of the Bukharian Emirate during these years, to preserve the freedom of the land was their main duty[10]. However, it was difficult to find a solution

to this matter in such a short period of time. There were dozens of reasons impeding it.

### **Conclusion**

The Emir himself started being frightened by the newly formed military units. In some cases it became difficult to rule them, and the Emir even had to ask the Soviet government for help in some of these matters. (Disputable matters between Sherbachas and Afghan volunteers can be an obvious example of it). This situation in its turn has accelerated the destruction process of the Emirate evenmore.

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## MODERN PROBLEMS OF TOURISM AND ECONOMICS

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**UDK 551.4 (338.48)**

### **A SEPARATION OF THE REPUBLIC OF UZBEKISTAN INTO AGROTOURISTIC REGIONS AND USE OF THEM FOR TOURISTIC AIMS**

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**Abstract:** The article involves the separation of the territory of the Republic of Uzbekistan into agrarian areas for the development of agrotourism. The results of research are directed to define the landscape complexes of agroindustrial potential in different geographical regionalization. A separation of agrotouristic areas requires a variety of factors in the territory of Uzbekistan. Regionalization principles on agrotouristic territories, peculiarities and indicators of agrotourism were described in the article.

**Key words:** method, agrotourism, regional, landscape, indicator, map, principle, diversity, touristic aim.

**Аннотация.** В статье предусматривается разделение территории Республики Узбекистан на аграрные районы для развития агротуризма. Результаты исследований направлены на определение ландшафтных комплексов агропромышленного потенциала в разных географических регионах. Разделение агротуристических зон требует множества факторов на территории Узбекистана. В статье описаны принципы регионализации на агротуристических территориях, особенности и показатели агротуризма.

**Ключевые слова:** метод, агротуризм, регионал, ландшафт, индикатор, карта, принцип, разнообразие, туристическая цель.

**Аннотация.** Мақола агротуризмни ривожлантириш мақсадида Ўзбекистон Республикаси ҳудудини агротуристлик районларга ажратишга бағишланган. Ўзбекистон ҳудудини агротуристлик районларга ажратишда районлаштириш йўналишлари бўйича олинган тадқиқот натижалардан фойдаланилган. Агротуристлик салоҳиятни аниқлашда турли табиий географик районлаштиришда ажратилган ландшафт мажмуаларининг ҳудудий фарқлари ҳисобга олинган.

**Калит сўзлар:** метод, агротуризм, ҳудудий, ландшафт, индикатор, карта, принцип, хилма-хиллик, туристик мақсад.

**Introduction.** Regionalization is a universal method of regulating and systematizing the territorial systems which widely used in geography. It plays an important role to solve many geographic problems. L.N Babushkin, N.A.Kogay (1964), P.Baratov (1996), Sh.S.Zokirov, I.Muminov (2004) held a research on the various sphere of the geography in Uzbekistan , as well as A. Soliev, R. Mahamadaliyev (2004), T.Djumaev (2004), I.A.Hasanov (2006), A.N.Nigmatov, N. Shamuratova (2007) conducted the research on tourist zoning.

**Literature review.** We have used the results of these regionalization (zoning) trends to separate the territory of Uzbekistan into agrarian regions. In particular, it is important to take into account the territorial differences of the separated landscape complexes in determining of the agroindustrial potential in different geographical regionalization. We can see that no special studies have been conducted in Uzbekistan for the allocation of agrarian districts. That is why we have analyzed the researches performed on the general zoning of tourism and some of its trends [6; pp.53-54]. For example, E.A. Kotlyarov have based the following indexes such as the health resort and recreational establishments development that representing the specialization of the region in the implementation of recreational zoning , the interaction of production lines with tourist-health-improving enterprises of the given territory and the employment of the population in these farms [2; pp.238]. It was used four-tier taxonomic system units:

republic (province, region), district, recreational area, and recreational micro district. Yu.S.Putrik, V.V. Sveshnikov divided the region into zones and districts on touristic zoning [3; pp. 3-13].

According to N. Shamuratov's research, the ecotourism zoning of the territory of Uzbekistan is based on the availability of ecotouristic resources and the possibility of using it in ecotourism [4; pp.70-80].

A separation of agrotouristic areas requires a variety of factors (natural, economic, ecological-physiological, historical, agrarian economy, etc.). Such regionalization involves the identification of the potential and opportunity for use in different regions, and which describes the purposeful organization of agrotourism in them. By means of assessment the agrotouristic capacity of regions, a system of the districts with different characteristics will be separated [1; pp.24].

**Research methodology.** The natural and anthropogenic complex was taken as a basis for agrotouristic regionalization of the republic. The existing landscape maps serve as an information base. These allow for the identification of natural components and structures with restrictive or effective indicators.

In agrotouristic regionalization, it is important to take into account the following characteristics of the regions to attracting tourists: 1) diversity of agro landscapes and their level of repetition; 2) the attractiveness, of agrotouristic resources, rare, possibility of earning income; 3) cultural, agrarian and ethnographic values (historical and architectural monuments, centers of agriculture and craftsmanship, presence of ethnographic specific addresses, etc.); 4) availability of public and individually-used natural and agrolandscape areas, and their adaptability and convenience to conduct the holiday for agrotourists.

Taking into account the above-mentioned factors, the separation of the agrotouristic regions can be based on the following principles [5; pp.13-15]:

1. The priority of anthropogenic cultured level of geocomplexes. This principle is important for the territorial organization of agrotourism. Cultural landscapes are anthropogenic landscapes, which is built on the basis of natural resource use and it is directed to satisfy their own needs. Cultural landscape consists of a region; it is similar

to natural conditions and resources and which has been used for many years in a particular branch of the economy (for example, in agriculture). Their main peculiarities are measured by fertility and productivity of land and index of economic efficiency of productions. Thus, cultural landscapes are main factors for agrotourism.

2. Complexity - the need to combine the agronomic tourism with other tourism types. It involves the agrotourism, which it consists of historical, pilgrimage, spiritual and ecological tourism. To separate the districts, it is essential to combine the agro tourism with some tourism and it will contribute to its popularity and effectiveness. For example, it is significant to combine the agro tourism with historical tourism in areas with a lot of historical and archaeological monuments and ecological tourism, which natural resources are rich in determined areas.

3. An existence of travel opportunities. Agrotouristic resources, which attractive objects for tourists and existence of usage opportunities are accounted fully to define the agrotouristic districts.

4. Service availability. To use from agrotouristic opportunities of the region in effective organization – to accept the agrotourists, to put into place, to organize the restoration and existence of service maintenance for agrotourism are the main factors.

5. The diversity of cultures and their uniqueness. The village life, lifestyle, unique public ceremonies, holidays and festivals determine the uniqueness of the regions and become attraction factor as an integral part of the agrotouristic districts capacity.

We have used the methods of territorial analysis, cartographic, comparative-geographical, analysis of field research, expeditionary, statistical, and typological.

**Analysis and results.**In our research, the following peculiarity and indicators were used as a base to separate the agrotouristic districts:

- an existence of specific agrotouristic potential and capacities of each district;
- an availability of specific agrotouristic objects and their impact to the agrotouristic specialization;
- a compliance of agrotourism with local agricultural production specifics; an aesthetic peculiarities of the regions (attractive objects, landscapes and their comfortable to observe);



➤ an availability of agrotouristic routes with other touristic routes and soon.

As a result of research of the above mentioned indicators and features, 15 of agrotouristic districts have been separated in the territory of Uzbekistan (see picture). They are allocated to the Ustyurt, Aral Sea, Lower Amudarya, Kyzylkum, Lower Zarafshan, Middle Zarafshan, Nurota, Kashkadarya, Gissar-Zarafshan, Baysun-Bobotogh, Surkhon-Sherobod, Mirzachul, Chirchik-Akhangaran, West Tanshan and Fergana agrotouristic districts. Each agrotouristic district is characterized by the potential and the availability of its own agrarian resources, the availability of conditions for the formation and development of agrotourism, and agricultural specialization [9; pp. 37-38]. It is important to separate the agrotouristic objects in the system of separated districts by methodically [8; pp. 224-226]. For this purpose, the conditions and resources of the agrolandscape plots, which have a set of criteria to allow for a certain type of rest, that the agrotouristic specialization is clearly visible in the plots. These sites are also suitable to calculating recreational capacity of the territories [10; pp. 235-236].

The map on the scale of 1:1000000 of agrotouristic districts and Uzbekistan geocomplexes have been created on the basis of generalization according to agrotouristic data and mapping of them. Agrotouristic districts are presented in different colors, displayed in figures and their names are given in the map legend. Also, the map has a brief description on natural geocomplexes and agrotouristic districts.

This map can be used for the organization of touristic routes to visit and monitor the agrotouristic facilities located on the territory of our Republic, as well as in the direction of educational institutions, tourist organizations and firms, hotels and tourists can use for their activities and interests, as well as advertising the agrotouristic potential and capacities.

**Conclusions/recommendations.** 1. Despite the widespread development of agro-tourism, its scientific and theoretical foundations have not been sufficiently developed. The development of agrotourism is based on certain principles. In this regard, taking into account the various views and ideas of foreign scientists and specialists, the basic principles of agrotourism are defined.

2. In the mountains, very favorable complexes are the foothill plains, favorable complexes are low mountains and adyrs, medium-high mountains are not favorable, high mountains are unfavorable.

3. On the territory of Uzbekistan, according to the principles and indicators of anthropogenic development, complexity, and tourism opportunities, 15 agrotouristic areas were identified. A 1: 1000000 scale map was created to use of agrotourism.

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## SOCIO-ECONOMIC ESSENCE OF THE CONCEPT OF HOUSEHOLD AND IT'S INEXTRICABLY LINKED WITH FAMILY

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**Аннотация:** Мақолада уй хўжаликларининг ижтимоий-иқтисодий категория сифатида мазмун-моҳияти, унинг таркибий-функционал хусусиятлари, фаолият юритиши ва ривожланишининг илмий-методологик муаммолари ҳамда “оила” тушунчаси билан фарқли жиҳатлари тадқиқ қилинган.

**Калит сўзлар:** уй хўжалиги, оила, инсон капитали, бозор иқтисодиёти

**Аннотация:** В статье исследуются сущность и значение домохозяйств как социально-экономических категорий, их структурные и функциональные характеристики, научные и методологические проблемы функционирования и развития, а также их различия с понятием «семья».

**Ключевые слова:** домохозяйство, семья, человеческий капитал, рыночная экономика

**Annotation:** The article explores the essence and significance of households as socio-economic categories, their structural and functional characteristics, scientific and methodological problems of functioning and development, and their differences with the notion of "family".

**Key words:** household, family, human capital, market economy

### Introduction

In countries with a market economy, there is an increased attention to the scientific and practical issues of developing household activities. This is primarily due to the growing contribution of households to the development of the national economy and welfare of the population. Therefore, as a subject of a market economy, it is necessary to better understand the socio-economic nature of the concept of a household, its

features and structural features, development laws, which play an increasingly important role in the development of a country.

### **Literature review**

Analyses show that the word household means the activity of living in the everyday life, in the yard or in the apartment building. Therefore, modern households are studied by representatives of sociology, demography, statistics, psychology, economics and other social sciences. Each of these subjects examines aspects of household activities. The complexity of the problems associated with the life and development of the household is indicative of the existence of many dimensions that reflect various aspects of the household.

Scientific-methodological problems of the essence, functioning and development of the household as a socio-economic category are widely studied in the scientific work of foreign scientists. [1] During the post-Soviet period, a household as an economic category has been virtually unexplored for several decades of the 20th century because of economic and ideological reasons. In the researchers' research, attention was focused solely on family property and personal subsidiary farming, which is one of its kinds.

### **Research Methodology**

An analysis of scientific sources shows that the concept of household has not been given a single definition so far. Researchers gave their own description based on the earliest understanding of the nature of households and their functions. (Table 1). However, definitions given at different times, under different conditions and in solving different tasks have different meanings and interpretations. Lack of a clear socio-economic and structural-functional definition of the concept of household is one of the obstacles to form a unified approach to research.

The interpretation of the concept of household in the following definitions reflects the logic of the gradual formation and formation of the socio-economic nature of this category.

Table 1

Definitions of the term "household"

authors	Definition
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Makkonell S.R. Bru S.D [1]	Household is an economic unit comprised of one or more persons, who supply the economy with resources and spend the money received for these resources for the purchase of goods and services that meet the material needs of the individual.
Oleynik A.N. [3]	Households are a group of people united by the common goals of restoring human capital, housing, budgeting, and developing family ties. The basis of the household is in power relations - control over joint economic activities is assigned to one of the family members, the head of the family.
Vinter M., Morris U. [6]	Household is a group of people with common functions of restoring human capital, accommodation, budget and, as a rule, family ties.
Boychuk NI, Korneeva ES [5]	A household is an economic unit consisting of one or more persons who provide the economy with resources and spend income for these resources on the purchase of goods and services that satisfy the material needs of a person.
Mironenko O.V. [2]	A household as a subject of social and labor relations is one or the other involved in economic activity in combination with the general budget and place of residence, each of which has the status of employment as a factor of production, both natural and commercial group of persons
Akhmedova MA [7]	In a market economy, a household represents an agent of market relations, who is an independent decision-maker for the purchase and sale of resources, products and services and strives to meet his or her needs.
Barsukova S.Yu. [8]	The term “household” refers to a group of people living together and working together in the same house, and is reflected in the joint production and consumption of these

	<p>blessings. Unlike households, it is based on the concept of family kinship, but the level of brotherhood sufficient to reunite in one family depends on the historical and cultural context.</p>
Maznaya E.A. [9]	<p>Home improvement is a system of economic relations between a person and society, as well as the consolidation of one's own budget and joint decision-making, which is created by a person to satisfy his own needs and create conditions for his or her life and work.</p>

Source: Based on the analysis of scientific sources

Households are often viewed as economic, socio-demographic, and statistical determinants of the family. The family is traditionally characterized by marriage and kinship, co-existence, the common budget, and joint business. While the symbol of kinship is a prerequisite for describing a family, it does not always take part because the family can include both foster and adopted children

At the same time, the concept of households will also change. Its essence is expanding. This requires a qualitative clarification of the concept of households. At the same time, it is necessary to consider households as a separate multi-step system, characterized not only by its socio-economic potential, but also by a certain functional structure and economic and economic behavior.

Non-family and collective households are not related to marriage, but this does not mean that they were not married or existed as family households in the past or were not married in the future. In addition, collective households do not have common consumption expenditures, depending on individual budgets and general rules. Theoretically, this means that collective households can be considered as exceptions, not rules. In this context, individuals who may be part of a collective household in Uzbekistan are not included in the formal rules.



## Analysis and results

In today's economic environment, the terms "household" and "family" are very close together. Therefore, in the literature, the term "household" is often associated with the concept of "family" or has a relationship of overlap or even interchangeability.

Vinter M. and Morris U. The study [6] acknowledges that "Family is a group united by the commonality of family relations, which does not have to live in the same house and have a common budget." Urumova F.I. and [4] stated: "The family is a subgroup of people, usually consciously organized on the basis of kinship and common living, whose life and activity are carried out to meet the social, economic and spiritual needs of the individual." From these definitions, it is clear that the main features of the family, such as kinship, marriage and social security, are basic but not sufficient to recognize the family as a household. Households are also characterized by key features such as co-existence, co-operation, overall budget, and family ties (Table 2). This may or may not be the marriage relationship. However, this may lead to the conclusion that the specific features of "household" and "family" are often the same, but the family is the basis of the household. To see this more clearly, we can compare the main features and structural features of the family with the household (Table 2).

Structure of the main features and functions of the family and household. Table 2.

Functions	Family	Household
Key characters (written down by relevance)	Marital Relationships; place of residence; general budget; joint business	Residence; joint business; general budget; marriage and kinship
The ultimate goal	The birth of mankind	Human capital protection and recovery
Specific functions arising from the essence of family and household	The birth, upbringing and education of the child, the fulfillment of social functions - will remain	Supply, production, savings, consumption are the basis for the restoration and realization of human capital,

	unchanged at all stages of development of society.	reflecting the historical nature of external and internal economic relations.
Non-specific functions that are forced or adapted under certain historical conditions	Household and domestic; production; consumption; renewal and other functions - reflect the historical nature of family relationships and the interaction of family with society	Upbringing and other social functions are aimed at creating, maintaining and maintaining the physiological basis of human potential.

Source: Based on the analysis of scientific sources.

The results of a comparative analysis of the basic functions of the household and family show that they are complementary and interdependent, which means that the successful implementation of specific household functions (supply, production, savings and consumption) are both specific functions of the family and the quality, storage and implementation of its non-specific functions. This allows us to draw the following conclusions, supplementing the basic functions of households, dividing them into specific and non-specific types.

### Conclusion

The concept of the reproduction of human capital embodies the essence of a multifaceted process, including not only the individual and society as a whole, but also the conditions for their biological and socio-economic and economic recovery.

This concept reflects the totality of the material, human, spiritual, ethnic and religious foundations of everyday existence, indicating its universality and importance. However, in terms of economic value, a household is often seen as preserving human capital.

The composition of a household varies from one of the following aspects:

- the form of a separate, individual dwelling or part of it, which does not have the means of economic management with other persons who independently satisfy all vital needs and have shared housing;

- two or more people living together or separately in a separate place of residence who fully or partially satisfy their daily needs by merging or sharing their funds. These people may be related by marriage, kinship or non-kinship.

A household can also be persons unfamiliar with the household, but living in the same house and being the sole owner (elderly people and other persons living in the household).

In cases where the building is leased, the owner of the building is not a member of the designated household. At the same time, domestic workers are not members of the household, even if they live in the home of their employers (provide housing and food for their work).

The key should not be misleading the words “household” and “family”. Although the two terms are similar, as mentioned above, the family is the foundation of the family. One person can be a household, but cannot be a family. A household may consist of a large number of people, but they are not always related by kinship.

A deep understanding of the concept of home economics helps to understand the difference between household management. Housework is carried out with the participation of family members as workers. Housing and surroundings are in good condition, cooking, caring for children and disabled people and much more. Household activities are not limited to their household responsibilities, but household members also enter into market relations with the external environment and other economic interests in the interests of the household.

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## TENDENCIES AND REGULATORY FRAMEWORK OF DIGITAL ECONOMY DEVELOPMENT IN THE REPUBLIC OF UZBEKISTAN

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**Аннотация:** Мазкур мақолада рақамли иқтисодни ривожлантиришда муҳим бўлган компоненталаридан бири бўлган норматив ҳуқуқий асос таҳлил қилинган ва дунё тажрибаси ўрганилган. Ўзбекистонда иқтисодиётни ва бошқа тармоқларни рақамлаштиришдаги қонун ҳужжатлари ҳолати ўрганилиб, муаллиф томонидан мамлакатда рақамли муҳитни ривожлантиришда норматив ҳуқуқий ҳужжатларни такомиллаштириш бўйича таклифлар илгари сурилган.

**Калит сўзлар:** рақамли иқтисодиёт, рақамлаштириш, норматив-ҳуқуқий асослар, рақамли, стратегия, ҳужжатлар

**Аннотация:** В этой статье изучена нормативно правовая основа цифровой экономики и анализирован мировой опыт. Исследовалось состояние законодательных документов по цифровизации экономики и других отраслей в Узбекистане, а также автором выдвинуты предложения по совершенствованию нормативно правовых документов по развитию цифровой среды в стране.

**Ключевые слова:** цифровая экономика, цифровые навыки, инфраструктура, инвестиция, нормативно-правовая основа

**Annotation:** This article explores one of the important components of the digital economy as a regulatory framework and analyzes world experience. The state of legislative documents on the digitalization of the economy and other industries in Uzbekistan was examined and the author put forward proposals for improving regulatory documents on the development of the digital environment in the country.

**Keywords:** digital economy, digitalization, regulatory framework, digital strategy, acts

**Introduction.** Today, the digital economy accounts for 15.5% of global market GDP and generates \$ 11.5 trillion. ICT products and services account for 6.5% of global GDP, which means that over 100 million people are involved in ICT services. In 2015, global e-commerce sales totaled \$ 25 trillion. Exports of ICT services increased by 40% from 2010 to 2015. Worldwide, 380 million buyers buy online from overseas websites [1]. Over the past 30 years, every dollar invested in digital technology has earned an additional \$ 20, which is 6.7 times higher than other investments, with only \$ 3 per dollar. Global public cloud services are expected to reach \$ 383 billion by 2020 and \$ 23 trillion in digital economy by 2025 [2].

Therefore, in an annual appeal to the Parliament, President of the Republic of Uzbekistan Shavkat Mirziyoyev outlined the need for the development of the digital economy and the implementation of “Digital Uzbekistan - 2030” by 2030. “We need to develop a National Digital Economy Concept, which provides for updating all sectors of the economy on a digital basis. In this regard, we need to implement the Digital Uzbekistan - 2030 program,” said Shavkat Mirziyoyev. Thus, it is necessary to analyze the possibilities of stimulating the transition to a digital economy of Uzbekistan for the implementation of the task[3].

The experience of many countries shows that the initial stage in the foundation of the digital economic space is the identification of the main actors that play an important role in creating such conditions. The digital economy is based on the following more important components: government support and the regulatory framework.

**Review.** Developing countries, such as the US, Japan, and the United Kingdom, have begun with the creation of a digital infrastructure and ICT-specific human resources, which is clearly defined in the transition to a digital economy. For example, in 1993, the United States developed a strategy for the "US Information Super Highway" to develop information systems and information networks. Japan began digitizing the country in 2001 by exploring and developing information infrastructure and technology through its e-Japan concept and training, and since 2004 has continued to integrate digital technologies into the industry and services. The UK is a leader in the digital



economy, and since 2009 it has moved to the digital system. In 2010, the Digital Economy Act was passed. In addition, the “Digital Economy Development Strategy 2015-2018” was adopted in 2015, with various incentives for innovators in this field, with particular emphasis on digital economy security[4].

Countries	Strategies	Focus
USA	Information Super Highway (1993)	<ul style="list-style-type: none"> <li>• Digital communication systems</li> <li>• Information and telecommunication networks</li> </ul>
	National Broadband Plan (2010)	<ul style="list-style-type: none"> <li>• Increasing high-speed internet access</li> </ul>
	Digital Government Strategy (2012)	<ul style="list-style-type: none"> <li>• Better digital services to the public</li> </ul>
Japan	e-Japan (2001)	<ul style="list-style-type: none"> <li>• Research and development of information infrastructure and technologies</li> </ul>
	u-Japan (2004)	<ul style="list-style-type: none"> <li>• Speed up of industry and services, diversification of software applications</li> </ul>
	i-Japan (2009)	<ul style="list-style-type: none"> <li>• The main focus of public administration is the government, hospitals and schools</li> </ul>
European Union	i-2010 (2005)	<ul style="list-style-type: none"> <li>• An open and competitive digital economy</li> <li>• Information and communication technologies</li> </ul>
	Digital Agenda/Europe 2020 strategy	<ul style="list-style-type: none"> <li>• Development of a unified digital market</li> </ul>
	Digital Britain) (2009)	Leading globally is a leap of economics

Great Britain	“Digital Economy Act 2010” (2010)	Digital Media Related Media Policy (Copyright Infringement, Internet Store Names, Local Radio and Video Games)
	“Digital Economy Strategy 2015-2018” (2015)	Encouraging digital innovators; attention to users; digital infrastructure and ecosystems
Australia	National Digital Economy Strategy (2011)	e-health, e-education, smart networks, e-government, digital economy, digital media, etc.
	National Digital Economy Strategy 2020 (2013)	Skills, inclusion, digital infrastructure, digital government, cybersecurity and regulatory systems
Germany	Industry 4.0 (2013)	Cybersecurity, Internet of Things, Cloud computing
	Digital strategy 2025 (2016)	Digital sovereignty, digital infrastructure, digital security
Russia	National Technology Plan (2014)	EnergyNet, FoodNet, SafeNet, HealthNet, AeroNet, MariNet, AutoNet, FinNet, and NeuroNet
	Program "Digital Economy of the Russian Federation"	<ul style="list-style-type: none"> <li>• Regulatory</li> <li>• Public administration</li> <li>• Personnel</li> <li>• Education</li> <li>• Information infrastructure and security</li> <li>• Health</li> </ul>
South Korea	Manufacture innovation 3.0 (2014)	Information Technology, Production

	E-government 3.0 [5]	<ul style="list-style-type: none"> <li>• ICT service for service integration</li> <li>• Internet of Things</li> <li>• Cloud computing</li> <li>• Overview of the creative economy</li> <li>• ICT jobs</li> </ul>
India	Digital India (2015)	<ul style="list-style-type: none"> <li>• Create a digital infrastructure</li> <li>• Digital delivery of services</li> <li>• Digital literacy</li> </ul>
China	Internet Plus (2015)	<p>Information and communication technologies</p> <p>Integration of the Internet and Traditional Industry</p>
Singapore	SmartNation government initiative (2014)	Infocom technology, networks, big data for creating technology-based solutions
	National AI strategy 2030) (2019)	Logistics, health care, border security, property management and education management
Belarus	Strategy of information development Republic of Belarus for 2016 - 2022	<ul style="list-style-type: none"> <li>• e-Government</li> <li>• Electronic economy</li> <li>• e-health</li> <li>• E-learning</li> <li>• E-employment and social protection</li> </ul>

In the UK, the only ICT law was passed, and in 2003 a great communication law was passed. The law consists of 411 articles and 19 appendices, with the volume of 623 pages [6]. Direct regulation of communications is given to more than half of the rules. In addition, the law details the penalties for violations of telecommunications legislation.

Digital Economy Act was adopted in April 2017 [7]. Its main provisions are: regulation of telecommunications infrastructure, universal broadband speeds of 10 Mbps with minimum bandwidth, age determination for pornography, penalties for copyright infringers, and greater citizen information sharing.

A total of 187 ICT laws have been adopted and revised in Korea since 1995, including 86 laws for the promotion of information in the public sector, including the Basic Information Development Law. 101 laws have been adopted and revised for IT sector development and private sector informatization, including laws on digital signatures and online digital content industry development. In 1992, the Korean Communications Commission was established and included three special committees, legal issues and contracts, tariff accounting. The main task of this commission is to represent agreements between telecommunications operators, network exchanges and dispute resolution among operators and so on [8].

The government is taking large-scale measures to develop the digital sector of the economy. The legislation of the Republic of Uzbekistan on the development of information and communication technologies and digitalization consists of 10 laws, 4 decrees of the President, 14 decrees of the President and 34 decrees of the Cabinet of Ministers: Laws of the Republic of Uzbekistan “On Communications” and “On Telecommunications”, “On Public Procurement”, “On electronic digital signature” and “On electronic document management”, Decree of the President of the Republic of Uzbekistan dated July 3, 2018 No. DP-3832 “On measures for the development of the digital economy in the Republic of Uzbekistan” [9]. Most ICT laws were passed between 2000 and 2005. Laws relating to communications and communications were adopted before 2000, concerning IT - after 2000.

**Conclusion.** As the experience of foreign countries shows, the regulatory framework of the Republic of Uzbekistan does not reflect new trends in digital development and the needs of modern business. The new areas of the digital economy, not related to artificial intelligence, robotics, cloud computing, ownership of digital assets, the interactive entertainment industry, etc. have not been regulated.

All this requires the improvement of legislative acts of the Republic of Uzbekistan. It is necessary to improve the regulatory framework for the development of the digital economy, especially it is necessary to develop and adopt the law “On the digital economy” of the Republic of Uzbekistan. This law would secure the powers of state authorities, private and public organizations, as well as the establishment of relations between them. In addition, this would serve in protecting the rights, confidentiality, trust and security of online consumers, protecting personal information, especially protecting children on the Internet:

- 1.1. Developing legal procedures to protect the rights, privacy, confidence and security of online consumers
- 1.2. Development of regulatory framework for digital infrastructure
  - 1.2.1. Development of electronic communication code
  - 1.2.2. Improving the legal framework for the delivery of public electronic services
  - 1.2.3. Improvement of copyright and patent procedures
- 1.3. Developing a digital manual on digital economy
- 1.4. Organization of short-term courses aimed at developing legal skills of lawyers in the digital economy

Progress in the field of technology creates new opportunities, but along with this, new legal, technological, and personnel problems arise. In response to the challenges of the digital economy in the Republic of Uzbekistan, it is necessary to create a strong regulatory environment that provides a favorable legal regime for the development of the digital economy, as well as high-quality human resources with digital competencies and a competitive digital infrastructure.

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## POTENTIALS AND PROSPECTS OF TOURISM DEVELOPMENT IN THE SOUTHERN REGION OF UZBEKISTAN

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**Abstract:** The given article explores the potential and prospects for tourism development in the southern region. There studied the problems of effective use of tourism opportunities in employment and income generation of people in the region.

**Key words:** tourism infrastructure, tourism products, tourism facilities, tourism clusters, modernization, diversification.

**Аннотация:** В данной статье рассматриваются потенциал и перспективы развития туризма в южном регионе. В нём изучаются проблемы эффективного использования туристических возможностей в сфере занятости и увеличения доходов населения в регионе.

**Ключевые слова:** туристическая инфраструктура, туристические продукты, туристические объекты, туристические кластеры, модернизация, диверсификация.

**Annotatsiya:** Mazkur maqolada janubiy mintaqada turizmni rivojlantirish salohiyati va istiqbollari o'rganilgan. Mintaqada ish bilan bandlik va aholi daromadlarini oshirishda turistik imkoniyatlardan samarali foydalanish muammolari tadqiq etilgan.

**Kalit so'zlar:** turizm infratuzilmasi, turmahsulot, turistik ob'yekt, turizm klaster, modernizatsiya, diversifikatsiya.

**Introduction.** The total area of the Surkhandarya and Kashkadarya, the southern regions of Uzbekistan is 48.7 thousand sq. km, or 10.9% of the whole territory of Uzbekistan. The region is home to 5782.6 thousand people or 17.4% of the

population. Tourism opportunities and their development in terms of employment and income generation in the region are inferior.

Archaeological findings of the region, historical monuments of Hakim at-Termizi, Kokildor Ota Khanaka-mausoleum, Kyrk-Kyz Castle, Sultan Saodat Ensemble, Fayoz-Tepa Buddhist temple, Abu Isa at-Termizi mausoleum, Mosque of Oq Ostona, Mousque of Murchbobo, Termez Archaeological Museum, Sapollitepa, Sangardak Falls, Jarkurgan Tower, Sufi Olloyor Mosque, Kampirtepa City Castle on the right bank of the Amu Darya, karst caves, natural springs, unique natural landscapes, shrines and places of worship are the basis for the development of international, local and religious and ecotourism. In this regard, Archeological Museum established in Termez, plays a great role. Particularly, old Shahrisabz in Kashkadarya region is the homeland of Amir Temur, the historical monuments erected by him (Oqsaroy, etc.), the old Nasaf remains, the Kashkadarya State Museum of History and Culture, Material Culture Museum named after Amir Temur, the Maqam Museums in Shahrisabz can be stressed out.

First of all, the possibility of using the beautiful natural landscapes, resorts and recreational areas in the mountains and mountainous areas of the region, as well as the establishment of the Hisar State Reserve in the upper Shakhrisabz district allows to develop tourism in the region.

The development of tourism will have a positive impact on the economy of the region, to increase employment and improve the quality of life. As we have mentioned above, the region has great potential in tourism development and not everyone knows about these facilities. For many years this opportunity has not been used effectively. From this point of view, the development of scientifically-based recommendations and proposals on the potentials and prospects of tourism development in the southern region, the popularization of tourist facilities and their advantages are the most actual issues confronting the region's tourism industry.

**Literature Review.** Many foreign scholars are involved in the study of the potentials and prospects for the development of tourism in the regions. F. Kotler, D. Maykenz, U. Martin, G. Pechlaner and others. From the scholars of Commonwealth of

Independent States Countries A. Alexandrov, A.Mitrafanov, D.Mirzekhanov have investigated the perspectives of tourism development in the region, on the creation of touristic and recreational zones in the formation of direct border areas [6].

Uzbek scientists Z.M Akramov, E.A Akhmedov, A. Soliev, A.A. Rafikov have investigated the scientific problems of tourism development in the region. Also, H.Alimov, R.Usmanova, Z.Usmanova, Z.Abduhakimov, N.Ibragimov, G.Nigmatullaeva conducted research on the problems of tourism development in the regions [7]. They developed scientific recommendations for the development of tourism in the regions.

**Research methodology.** The present study widely used comparative analysis, statistical classification, and sample correlation method of research.

**Results of the analysis.** In accordance with the Decree of the President of the Republic of Uzbekistan dated December 2, 2016, № PF-4861 named “About measures of ensuring rapid development of tourism in the Republic of Uzbekistan” defined as a strategic sector of the national economy. The Decree of the President of the Republic of Uzbekistan № P-4947 “On the Strategy of Action for the Further Development of the Republic of Uzbekistan” issued on February 7, 2017, the Decree of the President of the Republic of Uzbekistan No. UP-5326 “On additional organizational measures” issued on February 3, 2018 and Decree of the President of the Republic of Uzbekistan No. PP-4095 “On measures for accelerated development of the tourism industry” dated January 5, 2019 are approved the Program of priority measures for the development of tourism in 2019-2021 [1,2,3,4].

The adoption of this Decree will promote the development of the tourism sector. Coming out from the legislative documents and Decree of the President of the Republic of Uzbekistan “On measures to accelerate the development of the tourism industry” dated January 5, 2019, investment projects for the establishment of hotels in Kashkadarya and Surkhandarya regions are being implemented.

The prospective parameters of development of tourism suggest the increase of hotels from 15 in 2019 to 58 by 2021 (Table 1).

## Government's programme of support of Hotels' development in Southern regions of Uzbekistan (2019 – 2021)

(the number of hotels and rooms)<sup>1</sup>

Names of the regions	2018		Parametres of building hotels								At the end of 2021	
			2019		2020		2021		2019 – 2021 Total			
	Hotels	Rooms	Hotels	Rooms	Hotels	Rooms	Hotels	Rooms	Hotels	Rooms	Hotels	Rooms
Jami:	71	1420	15	307	38	679	58	1035	111	2021	182	3491
Kashka darya region	38	731	12	252	30	551	46	834	88	1 637	126	2 368
Surkha ndarya region	33	739	3	55	8	128	12	201	23	384	56	1 123

The analysis shows that the southern regions of the country have taken a new approach in this direction, the implementation of targeted projects and the development of tourism infrastructure at the level of state policy, and proves the new step in this branch.

At the same time, compared to the experience of advanced countries with developed tourism industry, regional opportunities are not sufficiently underestimated and there is still a lot to be done. In particular, as comparing the visits of tourists to the Southern region is very low to other regions of the Republic. (For example, Tashkent region, Khorezm, Samarkand, and Bukhara). It will reduce the tourism in the region of tourists' interest because of a seasonal activity.

<sup>1</sup>Source: The Program of measures of the President of the Republic of Uzbekistan on accelerated development of tourism in the Republic of Uzbekistan and increase of their effectiveness" January 5, 2019 PF-4095

For this, the development of tourism infrastructure requires the creation of tourism clusters in recreational areas or in mountains and mountainous areas.

It is well known that the formation and the development of private property relations in tourism differs from other areas by their specifics. The modern stage of tourism development is characterized by crafts, and semi-crafts, the presence of a large number of small enterprises in the form of family.

In tourism enterprises, especially after investing, management costs increase to 70-80% of fixed costs. The main reason for this is that the cost of energy, repairs, personnel, depreciation, interest must be independent of the line's length. The high cost of sustainable costs is an important figure in profitability, and the performance and size of the profitability point make it difficult on using quantity.

The most important feature and a critical factor are too close in tourism investment. In areas where subcontracting facilities (roads, water, electricity, sewerage, telephone, etc.) are not available, it is not possible to invest in tourism.

**Conclusions and Suggestions.** In general, nowadays the tourism industry in the southern region is insignificant. The main reasons are as follows:

- Monopoly character of some tourism companies operating system in the region;
- Creation and effective functioning of new small tourism firms due to the lack of qualified personnel in the tourism sector, which can carry out investment projects;
- Inadequate marketing research in tourism;
- Insufficient scientific and unadvertising - information support of national product movement in the world market;
- The creation of economic mechanisms that encourage the development of foreign and local tourism;
- Newly established tourist firms are limited by a narrow range of activities.
- The need for tax and customs incentives to encourage investment flows.

As we have already mentioned, the presence of these problems is contributing to the decline in investment activity in the development of tourism in the region.

1. Over 5 million 782 thousand people are in the South region. It is also necessary to increase awareness of the population with ecologically disturbed areas in the area, as well as information on medical facilities, tourist bases, children's camps;
2. Improving the level of service delivery in the region, optimization of prices;
3. Improvement of tourist transport systems;
4. It is necessary to create new tourist attractions, including tourist-recreational facilities, ecological tourism resources, along with the main historical and architectural tourist sites, proposed by tourism companies;
5. It is necessary to create a catalog that includes the flora and fauna of the Kashkadarya and Surkhandarya regions, so that the tourists who come to the region can know the nature of the area.

As a result of the implementation, above mentioned recommendations the potential and prospects for tourism development in the southern region will significantly increase by the opening of new tourism destinations, which will extend the stay of foreign and local tourists in the region.

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**UDC: 81'37****VERBALIZATION OF THE CONCEPT “KNOWLEDGE” BY  
PHRASEOLOGICAL UNITS AND PROVERBS**

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**Annotation:** The concept “knowledge/bilim” is a universal concept and finds its reflection in all languages of the world. But at the same time the investigation of the verbalization of the concept “knowledge/bilim” in the English and Uzbek languages has found out some differences in the conceptual characteristics of this concept in both languages. These matters will be depicted in the following article.

**Key words:** Phraseological units, cognitive analysis, conceptual characteristics, cognitive-conceptual interpretation, stereotypes.

**Аннотация:** Слово «знание» - это универсальный концепт, отраженный во всех языках мира. Тем не менее, исходя из результатов множества научных исследований по этому вопросу, ясно, что концепт «знание» имеет несовпадающие морально-нравственные составляющие в разных языках, особенно в узбекском и английском. Данная статья посвящена решению именно этого научного вопроса.

**Ключевые слова:** фразеологизмы, когнитивный анализ, концептуальные характеристики, когнитивно-концептуальная интерпретация, стереотипы.

**Annotatsiya:** “bilim” so’zi universal tushuncha va bu dunyoning barcha tillarida o’z aksini topadi. Ammo bu tushuncha ustida ko’p ilmiy tadqiqotlar qilindi va “bilim”

so'zining turli tillarda turlicha ma'noviy farqliklari borligi o'rganildi, ayniqsa o'zbek va ingliz tillarida. Bu maqolada ushbu muammo aks ettiriladi.

**Kalit so'zlar:** Frazeologik birliklar, kognitiv tahlil, kontseptual xususiyatlar, kognitiv-kontseptual talqin, stereotiplar

## Introduction

Phraseological units reflect not only the history of the people, the peculiarity of culture and life, but they also help to make speech more expressive and emotional. Idioms expand the informational side of the language with the sensible, intuitive and emotional description of the outward things. That is why the study of specific semantic qualities of the phraseological units of different languages (English and Uzbek) will make it easier to contrast and compare both the conceptual and the cultural sides of the two languages.

Phraseological units are word-groups that cannot be made in the process of speech; they exist in the language as ready-made units. They are compiled in special dictionaries. Like words, phraseological units express a single notion and are used in a sentence as one part of it. American and British lexicographers call such units idioms.

Cognitive analysis of the concept "bilim" without phrase logical units, which also take part in verbalizing the concept can't be possible. Because phraseology "reflects in its semantics a long process of cultural development of people, registers and passes the cultural attitudes, stereotypes, etalons and archetypes from one generation to another" [1]

## Literature review

Phraseological units directly reflect the connection between the language and culture. Everything which characterizes the mode of life of people, their national psychology and customs, traditions, mentality are focused on phraseological units. That's why, phraseology of any language is deeply national and studying it helps to learn more deeply about the history and character of the nation. As it is known, phraseological units differ from words in their stylistically value, expressiveness and

national-cultural specificity. The significance and role of phraseological units call forth studying the phraseological units as a type of verbalization of the concept “**bilim/knowledge**”

The main task of this part of chapter is revelation and comparison of cognitive-conceptual characteristics presented in phraseological units, which represent researching the concept and appearing of different nominative and connotative manifestations of this concept in the Uzbek language.

As mentioned above, in the structure of concept there is a nuclei and periferia. The Nuclei of the concept consist of conceptual characteristics, exposed by us on the base of lexicographic definition and cognitive-conceptual interpretations of the phraseological units. Analysis of language materials showed that the conceptual composition of structures of the concept “bilim” is basically presented by linguistic zone, which is expressed by following meanings of phraseological units:

**Kuch:** Bilim – kuchda,

Kuch – bilimda.

In this proverb “bilim” has a conceptual characteristics “kuch”

**Baxt:** Baxt belgisi – bilim;

Bilim baxt keltirar.

Ilm baxt keltirar,

Bilim taxt keltirar.

This proverb shows that “bilim” also has a conceptual characteristics “baxt”.

**Aql chirog’i:** Bilim – aql chirog’i.

Ilm – aql bulog’i,

Aql – yashash chirog’i.

## Research methodology

According to Collins English Dictionary the word “knowledge” has following meanings:

1. Information; awareness; understanding;
2. Acquaintance with the facts;

### 3. The complete body of information; enlightenment

- Do you have any knowledge of the whereabouts of Waldo?
- It is important to have a thorough knowledge of the facts before reaching any conclusion about them.
- An encyclopedia attempts to catalog all the knowledge of mankind (CED)

In the Collins Cobuild English Dictionary the word “knowledge” explained as follows:

[2]

1. Facts, information, and skills acquired through experience or education; the theoretical or practical understanding of a subject: a thirst for knowledge her considerable knowledge of antiques.
2. The sum of what is known: the transmission of knowledge.
3. Information held on a computer system.
4. Philosophy true, justified belief; certain understanding, as opposed to opinion.
5. Awareness or familiarity gained by experience of a fact or situation: the program had been developed without his knowledge he denied all knowledge of the incidents.
6. Archaic sexual intercourse (CCED).

## Analysis and results

### English proverbs sayings and quotations concerning the concept "knowledge"

#### **A little knowledge is a dangerous thing**

##### **Meaning**

A small amount of knowledge can mislead people into thinking that they are more expert than they really are.

##### **Origin**

“A little knowledge is a dangerous thing” and “a little learning is a dangerous thing” have been used synonymously since the 18th century. The “a little learning” version is

widely attributed to Alexander Pope (1688 - 1744). It is found in *An Essay on Criticism*, 1709, and I can find no earlier example of the expression in print:

A little learning is a dangerous thing; drink deep, or taste not the Pierian spring: there shallow draughts intoxicate the brain, and drinking largely sobers us again.[3]

The similarity of the two phrases is demonstrated by what appears to be an impromptu coining of 'a little knowledge is a dangerous thing' in a piece in *The monthly miscellany; or Gentleman and Lady's Complete Magazine, Vol II*, 1774, in which the writer misquoted Pope: [4]

Mr. Pope says, very truly, "A little knowledge is a dangerous thing."

Both Pope's original verse and the misquotation of it were predated by an anonymous author, signing himself 'A B', in the collection of letters published in 1698 as *The mystery of phanaticism*: [5]

"T was well observed by my Lord Bacon, That a little knowledge is apt to puff up, and make men giddy, but a greater share of it will set them right, and bring them to low and humble thoughts of themselves.

Again, there is a degree of misquotation here, as what 'my Lord Bacon', the English politician and philosopher Francis Bacon, Viscount St Alban, actually said, in *The Essays: Of Atheism*, 1601, was: [6]

"A little philosophy inclines man's mind to atheism; but depth in philosophy brings men's minds about to religion."

So, who coined the phrase? It appears to have been a group effort. Bacon can be credited with the idea, Pope with the 'learning' version and the mysterious 'A B' with the 'knowledge' version. [7]

**Knowledge is power.** The more one knows, the more one will be able to control events. This sentence is found in the works of Francis Bacon [8]

**Experience is the mother of knowledge.** The knowledge gained from experience is complete, because practice gave an ideal experience.

**Action is the proper fruit of knowledge.** The action done by the gained knowledge is one step forward.

**Zeal without knowledge is like fire without light.** Knowledge is such necessary thing in human's life.

**Experience is the father of wisdom.** Experience and knowledge result in better judgment.

**Knowledge in youth is wisdom in age.** What you learn when you are young will be invaluable when you grow old.

**Learning is a treasure that will follow its owner everywhere.** Education is something you keep forever.

Following phrases was taken from Book of English Idioms with Explanations and NTS's American Idioms Dictionary:[9]

«**A Little Knowledge Is A Dangerous Thing**» people who have only a little **knowledge** about something often make big mistakes because they think they know more than they actually know...

«**A Taste Of Things To Come**» some **knowledge** of what the future will be like...

«**Feel Something In One's Bones**» one has a **knowledge** about something, and feels that knowledge as a deep sensation in one's body...

«**Have A Clue About Something**» have some **knowledge** about it...

«**Pick Someone's Brains**» ask questions to learn from one's **knowledge**...

«**Take Advantage Of Someone Or Something**» use ones **knowledge** or connection for selfish gain.

## **Conclusion**

According to the definitions of the word “knowledge” and its synonyms given in the dictionaries cited above, proverbs, sayings and quotations concerning concept “knowledge” in the English language I tried to make the Conceptual map of the concept with its conceptual characteristics: [10]

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UDC: 378: 37

**DEVELOPMENT OF PROBLEM-SOLVING SKILLS VIA CASE-STUDY**

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**Annotation:** Nowadays, the requirement for teachers, including acquiring excellent communication skills, strong work ethic, the ability to build community and preparation and organization skills, as well their competences are increasing greatly. Off the top of them, problem-solving skills stand as it is related with critical thinking which refers to the ability to use knowledge, facts, and data to effectively solve problems. In this article, the ways of developing problem-solving skills of future English language teachers are discussed.

**Key words:** problem-solving, teacher's development, case-study, competence, effectiveness, experiment, research, lesson.

**Annotatsiya:** Hozirgi kunda o'qituvchilarga qo'yiladigan talablar jumladan mukammal muloqot ko'nikmalari, kuchli mehnat axloqi, jamoani shakllantirish qobiliyati va tashkiliy tayyorgarlik ko'nikmalari ortib bormoqda. Bulardan eng asosiysi, tanqidiy fikrlash orqali muammolarni samarali hal qilish ko'nikmalari, bilim, faktlar va ma'lumotlardan foydalanish qobiliyati sanaladi. Ushbu maqolada bo'lg'usi ingliz tili o'qituvchilarining muammolarni hal qilish ko'nikmalarini rivojlantirish yo'llari muhokama qilinadi.

**Kalit so'zlar:** muammolarni echish, o'qituvchining rivojlanishi, amaliy mashg'ulot, kompetentsiya, samaradorlik, tajriba, tadqiqot, dars.

**Аннотация:** В настоящее время, возрастает требование к преподавателям, включая приобретение исключительных знаний навыков общения, учитывая мощную рабочую этику, так же как и навык построения сообщества и

подготовки и организации навыков, включая также их компетенции. На самой верхней позиции расположены навыки для решения проблем, которые связаны с критическим мышлением, которое связано с критическим мышлением, обращаясь к возможности использовать знания и данные для решения проблем. В данной статье также обсуждаются пути развития навыков направленных на решения проблем будущих преподавателей английского языка.

**Ключевое слово:** Решающий проблему, развитие преподавателя, кэйс-стади, компетенция, эффективность, эксперимент, исследование, урок.

**Introduction:** In order to prove the importance and effectiveness of developing students' problem-solving skills we should conduct an experiment. We have taken needs analysis questionnaire from the third-year students in Uzbekistan State World Languages University. In the following step, we design cases in accordance with the topics within the course of "Methodology of foreign language teaching" in the framework of development of problem-solving skills, and approbate them in the classrooms. It was important for us to check the existence and the development of problem solving in the English language classrooms with the help of the case study technology. Total number of students involved in the experiment was 24. We conducted tests for the third-year students to check their abilities and needs in problem-solving which came across in the classroom.

**Literature Review:** The final level of the FL teachers training is covered in the State Educational Standard in term of "competence" as a result of education [1]. Education is powerful means of not only intellectual abilities but also spiritual, emotional-sensitive sides of individuals, programming their development and life way. Of course, education is not a panacea, not a key to solve all problems but means provided harmonious and genuine individual development [6, p 10]. According to a recent survey by the Pew Research Center [8], most Americans view communication as the most important skill for long term success "to get ahead in the world today." Therefore, by being good communicators, teachers are modeling important lifetime skills by example. Problem solving was applied to education from ancient times. For

example, Socrates was famous for applying it. Later it was almost uncontrolled and invigorated in the 1960s. In recent times, it has been broadly studied and promoted [2, 7, 9], particularly for teaching mathematics at educational establishments. Nevertheless, surprisingly for us, problem solving has been very commonly introduced towards neither teacher neither training nor teaching foreign languages. Personal-professional knowledge incorporates two types of reflection as critical reasoning and critical engagement [4, p 15]. Both types of reflection are necessary because teachers' pragmatic decisions are grounded in rational and intuitive considerations. According to G.T. Makhkamova et.al. [5, p 107], the topics of case-study must meet the following requirements:

- to correspond to the purpose and the degree of difficulties of the case;
- to illustrate some aspects of professional/situational activity;
- to be topical at modern methodology of FLT;
- to illustrate typical professionally-oriented situations.

**Research Methodology:** We have used Questionnaire, Comparative, Quantitative, Qualitative and Experimental-pedagogical methods. Firstly, questionnaires were distributed which consist of 10 questions and aimed at clarifying whether there is a need to develop problem-solving skills among students within the course of "Methodology of foreign language teaching". The obtained quantitative results are converted to the percentages. *Based on the results of pre-experimental stage we came to conclusion that* the third-year students are quite satisfied with the organization of the course, however do not think that the course develop problem-solving skills of them. The problem-solving model guiding the case study presented in this paper consists of six stages – Understanding the problem, Structuring the problem, Seeking possible solutions, Adopt a resolution, Put into Action, and Observation or Review. A case study lesson within the problem-solving model takes approximately 60-75 minutes and follows the three-staged model of case study process [3] as individual preparation, small group discussion, and class discussion. Students are required to carefully read the case and analyze it individually before class under the direction of a case study guide. The guide is provided by the instructor and then the

students discuss the case in groups in classroom for 30 minutes, following the six steps of problem-solving model. All groups are requested to cover all six steps with their group discussion. The instructor walks around the classroom, addressing the students' questions. Next, students will be called to the front of the classroom and write down on the whiteboard their opinions on one of the six steps of the problem-solving model, which is randomly assigned to a group by the instructor. Groups are told not to worry about the possible mismatch between their writings on one step and those of the other groups' since the mismatch problem would be addressed in the next step during class discussion. The remaining groups may be called to add their opinions to the steps that are finished first on the board by the previous six groups. This part of the work may take up to 15 minutes. Finally, after a brief, collective review of the case background information, the instructor will lead the class discussion for up to 30 minutes, covering and integrating the writings on each of the six steps on the whiteboard. Groups will be asked to explain or clarify their own writings if needed. The rest of the class will be asked for their comments about the writings, step by step, to contribute different or additional ideas, or to raise questions for either the focal group or the instructor. Then the instructor will give his feedback on the writings, ask questions on some parts of the writings, and add some critical points or perspectives missed in the writings and discussion. Of course students are free to ask any questions during the instructor's wrap-up. In the end of the class discussion, the instructor summarizes the main learning outcomes of the case and its relevance to the course topic. Finally the instructor concludes the case lesson by asking whether students have any overall questions after all the individual, group, and class discussion and briefly addressing their questions if any. Over the whole process, students are advised again and again that there is no such things as correct or standard answers to a case; instead it all depends on whether they can well justify their analyses and support their points with sufficient evidence and facts from the case and the logic of their analyses. The questionnaire used to measure effectiveness of using case study to foster and develop problem-solving skills. The questionnaire was presented to participants after they completed the problem-solving process via case study, and the students who did not participate in the teaching

experience. After reading a case about a child struggling with an oral reading fluency skill deficit, all participants were asked to respond to a series of five questions. The questions were open-ended rather than in a multiple-choice format in an effort to reduce errors due to random responses. The questionnaire included two problem identification questions and three problem analysis questions. The problem identification questions asked participants to define the presenting problem and to then provide evidence from the case to support their problem definition. The problem analysis questions asked participants to report the student's current level of performance, any factors contributing to the skill deficit, and to identify an intervention they thought would be most appropriate. Participants' responses on the questionnaire were evaluated by using a modified scoring rubric developed by Watson [10]. The rubric helped identify if a participant had the specific problem solving skills that were being assessed. The scoring rubric assessed whether a participant accurately identified and analyzed the presenting academic skill deficit. Each item on the scoring rubric corresponded to a question on the questionnaire. Participants' responses on the questionnaire were scored using a five-point scale. One point was awarded if a question was left blank, two points were awarded if the response met the requirements for "not at all" (i.e., did not answer the question correctly), three points for "somewhat" (i.e., provided a correct and incorrect response or was almost correct but not quite on target), four points for "well" (i.e., answered the question correctly but did not go in-depth), and five points for "very well" (i.e., answered the question correctly and provided an in-depth response with more than one detail). The maximum total number of points that could be awarded was thirty. The minimum overall score on the questionnaire that participants could receive in order to be considered adequate problem solvers was 24 points. Such a score would reflect a participant receiving a score of 4 points (i.e., a response was correct but did not provide much detail) for each of the 6 items on the scoring rubric.

**Analysis and Results:** Of the 24 total participants in the study, 15 were experimental group's participants and 9 were control group's students. Results indicated a significant main effect of case-study on participants' scores on the questionnaire. Participants scored significantly high on the questionnaire ( $M = 25$ ).

Students who concerned the control group scored significantly lower on the questionnaire (19) than participants in the experimental teaching via case study (25). There was not a significant difference among the scores of participants in the control and didactic instruction conditions. Below there are summaries of the results of experimental group's participants (EG) and. It was hypothesized that participants would perform significantly high on the questionnaire, and the results appeared as expected. It seems logical to assume that developing problem-solving via case study would be beneficial. This may also indicate that third year students should have the training via case study that allows them to become successful problem solvers. Data from the present study that supports this notion is that participants demonstrated acceptable levels of problem solving skills (i.e., a composite questionnaire score above 24). The results of the current study clearly indicate an improvement in problem solving skills among participants who received instruction by a case study.

**Conclusion:** The present study evaluated the problem solving skills among future English teachers. While research has examined the existing problem solving skills of the third year students and how to best teach them those skills, the idea of developing their problem-solving skills via case study models has successfully proven.

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## THE IMPACT OF THE MATERIALS DEVELOPMENT TO THE IMPLEMENTATION OF THE LANGUAGE PLANNING AND POLICY

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**Annotation:** As the language teaching and learning is a long process which has several stages to be completed, these steps are related and influential to each other. Moreover, there are macro and micro planning strategies to Language Policy and Planning (LPP) of any institution, and developing materials can be placed at micro level planning. Even though it is considered as micro planning policy, materials development plays crucial role to make the lessons effective and informative.

**Key words:** Materials development, macro planning, micro planning, language planning and policy.

**Аннотация:** Поскольку преподавание и изучение языка - это длительный процесс, состоящий из нескольких этапов, эти этапы связаны и влияют друг на друга. Кроме того, существуют стратегии макро- и микро-планирования для языковой политики и планирования любого учреждения, а материалы для разработки могут быть размещены на микроуровне планирования. Несмотря на то, что это рассматривается как политика микропланирования, разработка материалов играет решающую роль, чтобы сделать уроки эффективными и информативными.

**Ключевые слова:** Разработка материалов, макропланирование, микро планирование, языковое планирование и политика.

**Annotatsiya:** Tilni o'qitish va o'rganish uzoq davom etadigan jarayon bo'lib, u bir necha bosqichlardan iboratdir, va bu bosqichlar bir-biri bilan bog'liq. Bundan tashqari, til siyosati va til o'qitishni rejalashtirish uchun makro va mikro rejalashtirish strategiyalari mavjud va ishlab chiqilgan materiallar rejalashtirish mikro darajada

joylashtirilishi mumkin. Garchi materiallarning rejalashtirishiga mikro rejalashtirish siyosati sifatida qaralsa ham, darslarni samarali va ma'lumot beruvchi qilish uchun materiallarni ishlab chiqish muhim rol o'ynaydi.

**Kalit so'zlar:** Materiallarni ishlab chiqish, makro rejalashtirish, mikro rejalashtirish, tilni rejalashtirish va uning siyosati.

**Introduction:** Developing materials for the language course can be considered as one of the most crucial aspects of language planning. Moreover, the outcomes of the program mainly lean on the content that is going to be taught, thus the first provided article *“Implementing language policy and planning through materials development”* that was written by Kennedy and Tomlinson [1] illustrates the Language Planning and Policy (LPP) and according to Kaplan and Baldauf [8] they present its various types such as; *access policy, personnel policy, curriculum policy, materials and methods policy, resourcing policy, community policy, and evaluation policy* that help the government and Ministries of Education to look and analyze LPP from different angles. Moreover, in the article there are numerous analyses of the LPPs and influence of materials development to the LPP process in various countries that are depicted and explained briefly.

**Literature review:** The analysis are divided into three subgroups, firstly they study the international published materials and LPP, and score the course books from 1 to 5 according to six national policies (*developing creative thinking, developing critical thinking, developing communicative competence, supplying rural and urban areas' students, supplying window on the world and educational development*). One important finding from this analysis was that the topics in the textbooks were more likely to be familiar to middle-class students rather than rural areas' learners, and as Gray [5, 191p.] states it as “deeply problematic artifact” that global textbooks do not align with the needs of the majority learners. Next stage is the study of the national course books in different areas and one case was in Japan that Japanese language teachers prefer utilizing national course books as they include traditional values and lots of grammar-based tasks which is more likely to have traditional lessons whereas books that are written by native authors comprise more communicative approach and learners are in

centre of learning process. Furthermore, the last discussed factor was about national materials development project and LPP that illustrate forward-mapping (good for macro level LPP) and backward-mapping (effective for micro level LPP) which are two different approaches of language planning. Moreover, the authors suggest one of the effective LPP projects, mixed-level project, by Tomlinson [1] that was conducted in Indonesia. Generally the article suggests applied linguists and LPP stakeholders to consider all types of LPP, norms, attitudes and local constraints of the country and collaborate with materials developers while planning language policy.

The article by Darvin and Norton [9] ***“Identity, Language Learning, and Critical Pedagogies in Digital Times”*** discusses the critical pedagogy, its development, main contributions on identity research influenced by digital tools, and future suggestions for the study. In general critical pedagogy deals with the all issues that occur while learning a language according to social and cultural varieties and identities, since this article discusses the ways how to consult relationship power between teachers and students, and cope with different conditions (considering ethnicity, age, gender, social class, sexual orientation) that occur while learning a language. Moreover, the authors depict the three main concepts of critical pedagogies:

- *The construction and performance of the identities* – where digital storytelling and blogging and IM can be samples of it, and they serve as types of constructing individual identities of the target population. Besides, by developing their own stories, images, music, and videos the learners will have authorial agency which enhances their creativity [4];
- *Structures and relations of power* – discuss the ways of digital use in critical pedagogy, and provide some cases where it brought positive outcomes, namely: Kenyan case, Uganda’s case, and Korean migrants’ cases [7];
- *Social an educational inequities* – digitals do not only bring advantageous results in classrooms, but also there may appear social injustice as there are several social statuses in a community, and not every student can be able to use technology or not all parents can afford providing their children with the necessary tools.

Consequently, Darwin and Norton [9] suggest following issues to be analyzed in the future: Issues of political economy, Digital exclusion and Methodological issues and innovations. According to their considerations these are some significant issues to be discussed and to be helpful for critical pedagogy in expectations.

**Research methodology:** According to above stated theories and hypothesis it can be seen that critical pedagogy, identity, and aligning materials development with the LPP process play crucial role as they all are connected with each other. Moreover, the digitals and their implementation is increasing rapidly, thus the research of the issues while incorporating technology should be discussed and solved in order to soften critical pedagogy's troubles [6]. One more indispensable factor of successful materials development is that working collaboratively with the LPP developers to make the textbooks effective and useful. In this point it is important to mention that mixed approach where backward-mapping approach follows forward-mapping approach as in Indonesia was conducted in Uzbekistan during 2012-2015 in UZSWLU, where trainer instructors taught some teachers from different regions and then those student teachers went to their areas and taught teachers there. The process was aimed to develop the quality of English lessons in Uzbekistan and to focus more attention to EFL classes. Furthermore, the materials that are used in our country are developed both nationally and internationally (schools-national, lyceum/universities-international). Therefore, it is considered that currently our LPP is mainly focusing on the communicativeness of the tasks in the books and aligning the topics with the institution's curriculum. Besides above stated factors one more factor – the case of LGBTs provided is not common in Uzbek community, so that we may only become informed about some issues that may occur in the textbooks or materials content while teaching the language, yet the author does not consider that Central Asian countries do not need to pay much attention on this aspect as our society does not approve this kind of ideology at all.

**Analysis and results:** The stated points are linked not only with the development of the materials for the English language classes, but also have connection with other aspects of language teaching process which are considered as important stages of language teaching, and comprise their theories [10]. For example the point of materials

development and LPP has relationship with Language Planning and Policy, and Curriculum Development for language classes as well as partially with Testing and Assessment module. Besides that, the next article which is about identity and critical pedagogy is interconnected with the teaching aspects such as; English for the Speakers of Other Languages, Second Language Acquisition, Testing and Assessment, and Pragmatics and Culture. As these hypotheses are aligned with each other, the materials development and LPP also has link with fore stated aspects of language teaching [3]. The last point that illustrates the issues linked with LGBTs and heteronormativity can be arranged in a line with Materials Development and Curriculum Development as the inclusion of LGBT-based contents can be discussed within these modules. Therefore, the materials developers should not avoid the role and the problem of LGBT's while designing and developing textbooks and materials for the English language courses.

**Conclusion:** To sum up, LPP is the path for English language learning and all the aspects of the language teaching process plays important role to make the course informative and productive. In this list materials development is crucial as well, and implementing micro planning (materials development) into LPP can bring beneficial outcomes for the course.

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## COMMON CHALLENGES IN TEACHING ENGLISH AS A FOREIGN LANGUAGE (EFL) AND SUGGESTED SOLUTIONS

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**Abstract:** Increasing numbers of English Language Learners as an ESL (English as second language) and EFL (English as foreign language) have created challenges for teachers in any education settings. English, the official language of the entire world is a tricky language to teach. In fact, every language varies to teach. English Language Teaching is now at a crucial juncture as a number of methods, approaches and innovations have been discussed in series of seminars and conferences arranged at various educational institutions. There are four skills of language learning i.e Listening, Reading, Writing and Speaking and to fulfill these skills one has to take constant and arduous efforts until the goal is achieved. The present paper is aimed at to find out certain problem and solution in teaching English as a foreign language. Moreover, the author have concluded that based on the article, more research is needed to identify specific strategies and practices for educating non-native language learners in today's classrooms.

**Keywords:** Education, teaching – learning process, problem and solution in teaching English, Approach, methods, technique etc.

**Аннотация:** Общие вызовы в обучение английского языка в качестве иностранного и предлагаемые решения. Повышенное количество изучающих английский язык в качестве второго языка и английского языка в качестве иностранного создано вызовы для преподавателей в общем образовательном аспекте. Английский язык в качестве официального языка во всём мире является очень своеобразным языком для обучения. Фактически каждый язык отличается



в аспекте обучения. Обучение в данный момент является первостепенным объединением методов, подходов, инноваций, которое были обсуждены в сериях семинаров и конференций, которые были организованы в разных образовательных институтах. Существует и навыка изучение языка, то есть прослушивание, чтение, письмо и говорение и для того, чтобы работать с этими навыками следует делать постоянные и усердные усилия для того, чтобы достигнуть цели. Данная статья направления на решение определённой проблемы и её решение в обучении английского языков качестве иностранного. Более того, автор заключил то, что, базируясь на данной литературе, большее количество исследований требуется для того, чтобы определить специфические стратегии и практики для обучения изучающих являющийся “не носителями” языка в современных классах.

**Ключевые слова:** образование, обучение- процесс изучение, проблема и её решение в обучение английского языка, подход, методы, техника и так далее.

**Annotatsiya:** ESL (ingliz tili ikkinchi til) va EFL (ingliz tili - chet tili) sifatida ingliz tilini o'rganuvchilar sonining ko'payishi har qanday ta'lim sohasidagi o'qituvchilar uchun qiyinchiliklar tug'dirdi. Ingliz tili, butun dunyoning rasmiy tili bo'lib, o'qitishda qator qiyinchiliklari mavjud. Aslida, har bir til turlicha o'rgatiladi. Hozirgi kunda ingliz tilini o'qitish juda muhim bosqichda bo'lib, turli xil o'quv yurtlarida o'tkazilgan qator seminar va konferentsiyalarda bir qator usullar, yondashuvlar va yangiliklar muhokama qilinmoqda. Til o'rganish bo'yicha to'rtta ko'nikma mavjud, ya'ni tinglash, o'qish, yozish va gapirish va bu ko'nikmalarni bajarish uchun maqsadga erishilgunga qadar doimiy va tinimsiz harakatlar talab etiladi. Ushbu maqola ingliz tilini chet tili sifatida o'qitishda ma'lum bir muammo va yechim topishga qaratilgan. Bundan tashqari, muallif ushbu maqola asosida bugungi sinflarda chet tilini o'qitishda maxsus strategiya va amaliyotlarni aniqlash uchun ko'proq tadqiqotlar talab qilinadi degan xulosaga keldi.

**Kalit so'zlar:** Ta'lim, o'qitish - o'quv jarayoni, ingliz tilini o'qitishdagi muammolar va yechimlar, yondashuv, usullar, texnika va boshqalar.

## Introduction

Education is an engine for the growth and progress of any society. It both states knowledge, capabilities and responsible for building human resources which drives and sets technological innovation and economic growth. English, ubiquitous language of the entire world is a very tricky language to teach. In fact, every language varies to teach. Present day English is the simplest adaptation of a very old Language and yet it is still difficult to teach this language effectively especially to those who speak English as a foreign language. The purpose of this paper is to critically examine challenges and basic solutions for teaching learners that are in early childhood classrooms. The challenges are explored first in the order of teacher, social, and school. The solutions presented are derived from research based best practices to support the general education early childhood teacher in the administration of second language teaching strategies. The solutions will examine the areas of program quality, teacher dispositions, and classroom practices.

English language teaching has acquired greater attention and importance as never before in the context of its position as a global language. The demand for teaching and learning English has been on the rise in all fields. Obviously the demand has brought a lot of pressure on English teachers to perform and produce good results. Consequently, English Teachers and class room practices in teaching English have come into sharp focus for the assessment of the state and stage of teaching English as a foreign language. English Language Teaching is now at a crucial juncture as a number of methods, approaches and innovations have been discussed in series of seminars and conferences arranged at various colleges and universities in. A few of them have already been in practice for a considerable time but found to be short of expectations in improving the language skills of the stakeholders. It needs a lot of motivation, innovation and commitment on the part of all concerned to sincerely and seriously take a new approach, an experiment or a theory through the process of practice from a superficial level to a deeper one. Mostly English is taught in a very orthodox manner. English is said to be the world's most important language having communicative and educative value. English is used all over the world not out of any imposition but

because of the realization that it has certain advantages. A very important reason for regarding English as a world language is that the world's knowledge is enshrined in English. It is a progressive language. It is dynamic and flexible. Over and above English is universally renowned for its power of expression and its rich literature. As far as the teaching English at any level in rural background is concerned we teacher have to suffer from many and uncounted problems those are very challengeable and hard-nut to crack. In modern time there are so many methods and materials available for enhancing the language ability of students and also it has become necessary action to learn English due its importance and global nature. to understand the difficulties in teaching English we should go through the approaches and the heterogeneous background of students. While the numbers of learners is increasing, the teachers and educational systems receiving them face a challenge.

## **CHALLENGES**

The teachers lack preparation and training for working with students that are second language learners (Bell, 2010; Futrell et al., 2003). Young learners are already developmentally in a position of challenge. They have the typical issues that young children face. These issues include being literal, not fully understanding logic, being egocentric, and being concrete learners (Piaget, 1962). Any learners have all of the same barriers as typical young children along with all of the challenges related to learning a new language. In addition, they do not understand the language of instruction in their preschool, the language of their friends, and their needs are misunderstood. Lastly, the English language learners can get confused when the first language sounds are similar to English sounds but used in different contexts (Young, 1996). The wide range of variability in language mastery can create challenges in teaching. There is more to learning English than vocabulary and grammar (Cummins, 1981; Snow, 1992). The social situation of language use can be even more challenging for the English language learners than the linguistic aspects. Children have to know when to use certain terminology and how to use idioms and slang. These aspects of language learning can be very confusing. Additionally, children learning a second language have a communicative competence barrier (Cummins, 1979). The children are unsure of the

functions of the new language and the appropriateness of language usage within specific contexts (Xu & Drame, 2008). This inability creates stress and frustration on the part of the child and reduces the initiative to become part of the community; this is known as the affective filter (Dulay & Burt, 1974). This inability to communicate can be equally frustrating for the teachers as well. (Gillanders, 2007) To understand the teaching and learning process we have to look into the method of teaching, there are so many methods invented by the linguistics.

The classroom dynamics are changed to reflect collaborative learning in which learners help native English speakers to grasp the curriculum, and English speakers help learners to acquire the curriculum through English. The Dual Language model is cost efficient and has a reliable success rate. The outcome of the service delivery models has an effect on learners academic learning because the delivery, time, language used, and population served is still subject to an administrative decision that if made improperly is problematic (Pica, 2000)

## **BASIC SOLUTIONS**

Researchers have been successful in identifying ways to improve teaching the English language in general terms. The solutions listed herein comprise programmatic, teacher, and research based classroom strategies. The solutions that have been identified may be used to scaffold the learning of the learners and influence the way specific strategies are taught within activities:

### **Programmatic solution**

The programmatic environment refers to the atmosphere, curriculum, daily schedule and classroom routines. There are ten programmatic indicators of high quality that impact learners that should be in place to support institution success (Castro et al as cited in Halle et al, 2012). The factors are:

1. Organized and supportive environment. High quality environments are neat, organized, and supportive. Teachers can provide an attitude of support by placing labels in the student's native language as well as English around the classroom (Zehler, 1994). Additionally, structuring the environment and the routines so they are

predictable gives the learner an understanding of how tasks are to proceed and how to navigate the room. When the environment is supportive and predictable the learners feel safe and can use their cognitive energy to process content and language rather than focusing on the environment.

2. Positive teacher and child interactions. High quality programs promote and demonstrate positive conversations and learning opportunities. Teachers maintain a pleasant demeanor while working with all children. Learners can feel emotionally safe and enjoy the learning process because it is free from stress and pressure. Additionally, the interactions that teachers have with the children demonstrate care and respect, while educationally focused. Teachers can send these messages using smiles and soothing tones, when the language barrier is high.

3. Increased opportunities for peer interactions. Peer scaffolding can be very productive for supporting learners. High quality programs offer time and learning opportunities that support the use of peer interactions. Strategies such as Think-Pair-Share, and cooperative learning increase the opportunities for peer interactions in a structured way.

4. Strategic use of the student's first language. Support and maintenance of the learners home language contributes to the learning of English (NAEYC, 1995). High quality programs have teachers that find ways to use the child's home language to display respect and provide scaffolding to increase first language proficiency. This allows the native language to serve as a frame of reference for the second language and the children become more willing participants in the learning process.

5. Explicit vocabulary instruction. Teaching vocabulary purposefully to young learners has a positive correlation with academic outcomes. High quality programs plan for purposeful and explicit vocabulary instruction. Instruction in vocabulary contributes to higher reading ability and school functioning.

## **Conclusion**

The above all discussion make us clear that the prime importance of English language and the role of English teacher and his or her duty and the problems faced by them. However, the problems discussed, here, in language teaching have solutions.

It is not the fault of either teacher or student but the various stumbling blocks are stated. If these methods are used in teaching – learning process, certainly the current scenario will be changed.

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## THE IMPACT OF THE HUMAN FACTORS ON THE OCCURRENCE OF LANGUAGE EVENTS

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**Abstract :** This article is about the dynamic nature of communicative meaning, and although nominative at first glance is static, but from the point of view of the text, from the point of view of speech, the nominative phenomenon is not static in nature, and the impact of human factors on the occurrence of language phenomena.

**Key Words:** communicative, predicative, nominatives, linguistics, discourse.

**Аннотация:** Мазкур мақолада коммуникатив маънони мутлақо динамик характерли эканлигини, ва бир қарашда номинативлик статик характерлидай кўринишини тақозо этади. Аммо масала моҳиятига матн нуқтаи назаридан, нутқий воқелик нуқтаи назаридан ёндашадиган бўлсак, номинативлик ҳодисасини мутлақо статик характерли деб бўлмайди, чунки мулоқот жараёни давомийликни тақозо этади.

**Калит сўзлар:** коммуникативлик, предикативлик, номинативлик, лингвистика, дискурс.

**Аннотация:** В статье рассматривается номинативное значение языковых единиц которое имеет решающее место при образовании коммуникативного процесса. В первую очередь это наблюдается в номинативном значении слова. Потому что единство языка отличается не только его представлением номинативного значения, но и тем, что более крупные единицы обеспечивают представление собой номинативного значения.



**Ключевые слова:** коммуникативность, предикативность, номинативность, лингвистика, дискурс.

## INTRODUCTION

In contemporary linguistics, it is important to examine the effects of human factors on the occurrence of language phenomena. Within this reality cognitive linguistics was formed. This in turn contributes significantly to the development of linguistics. In fact, scholars have been dealing with linguistic anthropocentrism since ancient times. This is evident both in Humboldt's studies and in Saussure's linguistic views. We can also observe in the scientific concept of Benvenist. From this point of view, the interpretation of issues of cognitive linguistics and pragmalinguistics is not necessarily new. However, it is noteworthy that contemporary linguistics focuses on the study of these issues. In fact, until now, linguistic development has paid more attention to the study of issues related to internal linguistics, that is, the system and structure of the language, rather than the interpretation of external linguistic problems. In other words, at the heart of our linguistic research so far has been the discussion of the problems of internal linguistics.

It is also worth to note that external linguistics can also be studied in connection with the problems of internal linguistics. There are some issues that, by their very nature, are equally relevant to both internal and external linguistics. Take, for example, the issue of nominal meaning. This issue is inextricably linked to the language system and structure of the language units (not to mention exceptions), on the one hand, and to the onomasiology on the other, by its very nature. Consequently, the concept of communicativeness can also be an object of inquiry into cognitive linguistics, since the concept of meaning, including nominative meaning, is directly related to human consciousness. In reflecting on this, T.I. Vendina stated: "Man lives in the space of meanings. Language and culture are the results of practice of law of meaning formation." [10, 44].

The initial form of the evolution of thinking is in a nonverbal state; its formation is connected with language. In this process, it invariably correlates with the language

system. Since, whatever the speaker thinks, it is realized only through language. In other words, it is difficult to imagine thinking without language. Language not only gives verbal expression to thinking – it involves a certain force necessary for its development. This device is not attracted from outside for the practical use of the language system. Having an immanent (out of external influence) character, it structures energy within the system. For this reason, as a theory of the meaning of a self-regulating system in modern linguistics, it is called synergetic.

It should be emphasized that the nominative units arising in the process of speech, including those expressed through a sentence, constitute a certain system that conforms essential laws that contain a synergistic power.

### **RESEARCH METHODOLOGY:**

In fact, in communication we use language, no matter what we report. At the same time, each language unit names something. We think it is very important. According to M. Bakhtin, meaning is the answer to a specific question. If something cannot be answered, it is deprived of the concept of meaning and the ability to name something [1, 44]. It is evident that the concept of meaning is inextricably linked to the nominative, since any nominative unit cannot live apart from the concept of meaning. We need to understand this in a specific legal way. The scope of this law is measured not only by language units but also by speech units. Therefore, the nominative sign is not only in words taken separately, but also in word units and sentences. Apart from the foregoing, the character, meaning and nomination are inextricably linked to the concept of proposition. After all, proposition requires a general semantic invariant for modal and communicative paradigms of discourse and its nominative meaning [2, 401].

### **ANALYSIS AND RESULTS:**

The semantic invariant is undoubtedly the nominative aspect of the sentence. This, in turn, indicates that all forms of discourse used in the communicative process are at the center of all nominative meanings. In this context, the nominative meaning (or semantic invariance) of a sentence is inextricably linked to its cognitive meaning.

Certainly, the sentence and its communicative paradigm are shaped by the text. It is true that macro discourses are not always used in communication. Constantly, independent communication is used in the communicative process. However, this statement is in the text and it is very important. E. A. Popova rightly states that "everything in the language will focus on the organization of the first textual communicative process" [6, 73]. This indicates that the text is the main object for the cognitive, nominative and communicative meaning to be fully understood. Refer to the following text for proof.

*The news that Abdulatif and his bird were terrorizing everyone had already reached Herat. Alauddavla's deserted city also stirred up panic among the people of the palace. Gawharshod begum also hurriedly packed up what was needed in the Garden Saffed and headed for his grandson, Abulcasim Bobur, in Astrakhan (P. Kadyrov. Mother Falcon's Farewell).*

We see that the given textual components are based on the following nominative meanings: 1) *the news that Abdulatif and his troops are terrorizing everywhere has already reached Herat;*

2) *Alauddavla's abandonment of the city, which sparked panic among the people of the palace;*

3) *Gawharshod begum hurriedly packed up what was needed in the Garden Saffed and headed to her grandson, Abulcasim Bobur, in Astrakhan.*

The propositive forms of discourse presented to these nominative structures are also grounded. In addition, each of these nominative structures forms the communicative basis of the discourse in which it is involved.

It is seen that in the context of a particular text, the words are interspersed with a complete nominative, cognitive meaning and communicative meaning. It is very essential. Reflecting on cognitive and communicative meanings, E.S. Kubryakova emphasizes the following: "accordingly, each linguistic phenomenon can be considered adequately described and explained only if it is considered at the crossroads of cognition and communication" [4, 11].

Contrary to E.S. Kubryakova's remarks, we would also like to add that the concept of nominatives would be more desirable, for both cognitive and communicative meaning is at least covert.

## CONCLUSION

It is also worth to note that communicative meaning is quite dynamic in nature, as the process of communication requires continuity. What about the nominativity? Is it also dynamic? Certainly, at first glance, the nominativity seems static. However, if we approach the essence of the issue from the point of view of the text and speech, the phenomenon of nominativity is not necessarily static. If you visualize it in the communicative process, you will see that the concept of dynamism is also a priority here. As communication units are continuously renewed during communication, new and new nominal units are created each time. This is indicative of its dynamic nature.

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**APPLYING ALTERNATIVE TESTS IN MODERN TEACHING CONTEXT**

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**Annotation:** Assessment is one of the major aspects of any educational setting. As Genesee and Upshur (1996) stated that it is the process of teaching and learning in order to develop students' success as well as the achievement of institutions (p.1). Educators utilize a variety of tests in order to meet the outcomes of the course. Since communicative approach is widely used in many classrooms traditional tests have been replaced by alternative assessment. It is evident that tests should align with learners' level, purpose, course objectives and topics. Therefore, modification of tests is highly required in a bid to obtain ultimate objectives of the course. This article is dedicated to the assessment and modification of the test taken at University of law.

**Key words:** alternative test, evaluation, assessment, validity, washback, authenticity, practicality.

**Annotatsiya:** Baholash har qanday ta'lim sohasidagi muhim jihatlaridan biri hisoblanadi. Jenis va Apshur (1996) aytganidek, bu talabalarni omadini rivojlanitirish bilan bir qatorda institutlarni ravnoq toptiruvchi o'qish va o'rganish jarayonidir. Ta'lim beruvchilar kursning kutilayotgan natijalarini amalga oshirishda har xil test turlaridan foydalanishadi. Kommunikativ yondashuv ko'plab o'quv xonalarida keng qo'llanilganligi sababli an'anaviy testlar alternativ baholash bilan almashtirildi. Bundan

ko'rinib turibdiki, testlar o'quvchilarning darajasi, maqsadi, kurs maqsadlari va mavzulariga mos kelishi kerak. Shu sababli, kursning yakuniy maqsadlariga erishish uchun testlarni modifikatsiyalash talab qilinadi. Ushbu maqola Yuridik universitetida o'tkazilgan testlarni baholash va o'zgartirishga bag'ishlangan.

**Kalit so'zlar:** alternative test, baholash, asoslilik, ta'siri, haqiqiyliqi, amaliyligi.

**Аннотация:** Оценка является одним из основных аспектов любой образовательной среды. Дженеси и Апшур (1996) заявили, что это процесс преподавания и обучения с целью развития как успехов учащихся, так и достижений учебных заведений. Педагоги используют различные тесты, чтобы соответствовать результатам курса. Поскольку коммуникативный подход широко используется во многих классных комнатах, традиционные тесты были заменены альтернативной оценкой. Очевидно, что тесты должны соответствовать уровню, цели, задачам и темам учащихся. Таким образом, для достижения конечных целей курса крайне необходима модификация тестов. Данная статья посвящена оценке и модификации теста, который проходит в юридическом университете.

**Ключевые слова:** альтернативный тест, оценка, обоснованность, отмывка, аутентичность, практичность.

### **INTRODUCTION: Learner assessment profile**

It is known that learners are the major actors in any assessment or evaluation process. Therefore, gathering sufficient data concerning them is very crucial so as to develop the current teaching system. The learner we chose for this project work is the second year student at University of law. He was brought up in Uzbek family and now he is at the age of 22. Doston studies criminal law as his major and he is fluent in Russian as his mother is a Russian language teacher. As for English he has been learning this language for almost 10 years. Nowadays his level is intermediate. Once he got IELTS certificate with the band score 5.5. He has recently started to take this test again in order to take higher score. Indeed, by his personality he is very clever, outgoing and active. He always strives to achieve his goals as he is highly ambitious. When we delivered the first class in this group he left a great impression on me with



his wise ideas and good command of English. He is very active and punctual in all lessons. He favors more interactive activities and games during the classes. He also takes the leadership position in group or pair works. Furthermore, he is hardworking too, because he tries to do his best in all subjects. Doston is more intrigued in learning vocabulary and watching movies. With these words we can say that he is a visual learner since he is a movie buff. Besides, he likes discussion and debates. He always impresses others with his unusual viewpoints. We deem that he is very eager to learn foreign languages. In the future he is willing to learn Japanese language as well.

Regarding English lesson it is obvious that according to their syllabus second year students have English classes twice a week for 80 minutes each. Over the whole semester 112 hours is allocated for English lessons and there are 2 midterms and one final in each semester. Overall, in order to pass the final exam they have to gather at least 28 out of 50. In this university students are assessed via both formative and summative assessment. During tutorials teachers assess them more with the help of formative assessment, but summative assessment is mostly carried out during midterms and finals. Brown (2010) points out that achievement tests are mainly summative and provides with clear feedback on the learners' improvement and performance (p.9). That is why, achievement tests and their results are vitally important in this university.

When it comes to tests we have never noticed his anxiety during exams. He is always calm and does the tests very well. However, he has some difficulties in reading tests. According to his ongoing assessment he often gets 8 or 9 out of 10, while in the midterms and finals he obtains roughly 18 out of 20 and 43 out of 50 respectively. His results have been always great in the class. However, last year his scores of finals were a bit lower as compared to nowadays as he had more challenges in reading. He was a bit complaining about the tests and their difficulty because his ongoing assessment was higher than midterms and finals. Therefore, he started working harder on his reading in order to improve his scores. As his strengths he is much better at listening and writing. Hence, in writing tests he always succeeds. In terms of legal English he is well aware of most of the expressions and terms covered in the second year. As he likes learning new words and a set of expressions he does his vocabulary quizzes very well.

In the beginning of this academic year he took a placement and started studying in “A” level class according to his results. The test included all 4 skills and he did well all three skills except reading. Out of 100 % he gathered 86 %. The test itself was a bit difficult for his level since reading passages were quite complicated. However, he was placed appropriately to the class. All in all, despite his challenges in reading he is more competent in listening and writing.

### **LITERATURE REVIEW: Critique of an existing test and assessment**

Indeed, at University of law students have to take two finals in the whole academic year. Each one weighs 50 of the total score and they are required to collect at least 28. There are two parts in this test. In the first part there are 40 questions including two reading passages and legal English. Reading passages entail mostly true, false/ not given; gap-filling and short answer questions, while there are more matching and gap-filling in legal English accordingly. The second part is dedicated to essay writing. Different types of essays according to the syllabus are given and they have to write at least 250 words in an hour. Overall they are given two hours to finish the test. The test suits more B2 + as there are two reading passages based on IELTS apart from an academic essay. In fact, the main coursebook is complete IELTS 5-6.5 for second year students they are obliged to have IELTS-based questions in both reading and writing.

It is believed that a good and effective test needs to have five cardinal criteria including practicality, reliability, validity, authenticity and washback (Brown, 2010, p.25). Therefore, meeting these core principles is a must for every test. Regarding the abovementioned test, it could be said that practicality is partially addressed in it. Although students are required to have B2 level, most of them still have great challenges to reach this level. It is evident that a practical test can be carried out within proper time limit by test takers. However, this test would take those students more than two hours to accomplish everything since it has two complicated reading passages. With these reasons, I think that time and effort should be considered in this test. Secondly, validity is partly met too. Messick (1989) claimed that adequacy and appropriateness of the test should be backed up by empirical and theoretical rationales (p.11). In terms of content validity, this test is likely to fail because in the first part both

reading passages are not related to the topic as well as the essay. Admittedly, as they are studying IELTS materials they should take tests based on IELTS, but there are different topics given in the syllabus and readings in the exam do not align with the syllabus. Therefore, the reading texts also should be appropriate to the topic itself. In this way, it should be also mentioned that face validity somehow fails too due to difficulty level and not well-constructed format. On the other hand, reliability was addressed to some extent. For example, the tasks have unambiguous items and provide specific rubrics with the test taker despite some unclear directions. In addition, there are some spelling mistakes in the second section of part 1. Perhaps rater-reliability is not wholly achieved because of inattention.

Bachman and Palmer (1996) put forward the view that authenticity is the correspondence of the between the features of a target language and the given language (p.23). Alternative tests at present should hold authenticity in a bid to help students learn in a faster pace. In this given test reading passages are partially authentic as they are taken from different articles or journals and the topics are intriguing. Lastly, washback can be both positive and negative. Since not all students are capable of doing this test successfully, at the end when the results come out they give negative feedback like Doston. He also claimed that reading part was challenging and they could not manage the test in 2 hours. However, questions of legal English were quite easier and appropriate to the course. Therefore, the balance between the tests should be equal.

It is undeniable that every test holds both strengths and weaknesses. This test is not an exception either. Firstly, according to its strengths it can be said that the division of the questions are satisfactory as they is an equal number of questions in each part. Secondly, it is somehow well-designed with tables and structures in the reading part. Besides, appropriateness is provided in legal English. However, as for weaknesses it is obvious that not all skills are covered in this test such as listening. Admittedly, containing a listening question in the exam is a problematic issue in this university owing to a large number of students and administration reliability. Furthermore, instructions are not concise and clear in legal English part and it can cause some difficulties to the test takers. Importantly, difficulty level of the test is a big problem

and the same test format is used. There, it needs some modification in order to meet the standards of the curriculum, students' needs and level as well as the principles.

### ANALYSIS AND RESULTS: Modified version of the chosen test

Brown (2010) suggests that practical considerations have to be taken so as to obtain the value and quality of the test (p.26). As this test is considered to be impractical due to difficulty level of reading passages and inappropriateness to the topic it should be modified. In fact, the learner's level is almost B2, but the reading passages are proper to B2+. Besides, the level of most learners is even B1. According to the syllabus, the topic "Environmental problems" should be covered, but in the test, totally different reading passages are chosen. In a bid to modify it, appropriate reading passages to the topic and level of students should be given. It is also crucial to note that clear instructions are of significance in the validity and reliability of the test. In legal English part, instructions are not vividly and concisely explained. Moreover, even though the questions are based on the topic the test uses only one productive vocabulary questions (fill-in-the-blank). With these reasons, the variability apart from clear instructions should be provided.

Taking these reasons into account we concentrated on more the legal English part and designed a modified version. Prior to the description of the modified version of the final test, the original version will be provided.

#### ORIGINAL VERSION OF FINAL LEGAL QUESTIONS.

Questions 14-28. Complete the following sentences by using the words from the box.

tenant, landlord, discriminate, insolvent, sick pay, unfair dismissal, redundancy, maternity leave, goods, formation of a business, capital, valid, partnership, merger, lease of land and buildings, conveyancing, real estate

27. He is a very good \_\_\_\_\_. He always pays the rent on time!  
28. He sued his employer on the grounds of \_\_\_\_\_ because the reason his employer gave for firing him was not valid.  
29. The \_\_\_\_\_ is the formal way of saying the way in which a new business is created.  
30. It is against the law in England for an employer to \_\_\_\_\_ against an employee because of his or her age.  
31. Many employees are worried about \_\_\_\_\_ because a lot of businesses are closing in this area at the moment.

32. If you are ill and not able to work you should look your contract to see if you can get \_\_\_\_\_.  
33. The total \_\_\_\_\_ of the business is valued at approximately £32 million.  
34. The business does not have enough money to pay its debts and is \_\_\_\_\_.  
35. There will be a \_\_\_\_\_ next year between two major British chemical companies.  
36. My friend and I want to start a cleaning business together and we decided that the best thing to do is to create a \_\_\_\_\_.  
37. My baby will arrive at the end of March so I will take six months' \_\_\_\_\_ starting on 1 March.  
38. My sister works in the Property department of her law firm. She acts for people who are buying and selling houses. She is a specialist in \_\_\_\_\_.  
39. We don't own our house; we rent it. The \_\_\_\_\_ ends in three months so we will have to find somewhere else to live.  
40. He is the \_\_\_\_\_ of five houses in this area. He makes a lot of money every month from the rent.

### MODIFIED VERSION OF THE TEST.

Questions 27-33. Match each of the words with the correct definition. Write only A-G for questions 27-33 on your answer sheet.

27	A person who pays rent to the owner of a house, a flat or an office in return for living there.	A redundancy
28	An amount of money that an employer must pay to an employee when that employee is ill.	B maternity leave
29	The situation where someone loses his or her job for a reason that is not valid.	C sick pay
30	The situation where someone loses his or her job because an employer no longer needs so many employees.	D insolvent
31	Not having enough money to pay debts or buy goods	E a lease of land and buildings
32	The time period when a woman is not at work before and after the birth of her baby.	F unfair dismissal
33	An agreement to allow someone to use land or buildings for a fixed period of time in return for a payment of rent	G tenant

Questions 34-40. Choose a word or phrase from the box to complete the sentences. NB. Not all words are used in the box.

conveyancing	capital	real estate	merger	valid
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discriminate	landlord	goods	formation of a business	partnership
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34. The ..... is the formal way of saying the way in which a new business is created.

35. It is against the law in England for an employer to ..... against an employee because of his or her age.

36. The total ..... of the business is valued at approximately \$ 32 million.

37. There will be a ..... next year between two major British chemical companies.

38. My friend and I want to start a cleaning business together and we decided that the best thing to do is to create a .....

39. My sister works in the Property department of her law firm. She acts for people who are buying and selling houses. She is a specialist in .....

40. He is the ..... of five houses in this area. He makes a lot of money every month from the rent.

As it is seen, modified version contains both receptive (matching) and productive (fill-in-the-blank) vocabulary. This is more advantageous for the learner since it has a clear instruction and a variety of questions. We believe that this test aligns with ESL standards as it suits well the level of the students and the syllabus. For example, in the original test the instruction does not mention about extra words or phrases. Therefore, learners are likely to use all of the words for the answers. There are several modifications carried out for this test:

- ✚ It entails a clear guideline in order to meet validity and reliability as well as avoiding negative washback.
- ✚ Questions are well-designed concisely so as to ease the process.
- ✚ Both productive and receptive vocabulary questions are used.
- ✚ It highly provides practicality for both teachers and learners
- ✚ There is a balance between the questions and answers. They do not appear in the same place.

At present, the advancement of brand-new technologies has considerably facilitated both teaching and learning process. Computer technology can be a great advantage to testing as well as communicative language teaching (Chapelle & Jamieson, 2008). Hence, incorporating technologies in testing allows testers to address authenticity and creativity. This test is also made online. Vocabulary is well-suited for computer-based tests. However, sufficient number of computers and good



access to the internet are required to hold a computer-based test. Besides, if it is an online test, it will be much more practical for the teachers as well.

Both tests have already been given to students. When the original test was taken many students asked several questions about the task as they did not understand well and how many words to use for the answers. Also, they complained about the face validity of the test since it has some spelling mistakes and wrong format. Therefore, we modified the same test and applied it with my learner. When he took the test he was satisfied with it since it has one topic-based reading passage, vocabulary and clear instructions. He did not ask any questions during the process regarding its guidelines. He said that everything was crystal clear for him. Essentially, he managed to do the test in the given time without any delays. The test itself was proper for his level and the syllabus.

## CONCLUSION

Undoubtedly, in this assignment we learnt a lot about testing and assessment. Initially, we relied on many reading sources and got familiar with much information about different types of assessment and principles. Moreover, we learnt how to make a valid, practical and reliable test, which suits the level and needs of the learners. The formation of the main requirements, guidelines and specifications became very clear with the help of this task too. It really helped us to enhance assessment skills and analysis of the tests given in any skill. It also made us realize the importance of making a test based on five principles in learners' development. We surely believe that this knowledge and experience will be very helpful and effective in our future teaching and we intend to use all of this expertise in our further classes.

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## **ARTISTIC PECULARITIES IN JOHN GRISHAM'S LEGAL THRILLERS**

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**Abstract:** The article discusses the courtroom cases and their artistic originality in contemporary American writer John Grisham's works. His works, affecting the complex social problems that are relevant to contemporary American reality (race relations, the death penalty, corruption), as well as a detailed description of the problems and shortcomings in the actions of the judiciary, the legal system and the state.

**Key words:** legal detective, courtroom cases, comparison, novel, political and social problems, detective, psychological and philosophical attitudes, literary analysis, literary character.

**Аннотация:** Мақолада замонавий Америка адабиёти ёзувчиси Джон Гришэмнинг юридик детектив асарларидаги суд жараёнлари ва уларнинг бадиий хусусиятлари муҳокама қилинган. Унинг асарлари америка реал воқеялигининг актуал ва мураккаб ижтимоий муаммолари ( ирқий муносабатлар, ўлим жазоси, коррупция) мавзуларига ўрғу қаратади, айниқса суд жараёнлари, юридик ва ҳукумат тизим фаолиятидаги муаммо ва камчиликларни батафсил ёритади.

**Калит сўзлар:** юридик детектив, суд жараёнлари, роман, ижтимоий ва сиёсий муаммолар, детектив, руҳий ва фалсафий қарашлар, адабий таҳлил, адабий қаҳрамон.

**Аннотация:** Данная статья рассматривает судебные процессы и их художественное своеобразие в работах американского писателя Джона Гришэма. Его произведения, затрагивая актуальные для современной американской действительности сложные социальные проблемы (расовые отношения, смертная казнь, коррупция), а также детальное описание проблем и неудач в действиях судопроизводства, юридической и государственной системе.

**Ключевые слова:** юридический детектив, судебные процессы, роман, социально-политические проблемы, детектив, психологические и философские взгляды, литературный анализ, литературный персонаж.

“I seriously doubt I would ever have written the first story had I not been a lawyer.

I never dreamed of being a writer. I wrote only after witnessing a trial.”

— John Grisham[5]

## Introduction

The category of obligation is often not fully accepted by most people, although the category of freedom will not make sense outside the context of the category of responsibility. The formation and upbringing of an individual goes through the entire uncomplicated sphere of social relations, but not everyone is able to become a genuine social factor that meets all the basic requirements of social activity.

One of the criteria for personal selection is the ability to make decisions and to feel responsibility for what is happening around the individual, for acts committed by her or for inaction in situations requiring participation. Particularly relevant is the problem of human responsibility to society today, in the conditions of the formation of a democratic state of law and civil society in Uzbekistan. In light of this, foreign experience, including the experience of artistic works, should also be considered as a theoretical base. Against this background, in modern world literature, the figure of the famous American writer, the founder of a new genre in world literature – the legal thriller genre, John Grisham – stands out.

## Literature review

In his works, John Grisham puts the characters in various situations of a legal nature. Almost all situations have a dramatic and sometimes tragic outcome. However, until the end of the work, readers still have hope for a happy solution to a problem.

The category of obligation runs through all the works of the American writer. In all the books of John Grisham, the concept of legal responsibility is present, but the problem of personal responsibility to society sometimes turns out to be above their own convictions and, most importantly, above their own fear.

Grisham said the big case came in 1984, but it was not his case. As he was hanging around the court, he overheard a 12-year-old girl telling the jury what had happened to her. Her story intrigued Grisham, and he began watching the trial. He saw how the members of the jury cried as she told them about having been raped and beaten. It was then, Grisham later wrote in *The New York Times*, that a story was born [1]. His first novel, *A Time to Kill*, was published in June 1989, four years after he began writing it. As of 2012, his books have sold over 275 million copies worldwide [2].

In his work “Time to kill” (1989) “an African-American kills two white scoundrels who raped his young daughter. Young lawyer Jake Braygans protects him during the process. ” Racial discrimination is a “white spot” in US history. The situation in which the protagonist finds himself is absolutely losing, since in the history of the state in which this event takes place, the rape of a black child has been before. Braygans, in spite of everything, enters into a real war with the followers of the “Ku Klux Klan”, being exposed to even mortal danger. Feeling a responsibility to society, the lawyer brings the case to the end, when everyone has already lost faith in the acquittal. The relationship between the white and black people in the United States is a dangerous topic, but nevertheless, Grisham managed to reflect in a new and fantastically realistic way the situation reflecting, to this day, discrimination against the African-American population of the country.

The Firm remained on The New York Times' bestseller list for 47 weeks [3], and became the bestselling novel of 1991 [4].

In his book, *The Firm* (1991), Grisham raises the problem of responsibility from a different angle. A graduate of a prestigious law school offers a job in a prestigious company, where he buys his home, a luxury car after half a year, and he sees his own yacht and private jet ahead ... But the further, the more questions arise. From this company, no one ever quit, only as a result of an accident ... And one person enters into an unequal fight with the corporation, while having a decent bank account and a luxurious future. The hero, initially "dokey" luxury and cash, then, perhaps, wonders whether it is possible to be happy, the misfortune of other people, ignore it, ignore, and often contribute to the misfortune of other people. Knowing about crimes is it possible to quietly exist and live as if nothing had happened. Many members of society live this way, but not our hero. Again, risking his own life and the safety of his family, he changes the situation and brings to the public the whole thread of the crimes committed by the law corporation. It is difficult to make a choice between well-being and average income when a person touched the world of luxury, but is it always just as beautiful from the inside and based on the blood of innocent people? Not every person can ask this question; much less make a choice in favor of society to the detriment of their interests.

The situation of risk and mortal combat with the "monster" in favor of the interests of society and individual citizens is the main storyline of all the works of the American writer and screenwriter.

The plot of the *Pelican Brief* (1992) is as follows: two members of the Supreme Court were killed. A law student is pushing her own version. Hiding from the mafia, she, together with a correspondent, manages to find a witness and make a sensational article in the newspaper. A killer is chasing her death, who is paid \$ 3-4 million for each murder. And, it would seem, the easiest way to lie on the bottom, throw all the cases, forget about the investigation, take the money and live happily ever after, but not for the main character. Again, risking her own life, she seeks the truth. The question is: is the truth of human life worth it? But is this truth needed by society, and are there any need for responsible people who cannot agree with injustice, especially if this injustice comes from high-ranking officials?

In another novel, *The Client* (1993), the main characters are people with very complex characters. Imagine the following situation. You have witnessed suicide. However, the unlucky victim of neurasthenia managed to hold a very informative conversation with you before putting a bullet in his head. As it turned out from the conversation, the body cooling before your eyes once belonged to a successful lawyer, zealously protecting the representatives of the mafia klan. And this lawyer was aware of where one of his clients hid the corpse of a senator killed the day before ... Actually; it was this lawyer who decided to give you this sacred knowledge directly before his own voluntary death. Further events will begin to unfold with terrifying speed - they will open you hunting: police, mafia and FBI. All three structures in the process will be terribly interfere with each other, which in general will be in your favor ... But just the case will have to hire a lawyer - however, in your pocket you only have a couple of dollars. And - by the way - you are only ... 11 years old. Here, the responsibility for society is already taken on by individuals of a different order - a minor boy “a difficult teenager” and a loser-lawyer, who took courses in alcoholics anonymous. Such a plot of the work is twisted in a zigzag and constantly keeps in suspense, and the force with which the characters, almost alone, struggle for survival and, of course, for justice, is passed on to the readers.

The successes of *The Pelican Brief*, which hit number one on the New York Times bestseller list, and *The Client*, which debuted at number one, confirmed Grisham’s reputation as the master of the legal thriller [5].

The focus of the work “*Camera*” (1994) is on a death row is a person convicted of a brutal murder and awaiting execution of the sentence. It would seem that his guilt is proven completely. But the young lawyer, who dreams of a sensational case, is sure everything is not as it seems and is ready to start a fight that will either save the life of his client, or will cost him his career. Here, a sense of responsibility is already acquiring a shade of responsibility towards one person. But also the lawyer himself is confronted with the question of whether the sentenced person really did not commit a crime or is it all just a visage?

## Research methodology

It is also interesting that in the works of Grisham the heroes struggle, first of all, with their own shortcomings, vices, weaknesses and fears. And if at the beginning of the work we find a person who is rather weak, lost or blinded by the glory of a person, then by the middle and end of the book a completely different person appears before the reading audience - a strong person who has suffered a fair decision and changed his life.

In another work, “The Rainmaker” (1995), the truth is: “The lawyer protects the client” turns the other way: “The lawyer must protect himself”. “A lawyer should always know how to prove the innocence of his client - even if this client is guilty by definition. A lawyer must always believe in victory. But what to do when a lawyer himself is accused of committing a cruel crime. ” The hero of the book is drawn into a whirlpool of deadly events, from which he will either have to be a completely different person, or say goodbye to life.

Responsibility to oneself, to one's own conscience, to one's “I ” is another plot in Grisham's novels.

The novel “Runaway Jury” (1996) unfolds as follows: a lawsuit in which powerful tobacco corporations, on the one hand, and equally powerful lawyers, on the other hand, are trying to win over to their side jurors in the lawsuit of an American widow who died of cancer lungs against tobacco companies. However, the jury has its own opinion, its own game and its own rules. It's not the money that decides, the jury decides. The court does not turn into the process of asserting justice, but into such a special game in the process of asserting justice, where all the action is made out for pages, and only words remain on paper. All details are thought out, calculated and planned under the carpet, each stage of the process is the choice of each jury member, the total investigation of each. Everyone must have a button so that it can be pressed at the right time. And therefore replaying a corporation is not just winning a game. It is against the law, against huge money, against people who are ready for this money for everything. This is a mortal danger.



The work “Partner” (1997) begins quite easily and simply: “there is no need to find out who stole the money from whom. From the first pages it is clear that Patrick stole \$ 90 million from the law firm in which he worked. True, this money is illegal - that is the whole point. He patricifies his death and lives, does not hurt unnoticed for 4 years in Brazil, until mercenaries track him down, and do not return him to America.”

### **Analysis and Results**

Grisham brilliantly shows how the protagonist, with the help of his beloved Eva (also a lawyer, by the way) and old lawyer friend Sandy, fends off every blow of his enemies, eager to get back countless money and put Patrick behind bars or on an electric chair. There is the FBI with local authorities who want to try him for fraud and murder (he allegedly burned the body of an innocent man in order to fake his death), and the unfaithful wife with his lover, and the criminal leader who owns 90 million, and his law firm conducting financial fraud. How many people are there who want evil for a person with such and such money!

Patrick Lanigan organized the crime simply phenomenally, with particular accuracy, without the right to make a mistake. And oddly enough - you begin to empathize with him, to root for the fact that he came out unscathed. Looking for excuses for his actions in his stories. And Grisham constantly keeps us in front of the decision to "execute or pardon" Patrick. Lanigan like a man with a double bottom. He is anxious about his daughter, who later turns out to be not his child, and maintains a patient friendship with Clovis. But we are constantly confronted with his complacency, with his dismissive attitude towards state institutions and stunning immorality in stealing "dirty" money. Grisham seems to check the reader's ethics - should Patrick live happily ever after or not? And he chose a rather nontrivial way of checking, laying it at the end of the novel. If we are reconciled with the fact that Patrick was acquitted of everything he did, then the readers should be offended by the author, that he did not let his main character go to the sunset with his beloved. But, if you understand that Patrick is still a “cunning fox” and everything he did is criminal, whatever words he throws, then it is quite possible to say that he deserved everything that fate had prepared for him on the last pages.



Quite a different story unfolds in the book "Testament" (1999). A very rich man dies, the heirs are already dividing and trying to figure out how much they will get, buy or are going to buy expensive cars, etc., quarrel - and suddenly it turned out that all the money was bequeathed to no one to whom ... to another country, in a place where even letters barely reach. And she does not need money at all. As if by contrast - two worlds, two points of view on the meaning of life and its values. And you will think - was it worth making such riches, so that later the children and grandchildren would wait as the joys of the death of the parent?

Like A.S. Pushkin: "Sigh and think about yourself: when will the devil take you?" The terrible world of big money. Is he even sideways compatible with love - children, parents, spouses?

The plot of The "Summons" (2002) is completely twisted. "How to become a millionaire? It's very simple: to find three million in cash from your deceased father". Judge Atlee was the pride of his town, and indeed the entire state of Mississippi. At all he had time, only not on his own sons - Ray and Forrest. The first is not offended; he stands firmly on his feet, gets his professorial salary, flies from time to time on his own plane and does not dream of a better life.

The second turned into an alcoholic and a drug addict and the father does not like too much. And now the honorable judge dies, and Ray, appointed executor, suddenly finds the same three million in cash. Did the judge take bribes? Played in a casino? And no one even suspected about this? In general, Ray will have to safely hide the money and try to figure out their origin. Of course, the mysterious strangers will fix all sorts of obstacles. As always, Grisham is present in the work of morality, taught clearly, but at the same time unobtrusively. And do we know the closest people well? And do we know ourselves well? And what is responsibility to oneself and to other members of society?

In the center of attention of Grisham's different from other books, "Bleachers" (2003), the memoirs of a high school graduate who was once one of the best quarterbacks. Reflections of the hero of the game of American football, ruthless and merciless.

The small town of Messina, where everything and everyone is subordinated to only two things - American football and the school football team "Spartans". If the players needed new booths in the locker room or simulators, the people of Messina forgot about Christmas. Save on the team - death like. Spartans head coach, Eddie Rake, is a living legend of this place. God and the Devil in one. He is worshiped, he is cursed, admired and hated with all his heart. Even falling into disgrace, he does not descend from his pedestal, they talk about him, think, remember. "Bleachers" is a story about four days in which the death of the "great and terrible" Eddie Rake, his funeral, and much more — the little things that usually make up something important, for example, the most important and complex question that plagued every Spartan - did they love or hate their coach? Many players who returned to Messina after a long time, the idols of the past, in anticipation of Rake's death, gather in the evenings in the stands of the field to unwind the tangle of events that have sunk into oblivion and find the answer to this seemingly rhetorical question.

The "Appeal" (2008) describes very large-scale events: "large corporations lobby their interests, put their people in the courts in order to ensure in their favor decisions on claims filed against them by ordinary citizens. It describes in detail exactly how a judge of the Supreme Court of the state makes a huge amount of money out of an unknown lawyer to anyone; corporations throw out huge amounts of money: millions of dollars fly away like crumpled hundreds."

First, the masses are told exactly which ideals are of interest to them, then they are aggressively promoting a candidate who promises to support these ideals. It turns out that it is very easy to manipulate the minds and preferences of the masses, the most interesting thing is that after the whole campaign every single person who went to the polls and voted for this candidate, believes that he made the decision and chose the one who will ensure the protection of his interests in a way. In fact, everything happens exactly the opposite: they chose the one who acts to the detriment of ordinary people. And even if this popularly elected one understands that he has become just a pawn, his remorse of conscience does not bother anyone. This book is a hymn to rich corporate America, money rules the world, and ordinary people are left with nothing. Although

no, they are given the right to elect those who protect their interests, and they are even offered who exactly this will do the best.

Grisham opposes capital punishment, a position very strongly manifested in the plot of *The Confession* [6 7 8 9]. In his book “*Confession*” (2010), John Grisham pursues the following line: every innocent person sent to prison has someone in the wild, a real criminal. He cannot understand how the police and prosecutors could have been mistaken, and he, of course, has nothing to worry about. He just can't believe his luck. But time passes, and the innocent is aware that the error will not be corrected. How will people behave in such a hopeless situation. Give up or fight? And if you fight, it is akin to a person who is looking for a black cat in a dark room.

### **Conclusion**

For more than 30 years of creativity, Grisham improved his writing skills. In some works, he perfectly reflects the entire proposed storyline from the beginning to the end, in other works he twists the plot lines, crosses them with each other and, perhaps, the beauty of the stated range of situations is lost. But be that as it may, the works of the American writer John Grisham show that one person and a small group of people who are aware of their responsibility in the face of society can change a lot, although it is likely that they will lose a lot. The choice remains just for us. Whether each of us, like some selfless heroes of Grisham's works, can come to grips with the criminal system, corporations that are ready for the big money to destroy everything that gets in their way.

Responsibility for what is happening in society lies with each of its members, and therefore only an awareness of this fact will allow us to look with confidence into the fair future of our country and humanity as a whole.

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## MODERN PROBLEMS OF PEDOGOGY AND PHYHOLOGY

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### THE MOST IMPORTANT CONDITIONS RELIED ON THE MANAGEMENT OF EDUCATIONAL INSTITUTIONS

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**ABSTRACT:** This article focuses on the preparation of future professionals for preschool management, the peculiarities of pre-school education, the requirements for the quality improvement of pre-school education, and the continuity between pre-school education and the pedagogical process.

**Keywords:** preschool, educational management, management, preschool management, pedagogical process, future specialist, synergetic approach, functional approach, system approach, functional approach, situational approach, reflexive approach.

**Аннотация:** В этой статье приведены направления подготовки будущих специалистов для управления дошкольными учреждениями, особенности управления дошкольным образованием, требования к качественному улучшению дошкольного образования, взаимосвязь между дошкольными образовательными учреждениями и педагогическим процессом.

**Ключевые слова:** дошкольные учреждения, менежмент образования, управление, управление дошкольными образовательными учреждениями, педагогический процесс, будущий специалист, синергетический подход, активный подход, системный подход, функциональный подход, ситуационный подход, рефлексивный подход.

**Аннотация:** Ушбу мақолада бўлажак мутахассисларни мактабгача таълим муассасаларини бошқаришга тайёрлаш йўналишлари, мактабгача таълим менежментининг ўзига хос хусусиятлари, мактабгача таълимни сифат жиҳатдан такомиллаштиришга қўйилаётган талаблар, мактабгача таълим муассасалари билан унда амалга ошириладиган педагогик жараён орасидаги узвийлик ҳақида фикр юритилган.

**Таянч сўзлар:** мактабгача таълим муассасалари, таълим менежменти, бошқарув, мактабгача таълим муассасаларини бошқариш, педагогик жараён,

бўлажак мутахассис, синергетик ёндашув, фаолиятли ёндашув, тизимли ёндашув, функционал ёндашув, вазиятли ёндашув, рефлексив ёндашув.

### **Introduction**

On December 29, 2016, the President of the Republic of Uzbekistan Sh.Mirziyoev made a decision № PP-2707 "On measures to further improve the system of preschool education in 2017-2021". This decision places a priority on the effective management of preschool educational institutions and their promotion to a new level. In order to ensure the implementation of the "National Program for Personnel Training" in the Republic of Uzbekistan, the reform of the higher pedagogical education sets a special task for the management personnel training process. Reforms to move the community to a new level of quality also impose a number of requirements on early childhood education management. [1].

### **Literature review**

Qualitative improvement of pre-school education, along with critical analysis and updating of existing requirements, requires significant enrichment of the organization and management of pedagogical processes in these educational institutions. After all, modern conditions and modern developments in pre-school educational institutions can use all the opportunities, demand for themselves and their work, establish parental cooperation with preschools, master the profession, deeply know the secrets of their field. Increasing the need for kindergarten managers who are self-sufficient and able to use their full potential.

Requirements to qualitative improvement of pre-school education include: preparation of future teachers for interpersonal communication in pedagogical processes, introduction of subject-to-subject relations; competence diagnostics; equip them with the knowledge on the implementation of modern management technologies in preschool education; development of their professional competence; to create modern approaches to the management of quality of pre-school education and to ensure the introduction of methods of continuous improvement of preschool educational institutions.

In this way, it will provide not only the challenges of improving the quality and

effectiveness of pre-school education, but also the provision of future teachers with innovative teaching methods.

Reforms in the field of preschool education require improvement of the mechanisms of this process management, ie, the traditional process of this process is abandoned and the experience of democratic governance based on the requirements of social and professional development is based on democratic principles. It is not only a management problem, it also aims to identify mechanisms for improving the quality of education based on the organization and coordination of activities of pre-school education, coordination and implementation on the basis of competence-based approaches.

Preschool education as a complex social system, which includes various constituents, requires a special approach to its management. At the same time, it requires the adherence to the general principles of management as a pedagogical process that facilitates the development of early childhood development. Therefore, research in pedagogical management relies on methodological approaches that are already in place. [2].

The science of pedagogical management learns how to perform tasks in the organization and management of a particular activity.

It also provides knowledge on how management functions should be implemented in different pedagogical situations, and what factors may contribute to the successful implementation of specific functional tasks. Students should first be informed about the theoretical and methodological bases of management.

### **Research methodology**

It is also important to convey to students the historical background that management practices first emerged and theoretical approaches to governance have been put forward. Accurate information, knowledge and experience of management have been advanced by our ancestors. Our ancestors had a great experience in this field. An example of this is the "Temples of Temur". This work provides valuable insights into the characteristics of management. Abu Nasr Farabi, Alisher Navoi, Zahiriddin Muhammad Baburur and others have also voiced such valuable points. In



teaching pedagogy, the effective use of valuable insights from our ancestors plays an important role in imparting future educators with the knowledge of fair management of preschool education processes, ensuring the quality and effectiveness of this process. Because our ancestors have mastered the skills of managing any team and leave a legacy to future generations in this area. It is desirable to use this heritage effectively in the system of higher education. [3].

Radical changes in education require the transition to a new management paradigm. The existing literature provides a number of definitions of governance.

A number of scholars, including EA Klimov, VS Lazarev, VA Lectorsky, NV Nemova have interpreted governance as “influencing” one system by another, one person or another. Proponents of this direction believe that management is a process of transforming an object as a result of a directed effect on a subject, the effect of the subject on the object.

In the textbook "Management" by M. Sharifhodjaev and Y. Abdullaev, the meaning of the word management is presented in the form of activity. Management is also a process of choice, decision-making, and control over its implementation.

Another group of scholars have suggested that interactions between management subjects, that is, the continuity of right and negative effects, are harmoniously linked to changes in each other.

In most studies, management is interpreted as an activity that involves members of the community in regulating human behavior.

According to MM Pototnik, A. Fayol, VS Lasarev, GH Popov, management is a type of activity. In the context of this approach, it is important to train future careers with a specific type of activity. [4].

Lt. Itelson, AA Contrary to the view that governance reflects the influence of one system on another. At the same time, management is defined as the targeting effect of the entity on the control object and the effect of the change on the object. Such an approach is undertaken by an active manager. Managers appear to be passive participants in the process.

U.I Inoyatov, R.Sh.Ahliddinov, NP Kapustin, PI Tretyakov, TIhamova recognize

management as an interrelated activity of subjects. In this process, the interaction of participants in the interaction process is accelerated. The disadvantage of this approach is that it provides for a balance between changes in the entities that interact with each other and the direct and inverse relationship between the subjects.

### **Analysis and results**

In the theory of management, several methodological approaches related to the essence of the concept of management have been proposed. They are:

a) a systematic approach that ensures the interconnection and integrity of entities and entities within a managed system;

(b) The situational approach, in this process, to ensure the combination of specific methods for achieving the objectives of the educational institution;

c) A process approach, such as achieving a unified, evolutionary chain of management functions within this approach. [5]

Famous scientists R.Sh.Ahliddinov, E.

Seytkhalilov, UIInoyatov, STTurgunov, M.Yuldoshev, VSLazarev, MM Potashnik, VPSimonov, P.I. Tretyakov, TIhamova researches management of educational process as separate branch of pedagogy. According to these scholars, the theoretical-methodological basis of the science of pedagogical management consists of a synergistic approach, a functional approach, a systematic approach, a functional approach, a situational approach, a reflexive approach, a person-centered approach.

It is important to note that specialists should rely on all of these approaches when developing models for managing educational institutions and pedagogical processes. When any of these approaches take a central role, certain elements of the rest are adapted to it. Because each of these approaches is important for pedagogical management.

A person-centered approach to pedagogical process management takes priority. Applying this approach eliminates the contradictions and contradictions between the subjects of the educational process.

It is also important to rely on a systematic approach to the management of preschool educational institutions and the educational process used by them. Based on

this approach, the quality and effectiveness of the pre-school education process will be improved. The systematic management of preschool educational institutions will ensure the integrity of the educational institution and its pedagogical processes.

### **Conclusion**

Managing pedagogical processes in pre-school institutions, based on the synergetic approach, is important for creating an atmosphere of collaboration between the institution's management, educators, parents and students.

Management of preschool educational institutions has its own stages. They are:

- a) defining the purpose of pre-school education institutions;
- b) development prospects based on the analysis of preschool education activities;
- c) predicting the results of pre-school education activities;
- d) planning activities of preschool educational institutions;
- e) Performance at preschools;
- g) monitoring the activities of preschool educational institutions;
- g) regulation of preschool educational institutions;
- i) elimination of deficiencies, errors that occur on the basis of correction of preschool educational institutions.

All of this is essential for the future work of future teachers, and it is imperative for higher education institutions to provide students with the necessary knowledge and experience on these issues.

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## SEMANTIC TRANSFORMATION OF PHRASEOLOGICAL UNITS

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**Abstract:** This article includes material about semantic transformation of phraseological units.

**Key words:** phraseme, transformation of phrasemes, semantic transformation.

**Аннотация:** Ушбу мақолада фразеологик бирликларнинг семантик трансформацияси хусусида сўз юритилади.

**Калит сўзлар:** фразема, фраземалар трансформацияси, семантик трансформация.

**Аннотация:** В данной статье ведется речь о семантических трансформации фразеологизмах.

**Ключевые слова:** фразеология, трансформация фразеологизмы, семантический трансформация.

**Introduction:** As it is said in scientific resources, transformation (Latin *transformatio* - changing) is defined as formation of second structure by changing the main syntactic structure according to the linguistic rules, [9], [11] and according to other resources, it is thought to be a creation of a linguistic form which is based on the main linguistic model. One of the means of formation phraseological units is called semantic transformation. Which is why phraseological unites in a language are seen as a sematic phenomenon. According to its meaning, a word combination as a whole can be changed from one notion into the second one, and the meaning an independent conjunction can also be transformed into a phraseological unit.

**Literature review:** Sh. Balli describes phraseological semantics as their absolute sign, [2], and states that the combinations are considered to be lexic-grammatic, semantic and semantic-absolute units. V.Vinogradov made fundamental works dedicated to the research of phraseological units. [3]. Russian linguists like, N.M.Shanskiy, O.S.Akhmanova, V.L.Arkhangelskiy, Y.A.Gvozdayov, A.G.Nazaryan, S.Royzenzon, Y.Y. Avaliani led efficient researches on phraseology.

The notions of modern linguistics like, *separately officialised, constancy of the content, usable as a whole, existing in ready condition, imagery, semantic reformation* are shown as differential signs which differentiate phraseological units from other word combinations.

It turns out that the features like, separately and grammatically officialized, constantly contented, usable as a whole, existing in ready condition, imagery, semantic reformation belong to phraseological units, and they differ from independent and constant combinations. It is important to state that imagery and semantic reformations (transformation) are thought to be the key signs.

That is why phraseological units are considered to be imagery and expressing figurative meaning. In linguistics, phraseological units consist of at least two independent words, and they are interpreted as the biggest lingual unit. Sh. Rahmatullaev defines the meaning of phraseological units by stating that *in changing more than one word as a whole by some character, we can see semantic development*. [8].

It is observed that transpositiveness is reflected in cases when phraseological units are semantic phenomenon and the meaning is absolute [7]. We will use the term like, semantic transformation in our research.

The meaning of phraseological units in Uzbek language is made up by the way of reformation (semantic transformation), and it is the main feature to differ them from other units of the language. Transformational (transpositional) independent combination or phraseological meaning, which is made from indirect meaning of a sentence, is formed by using the lingual units (elements) for extraordinary task and meaning. The linguistic materials show that most of the phraseological units are formed

by transformation (transposition). For example, if the combination “qo’lini qovushtirib” (crossing the hands), which consists of the words like, “hand” and “crossing”, make up a common set of meaning, the meaning being careless of the combination “crossing the hands” is formed by semantic transformation. In this case, the components “hand” and “crossing” partly lose their meaning as independent combination and get figurative meaning. Phraseological unit has its pragmatic opportunities, in the first case it is thought to be an independent combination, and in the second case it is a phraseological combination. *People, who great Zunnur Ishan’s shadow, moving backward gave him way by **crossing** their **hands** with respect.* [1]. In this case, the combination “crossing hands” is thought to be an independent combination, and it is used as “expressing deep respect to someone“ [9] *Sobirakhon **crosses** her **hands** because of the public enemy’s wife.* [10]. In this context, “crossing hands” is used in extraordinary meaning, being careless.

**Research methodology:** Transformation of lingual units is reflected not only in changing the form, but also in transposition of the meaning. In this very process, an independent combination or a sentence may face transformation after which we can see a new phraseological meaning. It turns out that semantic transformation is a process in which non-phraseological combination (or a sentence) is transformed into phraseological unit. In the process of semantic transformation, an independent combination (or a sentence) is reformed by semantic or semantic-syntactic way. For example, “tesha tegmagan” (unbeaten) is used in the meaning of not beating or hitting something and is an independent expression. But it has the second meaning like, “totally new, or fresh” semantic transformation which causes formation of its phraseological meaning. *On top of that, the rumors about how his stepmother pushed him out of his home and because which Omonali changed his shelter has already become an **unbeaten** topic in the village.* [6]. By comparing things and situations, imagery and constancy appear which belong to the phrasiology at this point. The feature which is called constancy limits the connectivity or disconnectivity of the components of phrases. In this process, we can see how the features of phrases like,



constancy, usability as a whole, existing in a ready condition, imagery, semantical reformation appear.

Transformation may also occur by changing lexical structure, semantic expressions and lexical-semantic features of phraseological unit. That is why phraseological transformation is divided into: a) lexical transformation; b) semantic transformation; c) lexical-semantic transformation. *`Jonini jabborga bermoq (do one's best by risking) – bor kuchini safarbar qilgan holda kekirdagini cho'zmoq (give all efforts) – shovqin solib dabdabali gapirmoq (to speak in a maximum voice), ko'ngliga qol solmoq (to try to guess what one thinks)* are not defined by the meaning of the components of the phraseological units. Constant combination is transformed and by this way phraseological meaning is formed.

Lexical-semantic transformation of phraseological units lead to broadening of structural content. In the process of full semantic formation, all the components of the phraseological units are transformed as a whole. Although the expressions like, *the appetite is opened, the appetite is blown* and other various appetite structures *such as the appetite is suppressed, and the appetite has returned, the phraseological units are antonymic*, they are united by the concept of eating and drinking. These compounds are phraseologized on the basis of simulated images. The meanings of the phraseological units *such as pulling off the feet, throwing them in a cliff, splashing water on the armpits, putting a pillow on my pillow, changing my name*, are formed on the basis of the semantic transformation of the independent combination, the metaphorical relocation. Another example, *his face lit up, his face brightened, his face opened, his face revealed*, where the semantic transformation based on the concept of mood.

The concept of *disrespecting one's feet, trampling on one's face, trampling on one's face; a mirror in the face, a mirror to the mirror* are transformed semantically being based on the concept of *face-to-face, irritated* and phraseologically free expression.

Also, in the process of phraseological transformation, a partial semantic rearrangement that has the meanings of phraseological units is based on the application

or application of a component in a literal sense. For example, the meaning of the phrase *"flower in the mouth"* is based on the portable meaning of *"bloom"*, the meaning of the phrase *"blossom"* is based on the portable meaning of the *"blend component"* and the meaning of the phrase *"blush on the bark"*. The metaphorical transformation of a component of phraseological units is based on a metaphorical meaning. *Thousands cut, wax, bend their feet, put two feet in a boot, put the cap back, put a pillow, cross it, strap it in the skin, let it wind, and freeze in contact* with the phraseological units are also used in the phrase. Even when phrases are formed in these compounds, they retain their original form, with a phraseological meaning that is not typical of independent bonding. Phraseological units are formed on the basis of pragmatic factors to formulate a concept and are not used as a free link. The units such as *to win, to bend, to head, to receive skulls, to take off the head, to listen, to speak, to speak, to see the old, to see, to be frowned, to be blind, to love, to do nothing. be broken, mother's milk is not in her mouth, her mouth is distorted, her shoulder is deep, should see the snake beneath the ground, does not crack when the light is on, black inside, fists are bleeding, colored, lumps, fingernails to flee, to be full of patience, to be hardened* formed the basis of the semantic transformation of the meaning, and the meaning of the components has not occurred, and it turns as a unit. Semantic transformation is a phenomenon which is inherent in the phraseological subsystem, and this process is a form of transposition, in which the form of the universal phraseological unit does not change, but its meaning is portable.

In the literary text, the invariant develops the meanings of the phraseological units and forms a non-specific phraseological meaning. On the basis of the semantic transformation of the meaning of activity associated with the processing of the ferrous iron, the combination is formed by the phrase *"do something at the same time"*. Here the meaning of the whole phraseological unit is not the basis for the second phraseological unit. Similar images link them together.

**Analysis and results:** On the basis of the semantic transformation of the phrase *"putting two people on a pillow"* of the phraseological unit of laying on a pillow in the text, the meaning of the phrase *"family life"* is defined as a phraseological phrase.

The following units have two meanings in the texts, *such as "fly driving" and "not doing anything useful, wasting time"*. At the same time, one meaning of the phraseological unit is not the basis for the other. Semantic transformation takes place on the basis of a simulated image. A phraseological unit with the same structure expresses different meanings based on the same image.

On the basis of similar images, phraseological units are actualized, as a result of their perceptions within the meaning of phraseological unity and free connection within the text, the phrases are semantically transformed, semantically transformed, phraseological units, word games.

B. Yuldashev acknowledges that semantic changes in the use of phraseological units can lead to actualization of the meaning and that "the meaning of the free association that underlies the phraseological unity is revived within the phrase [4]. For example, the verbal breakdown of the tongue - "frightened" is updated with the options such as "split into thirty", "the heart is divided into thirty-two", enhancing the phraseological meaning of the image. The meaning of the stagnant combination "stopping with great excitement" is enhanced by the transformation of synonymous combinations such as *not knowing where to put it, not finding where to put it*. There is a wide variety of images and gradual actualization with the author's phraseological units close to the meaning of all phraseological units.

There are also phrases in Uzbek, which are derived from other languages, including Turkic, Persian. The derived phraseological units are also transformed as semantic and lexical-semantic. They are accompanied by the inclusion of Uzbek words, and the shift in meaning. A. Mamatov in his research [5] gives some examples from the Persian language, *such as food, a little calamity, a cure for the poor, the soul, some jamshid*.

**Conclusion:** Although lexeme, a phraseological unit, is not so wide expression to be learnt, its transformation involves special approach, analysis and definition.

In conclusion, semantic reformation occurs in the process of semantic transformation, and the meanings of phraseological units become more important, and the author, who uses new meaning contributes to new phraseological units.

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**UDK 781****PECULIARITIES OF THE UZBEK MUSICAL HERITAGE**

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**Annotation**

The heritage of the Uzbek folk music as a mirror of folk wisdom, with its educational potential, makes it attractive to other types of art. At every stage of its social and spiritual development, our people have created many songs for their variations, traditions and rituals. It has traditionally passed from generation to generation as artistic aesthetic expression of various aspects of people's life that has become a cultural and educational tradition from the distant past and has directly or indirectly influenced the artistic and emotional impact on the upbringing of the people.

**Аннотация**

Наследие узбекской народной музыки как зеркало народной мудрости, обладающее образовательным потенциалом, делает его привлекательным для других видов искусства. На каждом этапе своего социального и духовного развития наши люди создавали множество песен для своих вариаций, традиций и ритуалов. Традиционно оно передавалось из поколения в поколение как художественно-эстетическое выражение различных аспектов жизни людей, ставшее культурной и образовательной традицией из далекого прошлого и прямо или косвенно повлиявшее на художественное и эмоциональное воздействие на воспитание людей.

**Ключевые слова:** наследие, народная музыка, традиции и ритуалы, эмоциональное воздействие. **Key words:** heritage, folk music, traditions and rituals, emotional impact.

**Introduction** As we know, children's folk songs (often played in close connection with the game) also play a significant role in the rich musical heritage of the Uzbek people, which embodies the spiritual world of young children. The content of these songs is characterized by the fun, playful, simple and carefree way of life, worldview, child-friendly games, conversations and the processes associated with a particular event.

Studying and analyzing children's folk songs in Bukhara shows that they are both artistic and ideological in nature, as well as popular forms of folk music, and have a simple form, style of execution, very compact and dance character.

Such songs provide a great opportunity for children to use them for educational and educational purposes with their mental, mental, artistic thinking, and simplicity that is appropriate to their worldview, easy and easy to sing, and quickly captivating. Therefore, in elementary school and elementary schools, students are able to express their interest in and interest in the national music, to understand their perceptions and perceptions in the process of learning folk songs and singing. In this way, gradually, serious and complex types of music can be developed in children, creating a creative, active attitude. And this is one of the most important tasks facing educators, educators and club leaders responsible for music education and training.

It is well-known that the foundation for early musical and aesthetic upbringing is laid in primary school. This stage is the most important part of the education system. At this stage, students will get acquainted with the role and significance of music in people's lives, its artistic expression language, genres, national folk instruments, various rituals, seasons, customs and traditions in folk music. Gain knowledge and understanding.

The textbooks and science curriculum for elementary school (1-4 grades) include examples of children's folklore, along with many folklore songs. It is important



to emphasize that during the early years of teaching and performing such examples, children were given the most important insights about oral folk music, its leading genres, structure and traditional performing techniques.

The genres (types) of folk music of the Uzbek folklore, in oral tradition, are diverse and diverse according to their artistic content and vitality, and are classified according to their similarity and structure:

1. Seasonal rituals. These include the most popular topics, such as wedding ceremonies, tributes, celebrations, seasons, and Ramadan songs in Bukhara. Children's folk songs are no exception, and they are inextricably intertwined with adult folklore in their essence and meaning.

2. Labor songs. Basically, farmland (farmers' harvesting, sowing, cultivation) statements about livestock and other types of labor (handicraft, blacksmithing, crafts, and women's professions).

3. Permanent, day-to-day songs that can be sung anytime or in any situation. The themes of this type of song are wide and varied, and include a variety of games, friendships, peace, human qualities, advice, pure romantic, happy childhood experiences, dreams and aspirations for a better future. is possible.

Almost all folklore in the oral tradition, that is, in all genres, is sung with the poems of folklore. After all, poetry and song (poetry and melody) is a common product of antiquity. Here is a brief look at the genres of Uzbek folklore, which are the most popular and directly relevant to children's folklore:

A song that expresses the love and aspirations of a mother for her child. It has a soft, calming, pleasant, lyrical tone, which helps to calm the child's mood and lead to a peaceful, sweet sleep. In particular, it plays an important role in developing a child's ability to comprehend national music. Usually, each mother expresses her love for her child with her own desires and wishes and creates a new song that she does not know for herself. The lack of a specific size, volume, specific rhythm, direction and tempo in the hymn determines its uniqueness. There are also many examples of children's folklore, and these are the "songs" that children imitate in their first song, that of their mother. In the subsequent development



of the music industry, professional composers have created many examples of "alla", and this process continues successfully. It is also worth noting that in the process there are many "melody" songs for children to play. An example of this is the songs that the children sing along with their favorite dolls.

The development of the society, along with the development of the human mind, requires constant improvement. From the day the baby was born, the mother heard the beautiful voice of the mother. Special songs for children are included in the human brain with mother's milk. Later, it grows and refines itself with colorful melodies, various symbols, and words. In folk songs, life is represented by artistic images, and it gives rise to aesthetic feelings, excitement, mood, compassion, joy, sorrow, hatred, and sorrow. That is why all people of Bukhara address the folklore at the same time.

Abu Ali Ibn Sina emphasizes the importance of the song in child rearing, focusing not only on the physical but also on the psychological factor: "There are two things that should be done to strengthen the child's client. One is the music and everything that is used to shaking the child slowly and the other is the habit of getting him to sleep. Depending on the amount of adoption of these two, the child's talent for bodybuilding and music is created. "

The Great Judge states that the mother who is speaking is free from the negative effects of anger, sadness, and fear when performing it. Thus, the mother who sings to her also instills love in her heart. LAPAR is a fun, humorous dance routine that is usually performed by one, two or sometimes many people. Although the lapels recorded and recorded in music folklore mostly concern the performance of older people, in some cases we can also see their performances by children.

The genre is so popular that it was played at the same time by the elderly and the youth. In the process, delighted listeners clapped their hands with applause. Lapar songs were popular in all regions of the country and were famous in every era. Lapar songs have also been produced by popular talents as a favorite genre.

Numerous folk songs have been recorded, widely featured in the repertoire of popular folk bands and adapted to choral singing. Examples of such popular songs as

"Omon Yor", "Ililla yor", "Anor anor", "Karasoch", "Bilaguzuk", "Jahu-jahu", "I will go to Andijan", "What do you mean?" is possible. Some of the insights are humorous and humorous, and they are loved by adults and children alike. Examples of such idols are "Lazy", "Lamp", "Oyijon", "Jon burgam, Azamat Burgam", "Moon in the sky". The genre of Uzbek music is widely used in Uzbek music. Unfortunately, this is not to say about the popularity of children's folklore. Therefore, this issue is one of the challenges in music studies.

Lapes, performed by adults (young men and women), often start with the traditional 'starter' band. Then there were alternately four-sided between boys and girls of different themes and contents. They did not have to continue on a particular topic, and they did not have to answer questions on the same topic. During Lapa's performance, each of the parties played their quartet at a rapid pace, trying to show responsiveness and ensure the performance was not interrupted. That is why most of the popular performances of the nation are of the national character. For example, many lapa's in the White Apple, Red Apple are a good example of this.

Cartoons are also widely used in folklore. From the natural defects of the human being, he laughs at such disorders as laziness, laziness, indecency, and extortion. Such works increase the social and ideological nature of the work and are of great educational importance. In music lessons, it is important not only to use folk songs, but also to use them in class listening to music.

Yalla is a genre that is most popular in folk music folk, having fun and dancing. Usually a musical instrument and solo, accompanied by many singers, as well as solo singer and dancer. Popular holidays, weddings, various dates and important events are regularly performed. Numerous children's folklore samples have also been created and performed in the Yalla genre. Examples of such songs as "Yallama-yorim", "Roundabout", "Hakkalabon", "Get started with the bride", "Flood of the river". Many of the works in this genre are still performed without losing their artistic value. Songs such as "Yallworm", "Yolvorma my darling", "Doll's wrist", "Factory", "Khorezm", "Hova, hoy hova" are popular among the people.

Yalla varies in its performance. In the first round, the singer sings along with the dancer. In the second round, the singer sings and dances with the instrumentalists. Examples of songs such as "Maiden", "Spinach Niggim", "Pomegranate Pomegranate", "Yallalyalli" and "Tyubetei" have been included.

The song genre is one of the most widespread and popular genres in the music and performing arts of our people. The song is mainly sung with the poems about folklore of fingerprints, and the range (low and high volume) sounds. The most important distinguishing feature of the song genre from other genres is the fact that it is occupied with finger quadrupeds and is used in the structure of narcissism.

**Conclusion** The songs, by their content and by their nature, come in all themes and are characterized by their performance at any time. There are a lot of children's and children's songs in oral tradition, many of which still remain in the repertoire of children's songs and dances, many of which are performed by children at various festive events and concerts. Children's folk songs are also an inspiration for modern composers, and composers create new works under the influence of these songs, or they have been successful in creating new versions.

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## THE IMPORTANCE OF USING VIDEO IN TEACHING ENGLISH

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### ABSTRACT

With the advancement of technology, the use of video to facilitate language teaching and learning is also popular among language teachers. Besides its ability to offer learners with content, context, and language, video could also be creatively exploited by language teachers through various ways and for various language teaching and learning purposes. This article aims also at identifying and determining the positive effects of using videos in motivating learners, and how teachers can use them to improve and enhance their students' communicative skills.

**Key words:** video, authentic, communicative, motivation, native speakers, language teaching, pronunciation, viewing habits, movies, documentaries.

### АННОТАЦИЯ

С развитием технологий, использование видео для облегчения преподавания и изучения языка также популярно среди преподавателей языка. Помимо своей способности предлагать учащимся контент, контекст и язык,

преподаватели языка могут творчески использовать видео различными способами и для различных целей преподавания и изучения языка. Эта статья также направлена на выявление и определение положительных эффектов использования видео в мотивация учащихся и как учителя могут использовать их для улучшения и совершенствования коммуникативных навыков своих учеников.

**Ключевые слова:** видео, аутентичные, коммуникативные, мотивация, носители языка, преподавание языка, произношение, привычки просмотра, фильмы, документальные фильмы.

### ANNOTATSIYA

Texnologiya rivojlanishi natijasida til o'rgatish va o'rganishni osonlashtirish uchun videolardan foydalanish chet tili o'qituvchilari orasida keng qo'llanilmoqda. Video materiallar o'rganuvchilar uchun til materiali bo'libgina qolmay, o'qituvchilar tomonidan tilni samarali o'rgatish uchun turli maqsadlarda ijodkorona foydalanilishi mumkin. Ushbu maqola, shuningdek, o'quvchilarni rag'batlantirishda videolardan foydalanishning ijobiy ta'sirini aniqlash va o'qituvchilar o'z o'quvchilarining kommunikativ ko'nikmalarini yaxshilash va takomillashtirish uchun ulardan qanday foydalanishlari mumkinligi haqida so'z yuritilgan.

**Kalit so'zlar:** video, autentik (haqiqiy), kommunikativ, motivatsiya, ona tilida so'zlashuvchilar, tilni o'rgatish, talaffuz, tomosha qilish ko'nikmalari, filmlar, hujjatli filmlar.

### Introduction

In the Presidential Decree "On measures of further improvement of foreign language learning system" on December 10, 2012 it is stated that we must improve the system of teaching foreign languages to the younger generation and training specialists who can speak them fluently through the introduction of innovative teaching methods with the use of modern teaching and information and communication technologies and on this basis to create the conditions and opportunities for wider access to the achievements of world civilization and world information resources, international

cooperation and communication. Since that time, enormous work has been done in the sphere of foreign language learning and teaching. According to the decree, all the stages of education system should continuously work on learning and teaching foreign languages. [1]

The new Presidential Decree of the Republic of Uzbekistan № PD-2909 “On measures for further development of Higher Education System” opened a new stage in order to enhance the educational system. According to the Decree all educational institutions of the Republic should establish close partnership with the leading international research institutions, broad introduction of advanced teaching technologies into educational process, educational programs and teaching materials based on international educational standards, involve dynamically in research activity and professional development of teachers and professors.[2] It emphasizes the importance and essence of teaching and learning foreign languages and sets many tasks in front of language teachers.

Teaching foreign language learners is indeed challenging. According to J.Jalolov, the process of teaching a mother tongue and a second language usually occurs in natural situations, but a foreign language is learned in an artificial situation. Therefore, foreign language teaching and learning are markedly different in some respects and require appropriate teaching technology. [3] Hence, in coping with the challenges, ESP instructors are constantly looking for innovative idea to enhance language teaching and learning. With the advancement of technology, the use of video to facilitate language teaching and learning is also popular among language teachers. Besides its ability to offer learners with content, context, and language, video could also be creatively exploited by ESP instructors through various ways and for various language teaching and learning purposes. Within this frame, Samir M. Rammal stated that "Video has been proved to be an effective method in teaching English as a foreign/second language (EFL/ESL) foreign or both young". [4]

**The aim of the study.** The issue under study deals with how technological tools "videos" can affect learners' motivation and their understanding of ‘communication’. This present study aims also at identifying and determining the positive effects of using

videos in motivating learners, and how teachers can use them to improve and enhance their students' communicative skills.

### **The objectives are as follows:**

- To review the developments taking place in the use of video in English classes
- To identify the conditions that provide communicative teaching of professional-oriented language practice using video materials;
- To show the strategies for designing effective learning environment by using videos.

### **Significance of the study**

We have raised this topic to make a clear cut that learners feel demotivated to learn English as a foreign language and show boredom and disinterest when learning with the classical teaching method. In reality, they want to learn with new techniques and tools suitable to their life style, which is affected to a great extent by the advancement of technology. So, we hope through the research's findings, to make teachers aware of the positive effect of integrating videos in the teaching-learning process. More generally, we hope that the results of this study would be beneficial for solving the difficulties faced when applying videos.

With the rapid advancement of technology, the use of video in aiding language teaching and learning is also popular among foreign language teachers at all levels. In fact, the use of video for educational purpose, in general, is not a new phenomenon as its existence in the educational field has been reported since the early 1960s. [5] Educators in the field of language teaching and learning were no exception to the phenomenon, as they also took advantage of the exciting new opportunities offered through the development of video technology and this practice has also reached to today's generation of language instructors.

### **Literature review**

Most advocates of video in language teaching have focused on helping students to understand the content of a video sequence or on using video to present language models. The hypothesis is that teachers need to change the essentially passive viewing habits of students to create a climate conducive to learning. Because it can present a



total communicative situation, video has been recognized as a valuable resource for intensive language study. A relatively recent trend is to use the medium to stimulate oral and written communication among students.[6,7]

Harmer raised earlier this designation that the video is the best tool that enables learners not only to listen the language but to see it, too. Moreover; videos enclose visual hints such as gestures and expressions that are considered as a guidance for learners to go beyond of what they are listening in order to infer the video's content. Therefore, it supports and helps the students for more comprehension. [8]

Canning explained this valuable tool as in following quote: "Video is at best defined as the selection and sequence of messages in an audio-visual context". [9] Since students are directly in contact with the video, they can easily associate between the images and the words, which help them, learn new vocabulary, culture, pronunciation, and even allow them to check their use of the target language. The video is a sort of communication device that enables students to view the form and speech of the foreign language discourse from the beginning to the end by the use of authentic language and the rate of speech' speed in different contexts. Chung and Huang clarify more this idea by noting that: "As more complete video instructional packages are made available to foreign language teachers, they search for ways to make students' learning experience more active and interesting, similar to those that occur in the real world".[10]

Integrating the video material in foreign language classes permits students via video's content, to guess the information, construct them, and analyze the foreign culture that is brought into their learning context.

**Research methodology.** The article is a general overview to the application of video materials into the language classroom, its advantages and the researches based on the theme. To provide the scientific value of the article the methods of comparative, descriptive and analytical analyses are used in order to discuss the issues highlighted.

### **Analysis and results.**

Many teachers ask why we should use and integrate the video as a part of our teaching method, since we are able to manage well the classroom and get our students

motivated through their positive achievement. It is true that many students -with the classical way of teaching through gestures and board use- can achieve positively and become more successful in writing and listening skills; however, most of them become weak and achieve poorly when they come to communicate (in writing or speaking). For that reason, many researchers tackled the advantages and benefits of using the video as an educative tool in FL classes.

Dr. Samir Rammal acquiesces the benefits of using the video by clearly stating the following arguments:

- The video is the best motive in the ELT environment, since it offers students a new experience of real feeling of realizing learning with authentic materials. So when they comprehend the video content and the teacher's objective behind using it, they became familiar with what is happening in the native speakers' circumstances.
- Videos endow learners with real language used by native speakers in their everyday interactions and communications. This evidence enables students to learn easily the spoken discourse that comprises sounds, utterances, and the conveyed meaning that can be coded through the non-verbal explanatory body language.
- Through watching a video, students can acquire best the cultural aspects that go together with their foreign language in its appropriate context.[4]

Videos assist EFL learners to decode the implemented meaning that can be better understood without difficulties. In addition, when students pay attention to the native speakers' pronunciation and their use of language, it may save them from feeling shy or embarrassed while speaking to native speakers. Furthermore, it is noticeable that the visual hints simplify the meaning since the speakers use both verbal and non verbal language patterns.

The use of videos in language teaching is increasing and became a common feature these latest years. This may go back to its powerful impact on students' motivation, the improvement of their communicative skills, and its advantages in teaching and learning. Harmer argues that the video is used for many reasons and adds new positive things in the learning experience. He also points out the advantages of using this valuable tool in the following subsequent arguments:

- Seeing language-in-use and cross-cultural awareness: the video brings the real world into the class and which offers students authentic features of the second language. Students have the chance to see and to listen to the pronunciation and accent of native speakers as well as they can notice and determine their beliefs, traditions, and culture. In other words, it is an aid to teach and learn the language in its culture.
- Motivation: It is obvious that the video is best used in motivating students and raising their interest to see and learn the language in use. When they hear and see the target language they can easily comprehend the different meanings and moods through native speaker's mime, gestures, and facial expressions.
- Getting everyone involved: learning with videos create a sense of belonging, collaboration, and involvement through communicative activities that are practiced either in pairs or in groups
- Relaxation: it is obvious that the video is a source of entertainment and relaxation through playing music after a long course, for instance, but this should not be overdone since the video is an active process.[8]

**Conclusion.** Language learners watch English videos not only in class, but also at their home. They watch documentaries and movies and only some of them consider this an occasion to develop their communicative skills (especially speaking) through listening to the native speakers. The writing skill is also developed when the video is provided with subtitles in English; this would help students to be sure about the spelling of new introduced vocabulary. In addition, watching English movies provide students with a chance to increase their background of the English language outside the classroom.

To sum up video is considered valuable because of those following reasons:

- It helps in changing and refreshing the classroom atmosphere;
- It offers the chance to practice a variety of activities and grouping works;
- It extends the discussion between the teacher and his pupils;
- Through carrying on the discussion, video transforms the classroom from passive to dynamic one;

- It stimulates the reluctant/silent pupils to talk, so video increase the pupils participation in the class;
- It helps the pupils and even teachers to take some rest, relax, and enjoyment.

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## **METHODS OF THEORETICAL AND PRACTICAL APPLICATION OF INTERNATIONAL EXPERIENCE IN IMPROVING THE QUALITY OF SPORTS EDUCATION**

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**Аннотация:** Ушбу мақола спорт таълими сифатини оширишда халқаро тажрибалар борасида назарий билимларни, педагогик жараёнга жорий этиш ижодий фикрлаш ва ўқитиш жараёнида юклама ва кўникмаларни такомиллаштиришни назарда тутди.

**Калит сўзлар:** ижодий уйлаш қобилияти, педагогик назария, жисмоний маданият, жисмоний таълим, машқлар тури, ўқитиш методи, босқичма-босқич ривожланиш, психологик ёндашув, техник тайёргарлик, тактик тайёргарлик, спорт менежменти, тахлилий ёндашув

**Аннотация:** Это статья представляет теоритические знания по международному опыту в области повышения качества спортивного образования, реализации педагогических процессов, совершенствования навыков и умений в творческом мышлении и учебном процессе.

**Ключевые слова:** навык творческого мышления, педагогическая теория, физическая культура, физическое воспитание, виды обучения, физический метод, метод обучения, постепенное развитие, психологический подход, техническая подготовка, методическая подготовка, управление спортом, аналитический подход.

**Annotation:** This article provides theoretical knowledge on international experience in improving the quality of sports education, the introduction of pedagogical process, the improvement of skills in the creative thinking and teaching process.

**Key words:** creative thinking skill, pedagogical theory, physical culture, physical education, types of training, physical method, educational method, gradual developing, psychological approach, technical preparation, technique preparation, management of sport, analysis approach

**Introduction.** Existing developments in science, technology, manufacturing and determine the image of modern society. The most important characteristic of modern society is globalization in all areas. Globalization requires spontaneous action, prompt acquisition of the necessary information, its processing and effective implementation. International experience in improving the quality of sports education. The introduction of achievements and experience of improving the quality of sports education in the practice of foreign countries by professors and teachers of higher education institutions in sports activities.

The key to success in any business activity today is a high quality product. As it is considered, the quality takes everyone's interest, every business and organizations should produce their goods for pleasure of suppliers and recipients. It is also an important factor for pedagogical theory and practice, along with popular links from various mediums that require quality criteria to evaluate the performance of quality educational institutions. Quality is an interdisciplinary concept that applies to almost all aspects of life, human activity, and any processes. There are many surprising explanations and comments about quality in the literature but they are moderate in scientific research, and rarely in sport games. The ancient and rich history of the physical culture of European countries shows that quality should be the most widely recognized part of each education system.

**Literature review. (Material and research methods).** Mr. Krum successfully described the nature of changes in education, describing the process of physical education as a process of preparing young people for independence and full

participation in the development culture throughout their lives. Some time ago, Demel carried out a paradigmatic revolution, known as the re-education of physical culture. Replacing the biotechnological paradigm with a pedagogical paradigm has changed physical culture, both theoretical and practical. For example, following the concept of physical fitness, the level of training associated with tactical and technical skills in sports has long been important. Health-related training is now important in their future lives. Educators are required to work in two areas, in order to training the activity of the human body.

Physical education is a set of actions specifically designed to increase the level of physical development of a person. Physical education involves the formation of the body and its functions, as well as the body's ability to function in the future. Because the stability of the results of physical activity affects a person's personality. In this case, the main criterion for assessing the student's physical culture is his or her individual inclination to use the "axiological" ability to fulfill his duties: strength, motivation, morphological adherence to "instrumental" standards, respect, that is, the knowledge and ability of the driver to be perceived. Physical education involves the formation of not only an intelligent, educated, hardworking, literate, healthy, devout, pure, but also patriotic, international, spiritually mature person. Physical education is focused on local, socio-economic conditions, national traditions and interregional features. The physical education of athletes is inextricably linked with other types of training: mental, ethical, labor and aesthetic. Sport is not just an influence on a mentor, but a goal, relationship and mutual influence.

**Analyses and results.** The better physical methods are chosen, they improve the content of education. Currently, in the system of physical education, you can play sports using the following methods:

1. Observation method
2. Conversation method
3. A way to study children's creativity
4. Testing, survey method
5. Document analysis method
6. Experimentation - an experimental method
7. Statistical data analysis



The form of organization of sports depends on certain rules, the socio-psychological state of the group:

1. Always keep your workouts on time
2. Verify that session interrupts are scheduled for a period of time.
3. Based on age and number of teachers in groups
4. Adjust your workout pace according to quantity and quality.
5. It is important to conduct training depending on age, conditions and time of year.

Today, sports achievements have become possible thanks to the use of modern sports technologies. To improve the quality of sports education, trainers should pay special attention to the following components in their training.

1. Tracking events and processes in sports, comprehending information
2. Analysis of the information received (identifying, comparing, copying and changing information received in the first process, and going beyond the limits of the information received).
3. Remember
4. Act, compare, verify and evaluate the correctness of the generalization.

**Conclusion.** The formation of theoretical knowledge among the teaching staff with an understanding of the implementation of the achievements and experience of improving the quality of sports education in the practice of foreign countries.

To improve the quality of sports education, the process of physical education should become a viable and practical feature. Its participants: trainer, coaches, sports teams, parents and leading athletes must undergo training.

It is also important to have the knowledge and skills of using innovation technologies in organizing and ensuring the quality of educational process of sports education. Creating a new environment is very important in sports education by reflecting international experience.

Provision of skills to develop and popularize new practical and theoretical techniques in sports education based on international experience in improving the quality of sports education. Attracting international experience in research and creative activities is aimed to improve the quality of sports education. In addition to enhancing international experience in sports education, it is also important to learn international experience in professional sports activities and management. The result of modern

sports is so high that in order to achieve them, the athlete must meet the requirements, such as the unique morphological features, the balance of physical and psychological complexity, but they must be at the highest level of development. Developing creative thinking skills in identifying promising areas for achieving high athletic performance based on athletes' personalities, abilities and talents.

Purpose of the work:

Formation of knowledge and skills of university teachers on introduction of achievements and experience in improving the quality of sports education in foreign countries.

Task of the work:

Teaching the educators of higher education institutions to develop and implement theoretical knowledge on international experience in improving the quality of sports education. It also should be involved encouraging analytical and creative thinking skills.

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## BASIC DIRECTIONS OF DEVELOPMENT OF TOURIST CULTURE IN STUDENT YOUTH.

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### Abstract.

This article describes the nature and significance of tourism, opportunities for developing cultural tourism in Uzbekistan, the development of tourist culture in students, the main directions of development of cultural tourism.

**Key words:** Tourism, tourist culture, cultural heritage, domestic tourism.

### Аннотация.

Ушбу мақолада туризмнинг мазмуни ва моҳияти, Ўзбекистонда маданий туризмни ривожлантиришнинг имкониятлари, талаба ёшларда туристик маданиятни ривожлантириш масалалари, маданий туризмни ривожлантиришнинг асосий йўналишлари ёритиб берилган.

**Калит сўзлар:** Туризм, туристик маданият, маданий мерос, ички туризм.

### Резюме.

В данной статье описаны сущность и значение туризма, возможности развития культурного туризма в Узбекистане, развитие туристической культуры у студентов, основные направления развития культурного туризма.

**Ключевые слова:** Туризм, туристическая культура, культурное наследие, внутренний туризм.

### Introduction.

Uzbekistan, as a way of strategic development, pays great attention not only to the economic, political and legal reforms, but also to the social life, culture and spirituality of the people. Today, our historical monuments and sacred places are

invaluable in the development of the sense of national pride, patriotism and devotion to our young people.

Cultural tourism in Uzbekistan is more developed than other types of tourism. In Uzbekistan, the development of cultural tourism is more profitable, since other types of tourism will be more difficult to cover in the near future. In the provinces that offer cultural tourism, the yield is higher than in the regions offering recreational tourism. Recreational tourism is a popular form of tourism for many countries. Visiting foreign tourists to Spain, Italy, France, Austria is one of the main goals of this. Leisure travel is diverse and includes entertaining programs (theater, cinema, festivals, etc.), hobbies (hunting, fishing, music, art, etc.). It may also include ethnic tours related to the study of the national culture of the host country. For example, the overall Fergana Valley region's tourism profitability, which has great potential for recreational tourism, has not exceeded 10% in recent years. In each of the regions with developed cultural tourism such as Tashkent, Samarkand, Bukhara and Khorezm, the tourism profitability rate is 20%. This is because cultural tourism costs less than recreational tourism.

People began to be interested in tourism from a very young age. Masalan, Young people in Uzbekistan travel with friends, classmates or parents to nearby cultural sites and health resorts. During the tourist trips to the mountains, young people will be able to exercise in the field, improve their physical condition, develop their knowledge and skills. In the course of these tourist activities, adults will be able to recreate their work skills and provide cultural rest.

Tourism is driven by the desire to discover new unknowns, to look for changes in the environment and to experience impressions, and this term was originally used in French. Tourism mainly involves the activities of people to entertain. In addition, tourism includes meeting with distant friends and relaxation during such trips. Tourism plays an important role in educating the younger generation and its impact on the youth mentality should not be forgotten:

- Tourism contributes to the patriotic upbringing of young people! Anyone who travels in his or her own country learns what natural and cultural resources his country has;

- People are proud of their homeland, realizing that it has a historical cultural heritage;

Ancient Greek thinkers Aristotle, Democritus, Quintilian emphasize the importance of travel in human education. In their view, the study of nature is of great importance in the upbringing of man, and it is possible to learn the nature of it only when dealing with it. Travel will strengthen young people, develop their world outlook, prepare them for independent life, strengthen their love for the country, prepare them both physically and mentally for the protection of their country.

At the beginning of the 20th century, the "Traveling Students" movement emerged in countries such as Germany, Denmark and Belgium. Its charter emphasizes the need for heavy-duty travel to educate the younger generation. Taking into account the political situation of the time, the purpose was to train young people to train their future soldiers by teaching them tourist exercises.

The World Tourism Organization (WTO, WORLD TOURIST ORGANIZATION), later established in 1967, issued the following slogan:

*"Tourism is a global way of providing effective meetings and dialogues between members of various faiths and religions, atheists, and people who are interested in learning about religion."*

So tourism promotes human values. Therefore, it should be considered not only physiology, but also as a factor of recreational recovery in the development of the individual and his or her dignity.

Tourism is not only an activity associated with everyday life, recreation and leisure, but also a symbol of the unity of people and the environment. Article 21 of the WTO Declaration signed in Manila emphasizes that psychological factors in tourism must be prioritized over technical and material factors. These factors include: unlimited expansion, education, superiority of human dignity, recognition of each culture's uniqueness, and preservation of the psychological characteristics and mentality of peoples.

Cultural tourism refers to the activities of tourists interested in the culture, history, ethnography, archeology, folklore, and lifestyle of other peoples. During

cultural tourism, people travel to local theaters, national art and folk arts venues to gain a deeper understanding of the cultures of different nations. Even some tourists do not refuse to visit the homes of the locals, which is considered the best way to get acquainted with the culture of the resident .

By the specialists of Uzturservis Republican Foreign Trade Economic Unitary Enterprise, established in September 2000 by the National Company Uzbektourism it was noted that the main purpose of tourists is to get acquainted with the world, to get acquainted with the history and culture of the peoples of the world, to further strengthen the ties. According to these experts, the purpose of tourism is to study the world culture; to get acquainted with human values and architectural monuments created in different regions, to be inspired by the man-made miracles; comparative study of cultures of different peoples; visiting sacred places of worship, performing human duty; and through it to further develop and strengthen cultural and educational ties between people.

Cultural tourism lovers are interested in the population of tourist destinations, history (archeology, ethnography, local history), living conditions and national crafts. However, no matter how strong their desire to get to know the local life, such tourists are likely to abandon their goals if they cause discomfort, difficulty or danger. While some of the cultural tourists like to travel in groups of other tourists like themselves, others prefer solo or smaller groups. Some tourists make their own decisions about planning their own journey, such as where to go and how long to stay there. They may also obtain a temporary interpreter from the local community. Some other tourists entrust their travel arrangements with tour operators.

In short, cultural tourism introduces students to the cultural monuments of their nation and increases their interest in learning about other peoples' cultures.

### **Materials and methods**

In order to travel, there must be tourism resources first. There are a lot of resources that can be used to promote cultural tourism in Uzbekistan. For example, there are over 4000 architectural monuments in the Republic. Most of the monuments offered to tourists are of the 12th and 20th centuries. Students may be invited to visit



the ancient cities of Samarkand, Bukhara, Khiva and the Nurata mountain range. As well as the results of archeological excavations in many ancient cities, familiarity with the unique animals in our nature reserves can make a great impression on cultural tourism lovers.

Secondly, there are not enough resources for the development of cultural tourism (like other types of tourism). In other words, the local tourism infrastructure must be well developed. In order to develop tourism infrastructure, Uzbekistan Airways has become the best airline in Central Asia; The service on the route Tashkent - Bukhara has been raised, the high-speed train Tashkent - Samarkand has been launched, besides, the Navoi - Karakalpakstan railroad has been built, and soon the railroad from Karakalpakstan to Khorezm through the Amu Darya. 1 Bridge was built and commissioned. Also, a number of new modern hotels have been built and many airports modernized in Tashkent, Samarkand, Khorezm and other regions.

Thirdly, it is necessary to train specialists who will pursue the right marketing policy for promotion of cultural tourism products of Uzbekistan in the international and domestic tourism markets. Because, in the face of intense competition, finding and working with consumers who are interested in our products to attract tourists to our country can only be achieved by a well-known marketing expert who knows the tourism industry. In order to solve this problem, the Faculty of International Tourism was established at the Tashkent State Economic University, where qualified specialists for the tourism industry are trained.

### **Conclusion**

In conclusion, one of the most important tasks of today is to develop the tourism culture of the students, to conduct scientific research in this area, to use innovative pedagogical technologies in the educational environment, to develop positive attitudes towards the preservation of our cultural heritage.

It is clear from the foregoing that Uzbekistan has the potential for further development of cultural tourism and its development will promote international relations. The development of international relations brings our people closer to other



nations, enhances cooperation, and increases foreign investment. Increases the tourist culture of the youth

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## DISCOURSE ON SOME GENRES OF SPORTS JOURNALISM

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**Annotation:** The media has its rightful place in campaigning for the role of public sports in the life of society, people and families, in disseminating the notions that it is the foundation of a person's physical and spiritual well-being, and also in highlighting the importance of sports in developing talents and abilities among young people who have just begun to go their own lives, as well as in increasing the popularity of the countries of the world. Sports journalism has already managed to emerge as a separate academic subject and one of the main genres of journalism. At present, sports journalism itself has several genres. This article gives scientific conclusions about the independent genres that make up sports journalism.

**Keywords:** sports, mass media, sports journalism, genre, sports journalists, international sports association, direct press, press, radio, television, Internet, principle of objectivity, operational information, report, online reporting, interview, information interview, portrait interview, problem interview, blitz conversation.

**Аннотация:** Средства массовой информации имеют своё достойное место в агитировании роли общественного спорта в жизни общества, людей и семьи, в распространении понятий о том, что именно он является основой физического и духовного благосостояния человека, также в освещении важности спорта в развитии талантов и способностей у молодых людей, которые только начали проходить свои жизненные пути, а также в повышении популярности стран мира. Спортивная журналистика уже успела сформироваться в качестве отдельного учебного предмета и одного из главных жанров журналистики. В настоящее время спортивная журналистика сама имеет несколько жанров. В

данной статье даны научные заключения о независимых жанрах входящих в состав спортивной журналистики.

**Ключевые слова:** спорт, средства массовой информации, спортивная журналистика, жанр, спортивные журналисты, Международная спортивная ассоциация, спортивная пресса, пресса, радио, телевидение, интернет, принцип объективности, оперативная информация, доклад, онлайн репортаж, интервью, информационное интервью, портрет интервью, проблемное интервью, блиц беседа.

**Аннотация:** Оммавий спортнинг жамият, инсон ва оила ҳаётидаги ролини, унинг жисмоний ва маънавий соғломликнинг асоси эканини тарғиб-ташвиқ қилиш, ҳаётга катта умид билан кириб келаётган ёшларга ўз қобилият ва истеъдодини рўёбга чиқаришда спортнинг аҳамиятини очиб бериш, дунёда мамлакатларнинг обрў-эътиборини янада ошириш борасида оммавий ахборот воситалари ўзининг муносиб ўрнига эгадир. Спорт журналистикаси аллақачон журналистиканинг асосий жанрларидан бирига ва алоҳида ўқув предмети сифатида шаклланиб улгурган. Айни пайтда спорт журналистикасининг ўзи ҳам бир қанча жанрлардан иборат. Мақолада спорт журналистикаси таркибига кирувчи мустақил жанрлар ҳақидаги илмий хулосалар қисқача баён этилган.

**Калит сўзлар:** спорт, оммавий ахборот воситалари, спорт журналистикаси, жанр, спорт журналистлари Халқаро Спорт матбуот бирлашмаси, спорт маълумотлари, матбуот, радио, телевидение, интернет, ҳолислик тамойили, тезкор маълумот, ҳисобот, онлайн репортаж, интервью, ахборот интервью, портрет интервью, муаммоли интервью, блиц суҳбат.

**Introduction:** Propagandizing sport as the basis of the physical and spiritual health of a person and society as a whole, increasing the popularity and authority of countries around the world, highlighting the role of victories achieved by athletes in the media, in particular in periodicals, is considered to be a requirement of the time.

This means the need for separate studies on the effective use of existing media capabilities in this aspect, as well as on the genre, style and level of published materials on the pages.

July 2 is celebrated as the Day of International Sports Journalists. Since 1995, on the initiative of the International Sports Association, every year this day has been celebrated in many countries. This number is based on historical events. On July 2, 1924, the International Sports Press Association was created in Paris, which brings together hundreds of nations of journalists.[1]

Sport not only served as a means of uniting people, it was also a tying means of entire states and regions. Each person begins to lead a healthy lifestyle along his life path, and sport is the main source in this regard.

**Literature review:** What exactly is covered in sports journalism? The main object of sports journalism is to convey socially important information about ongoing international competitions and its transmission through the press, radio, television and Internet sites. In addition, sports journalist must first of all be well proficient in the sport he covers and be well aware of all its rules.

The award ceremony is held on this day. Journalists who have fully covered sports industry in their materials are deservedly rewarded by the International Association of Sports Press.

Sports journalism is one of the main types of journalism, which contains the collection of sports news and events, their processing, storage and broadcasting.

According to tradition, the palette of genres in the press, especially in the newspaper, is mainly aimed at informational genres in which accuracy, efficiency and compactness are considered important. However, sports journalist is not limited with them. Despite the fact that sports journalism is based on the details of events, unlike science and other genres of journalism, the principle of objectivity prevails in it.

The informational aspect of sports depends on one of its most basic features - competitiveness, because this implies a constant comparison of indicators, and therefore the comparison has obvious information. It must be emphasized that by the increase in the number of competitions growth of the importance and volume of sports

journalism can also be seen. We can come to the conclusion that most sports journalists have accurate data, and their main task is to quickly broadcast news about sports competitions and also about related events.[2]

**Research methodology:** The sports press involves such high positive human qualities as dexterity and responsiveness, because the main parts of the world community and the audience know the most basic details. This, in turn, requires the highest professional skills from a sports journalist.

In most cases, news is transmitted in written way. News serves as the means providing exclusively truthful information, they can contain a brief analysis and review. Both of these genres are distinguished by their compactness. The main requirement here is an accurate and concise summary of the relevant information. Such operational materials are included in specialized sports that are published, as well as in non-specialized publications.

However, the report is still the most suitable genre in the operational coverage of sporting events and in the visual display of their most basic aspects. The report makes it possible to convey emotions to the audience at the rallies, as well as dynamics and development at the event. This also allows competitors to express their own feelings, talk about their victories and losses.

The main requirement of the report is that the material in its full meaning should facilitate the reader's process of reproduction and addition of the event; nevertheless, the event should not be hidden or mastered by anyone. A certain degree of subjectivity of the report enhances such feelings as possession and condolences, thus report becomes brighter and more interesting. This is largely due to the principle of the author's objectivity and how much he follows that principle.[3]

Recently, correspondents leading online reporting on sports sites have increasingly gained popularity among the viewers. Sporting events (in most cases football) are updated in the form of short texts, and depending on the intensity of the events, they are updated every 2-3 minutes. The rapid development of the Internet in journalism, the publication of online reports on the news page have led to the meaninglessness of the so-called report genre.

**Analysis and results:** The genre "news" hasn't been widely used in sports journalism. It provides information about sporting events or others as well. However, according to the latest trends, you can see how the reader in the newspaper is not looking for information about the past game, since he already knows this, but nevertheless, you can find materials on the analysis of the game, expert opinions, impressions of the participants in this event and all sorts of interesting things on the pages of the newspaper. It means that sports journalist's time is limited and there is the need for immediate coverage of the outcome of the final game. As soon as the period of time ends, it will be very difficult to create something meaningful, high-quality and interesting than shortening the events.

Interviews are thought to be a widespread genre in sports journalism. There are some widely used kinds of this genre:

- ☐ *An informational interview*, it contains a definite peculiar sporting event which can be the main topic, and there is no analytical part of that situation;
- ☐ *portrait interview*, main goal is to reveal the activities and nature of a certain person in the sports world;
- ☐ *expert opinion*, significant opinion of a specialist in any sport;
- ☐ *problematic interview* which identifies the negative and problematic aspects of sport;
- ☐ *blitz conversation* contains four or five questions. This order appears during the game or as soon as the game ends. The most important aspect is that the answer must be given live and immediately.[4]

In most types of sports interviews provided (other than information), you can use some elements of review, analytics, journalism, essays, sketches and problematic articles. The leading direction of sports journalism is its focus on real topics.

To communicate with athletes and their coaches will require special training, knowledge and experience, certain skills. The most important skill of the interviewer is to listen carefully. If you need to conduct a short interview, there is no need to ask

the interviewee too many questions. It is enough to prepare one or two, giving answers to them helps the viewers to be more open.

Analytical genres are a combination of the best opportunities to provide readers with materials ensuring their versatility. The journalist can show any problem in details, and in order to find a solution to this problem, it can be divided into its component parts by him (her).

According to the famous researcher A.A. Tertych, the following peculiar characteristics can be given in analytical materials: "... various social associations, situations, reasons, interests, goals, reasons for any actions, development of events and changes in them, determination of conflicts in the modern world; tendencies in development, validity and correctness of different opinions and ideas. "

The popularity of conversation as a genre lies in its humanitarian direction. This type of interview provides a wide opportunity to reveal a person, to demonstrate his own voice. Interview has the ability to extend directly the speech in the conversation, this creates the convenience, empathy, impact on participation in sports events.

**Conclusion:** If we try to summarize the role of analytical information in sports, we can come to the conclusion that its task can be more than a review of events and more than a phased examination of the relationship between cause and outcome. The analyses may not include many details, they may contain only the structure of the problem that is written by conscience, but this is not enough to fully reveal this problem. The problem should be broadly considered and have a logical explanation.

In conclusion, it can be emphasized that today sports journalism is one of the important areas of modern journalism, and it consists of several separate genres. Consequently, the theoretical and scientific investigation of these genres naturally has a practical character.

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UDK 781

**DUTOR MAKAM - DEVELOPED BY KOMIL DEVONIY****Rakhimov Botir Matyakubovich, senior lecturer****Department “Music Education”****Urgench State University****E-mail: [ritob59@mail.ru](mailto:ritob59@mail.ru)**

**Annotation:** At the end of 19th century the Khorezm Six and a half makam and dutar makam were recorded on the “Tanbur notations”. In this article, Komil Devoni described how to write Khorezm’s makam to the “Tanbur notations”, and how to rank dutar makam.

**Keywords:** “makam”, “dutar”, “tanbur”, “doira”, “Dutar makams”, “Tanbur notation”, “Komil Devoni”.

**Annotatsiya:** XIX asr oxirida Xorazm Olti yarim maqomi va Dutor maqomlarin tanbur chizig‘iga yozib olingan. Ushbu maqolada Komil Devoniy tomonidan Xorazm maqomlarini tanbur nota chizig‘iga yozilish uslublari, Dutor maqomlarini tartiblashtirilishi to‘g‘risidagi tadqiqotlar yoritib berilgan.

**Kalit so‘zlar:** “maqom”, “dutor”, “tanbur”, “doyra”, “Dutor maqomlari”, “Tanbur chizig‘i”, “Komil Devoniy”.

**Аннотация:** В конце девятнадцатого века на Хорезмский танбурной нотации были зарегистрированы шесть с половиной и Дутарные макомы. В этой статье рассказывается как записал Комил Девони хорезмские макомы на танбурной нотации и изучается порядок упорядочения Дутарных макомов.

**Ключевые слова:** «маком», «дутар», «танбур», «дойра», «Дутарные макомы», «Танбурной нотации», «Комил Девони».

**Introduction.** In the middle of the twentieth century, the combination of two well-known musical subgenres of “Makam” (musical genre) “Six and a half Makam” and “Dutar makam” became known as “Khorezm makam”. However, this exact common name was not found in any of the works written before, such as “Tanbur notations” and “History of Khorezm music”[1].

Like any music genre, Makams never stopped developing and changing. At different periods, it changed its features, creating new meanings. In this article we are going to discuss one of the genres of Makam called “Dutar makam”, which was developed by Komil Devoniy and is directly related to the Khorezm makam genres.

What is a Tanbur notation?

Komil Khorezmiy held one of the highest posts in the palace of Mukhammad Rakhim Khan Feruz, and was also Feruz's teacher in music science. Komil Khorezmiy was one of the famous musicians who lived in Khorezm in the nineteenth century. He created and developed a new way of writing musical notes called “Tanbur notation” to write the music of his son (Mukhammad Rasul Mirzaboshi), performed on tanbur (a musical instrument). At the end of the nineteenth century, the “Tanbur notation” began to be fully used by musicians of that period. The singing and instrumental parts of the new six and a half Khorezmmakam songs were written according to the method of “Tanbur notation” by Mukhammad Rasul Mirzo, Khudaybergan Mukhrkon.



**Komil Xorezmi**  
(1825-1899)



**Muxammad Rasul  
Mirzo (1841-1921)**



**Matyoqub Xarrot**  
(1864-1939)

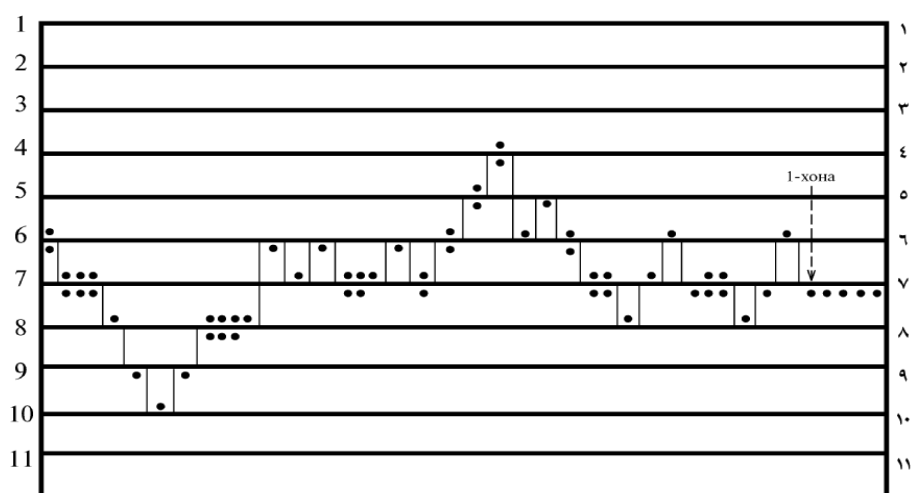


**Komil Devoniy**  
(1887-1938)

The basic principles and theory of the “Tanbur” musical note recording method are as follows: according to the eighteen lines on the tanbur, eighteen lines are taken to

represent them, and the points are located above and below these lines. Points represent the number of strokes. Points located above the line indicate high hits; meanwhile, points below the line represent low hits. Sometimes the positions of the points are arranged in accordance with the exact pattern. Pauses are written with a sign “O” (silence). Musical notes are written from right to left. The playing styles of musical works are expressed in short and long syllables. Syllabic combinations such as “tan”, “tananan” are used instead of “gup” and “takatak” on the Tanbur notation line. Khorezmiy also presented the texts of his Makams (songs) in his works. In some cases, the poem is not written from beginning to end, but only the first words of each line. The singer, looking at these words, easily remembered the entire line of the poem [2].

### General view of Tanbur line notation

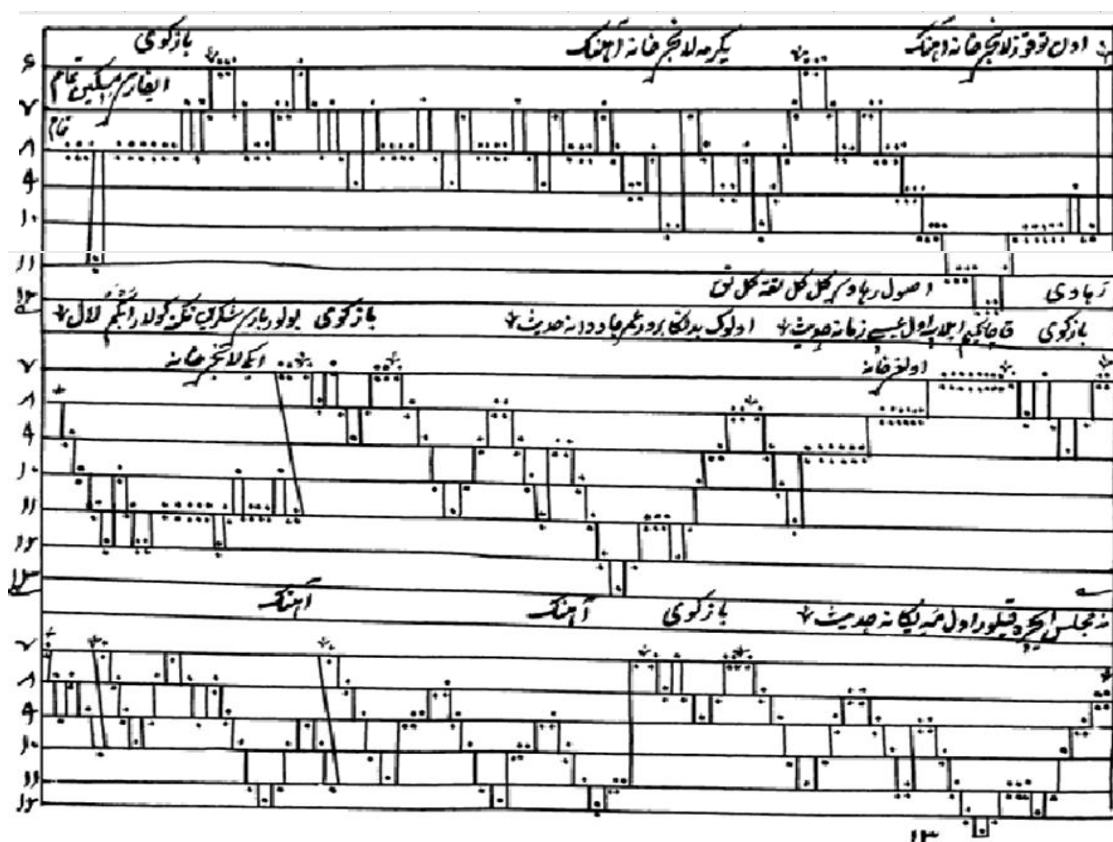


Komil Devoniyy was one of the students of Mukhammad Rasul, who continued his work and excelled in this area. He is considered a mentor who used the “Khorezm makam line” to write Khorezm makam songs. With the help of the “Tanbur” line, he could also write Dutarmakams, representing the ways of playing them. He could also write “Dutar makam” using the lines of “Tanbur notation”, clearly representing its playing style [3].

Komil Devoniyy wrote Dutar makams twice in his career, using the lines of Tanbur notation. The first copy was written in the form of a letter using a similar method of writing decrees of the khan.

The second copy of the work was published as a whole collection book using templates from Makam songs.

### The view of the first copy as follows



The collection contains the names of Dutor and Makam parts and Doira patterns in writing [4].

We had the opportunity to look at a copy of the “Tanbur notation”, which was preserved by Khamza, the son of Komil Devoni, who currently lives in the city of Khiva. He collected several copies and materials related to the Dutor notation. After a careful study of the materials, we found that these materials are the result of the hard and productive work of Komil Devoni. Another fact that was discovered during our observation is that the Dutar and Tanbur Makams have many different aspects and features. Some parts, including some parts from the beginning to the end of the handwriting, have disappeared.

Khamza Komilov says the following: “After the arrest of my father in 1938, my mother had to get rid of books because they were all in Arabic. She also tore up all parts of the Tanbur record that were written in Arabic.”

**Literature review.** In the thirties of the last century, such teachers as Gulom Zafariy, Chulpan and Fitrat, tried to study and conduct some research on the history of the Khorezm musical notation and its theory [5]. Following the instructions of his teachers, such as Khudoybergan Mukhkan and Muhammad Rasul Mirzo, Komil Devoniyy tried to advance the theory of musical notation in modern conditions. Creative Komil Devoniyy dared to carry out the most complex tasks that his teachers had not performed before. Komil Devoniyy outlined the whole theory of the Khorezm Dutor Makam on paper [6].

The copy of the “Komil Devoniyy Dutar Makam” contains 27 songs, and almost 200 verses, including one poem by Muhammad Rakhimkhon Feruz, Navoiy, Munis, Ogakhiy, Komil Khorazmiy, Ravnak Khorezmiy, Fizuliy and, finally, poems by Mirzo [7].

In the copy of Devoniyy, the styles of Makams are represented by various styles of Doira playing style, and all musical structures are divided in accordance with the sections of the verses. The horizontal arrows indicate not only large structures, but also small structures that are larger parts.

The news about the works of Devoniyy on Dutar Makam spread at the end of the twentieth century [8]. A contemporary of Devoniyy, Khasanmurod Laffasiy, said the following: “Thanks to his knowledge and quick wit, Devoniyy could create a book about Dutor Makams”[9]. However, the current period and the suffering that the author had to face did not allow him to distribute his remarkable work among musicians, and the political situation of that time did not allow the publication of the work in droves [10].

**Conclusion.** Nowadays there are more than twenty copies of “Khorezm tanbur notation”. The copy which was written by Komil Devoniyy is different from other copies in the way that it covers all features of Tanbur and Dutar makams. This copy also contains detailed information about the Doira playing patterns and their components. As this copy provides thorough data on the melodies and poems of “Khorezm tanbur notation”, this copy is still considered as one of the complex examples among other works.



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UDK 784.4

## A GLANCE AT THE HISTORY OF THE SONGS

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**Annotation:** How great is the role of music and song in the great work of shaping human spirituality?! This musical legacy has been sung for centuries because Uzbek folk songs and maqoms play a positive role in the spirituality of the people. The use of music is diverse, it plays a special role in the interpretation of various images in films, in the expression of the beauty of nature, in the illumination of the human character, and the effect of the spirit on the soul is immortal. This article provides information on the origin of Central Asian songs, their history, and ancient written sources of music.

**Keywords:** "Orhun-Enasoy" monuments, the art of music, ancient songs, "Avesto", historical brochures, great thinkers, scientific views.

**Аннотация:** Инсон маънавиятини шакллантиришдек улуг ишда музика ва кўшиқнинг ўрни нақадар буюкдир. Ўзбек халқ кўшиқлари, мақомлар халқ маънавиятида ижобий ўрин тутганлиги учун ҳам бу музикавий мерос асрлар оша оғиздан тушмасдан куйланиб келмоқда. Музиканинг қўлланиши ранг-баранг, у спектаклларда, кинофильмлардаги турли образларни кучли талқин қилишда, табиат гўзаллигини ифодалашда, инсон феълини ёритишда ўзига хос ўрин тутди, киши руҳига таъсир кучи беқиёс, узоқ вақтгача ёдда сақланади. Мазкур мақолада Марказий Осиё халқлари кўшиқларининг келиб чиқиши, уларнинг тарихи, қадимги ёзма манбалардаги музикага оид маълумотлар келтирилган.

**Калит сўзлар:** “Ўрхун-Энасой” ёдгорликлари, музика санъати, қадимги кўшиқлар, “Авесто”, тарихий рисолалар, буюк мутафаккирлар, илмий қарашлар.

**Аннотация:** Насколько велика роль музыки и песни в великой работе по формированию человеческой духовности?! Это музыкальное наследие пели на протяжении веков, потому что узбекские народные песни и макомы играют

положительную роль в духовности народа. Использование музыки разнообразно, она играет особую роль в интерпретации различных изображений в фильмах, в выражении красоты природы, в освещении человеческого характера, а влияние духа на душу бессмертно. Эта статья содержит информацию о происхождении центральноазиатских песен, их истории и древних письменных источниках музыки.

**Ключевые слова:** «Орхун-Енасой», памятники, музыкальное искусство, древние песни, «Авесто», исторические брошюры, великие мыслители, научные взгляды.

**Introduction:** There is evidence that the earliest songs of the Central Asian peoples came through the works of ‘Avesto’ and Mahmud Kashgari's “Devoni Lug’ati-t-Turk” (“Collection of Turkic Dictionary”). If we pay attention to the written monuments of the peoples of Central Asia, our ancestors, we will see that there are melodies and songs in the music. In particular, the written monuments, known as the Orkhun-Enasoy monuments, were created in the V-XIII centuries. It is believed that most of these writings were sung. In particular, the rhythm and tone of the text of the KulTigin (VIII century) and Bilga Haqan (VIII century) texts make certain that assured passages were performed in the same way as Uzbek folk songs with drums. Here are some examples: [1]

Bilga qaghan armis,  
Alp qaghan armis,  
Ayghuchisi bilga armis arinch,  
Alp armis arinch.

English:

Wisdom counselor he was,  
Man of courage he was,  
His adviser was probably astute,  
Apparently brave spirit.

Or:

Ellig bodin artim

Elim emit qani?

Qaghanligh bo'din ertim,

Qaghanim qany?

Uzbek:

We were a wealthy nation,

Where is our country now?

We were a nation with King,

Where is our Lord now?

Another example:

Elligig elsiratmas

Qaghanligh qaghansir atmis,

Bashlighigh yukuntirmis,

Tizligig sokurmis.

English:

That destroyed the state of well-to-do,

That murdered the king of kings' men.

He has subdued the haughty people,

He made stubborn stand on knee.

When you read these excerpts, it seems as if you are in the grip of the Bakhshi drum and the image of the patriarchs who ruled the country during the early years of the Turkic khanate, at the same time expressing the sadness and bitterness of the people who had lost their country. It is true indeed. These were the first songs and folk songs that really saddled the people! [2]

Particularly, in the work of Mahmud Kashghari's "Devoni

Lughat-t - Turk" there are separate chapters devoted to "Songs of Labor", "Heroic Songs", "Songs of the Ceremonies" and "Songs of the Season." Here are some of the songs to make the idea clear to our readers. [3]

Excerpt from "Songs of Labor":

*Yigitlarig ishlatu,*

*Yigach yamish irgatu.*

*Qulan, kiyik avlatu,*

*Bazram qilib avnalim.*

The content of the poem:

Let's make the young men work,

Shake the fruit from the trees,

Hunt the pendants, the deer,

and then enjoy making a feast.

Excerpt from Hero Songs:

*Alp oranni uzurdim,*

*Bo'ynin aning qazirdim.*

*Altun kumush yuzurdim,*

*Susi qalin kimtutar.*

The content of the poem: I dispersed the mighty soldiers of the enemy. I bent his necks. I loaded gold and silver booty. They were extremely dense.almost impossible to break through. [4]

Excerpt from "Songs of the Ceremony":

*Ulishib eran bo'rlayu,*

*Yirtin yaqa urlayu.*

*Siqrib uni yurlayu,*

*Sigtab kozi ourtilur.*

The content of the poem: The heroes wept and wailed like wolves. They tore their necklines and yelled. They cried Their eyes were dim with tears, the sad veil covered their eyes.

Extract from "Songs of the Season":

*Balchiq baliq yugrulur,*

*Jigay yovuzyigrulur,*

*Aringaklariogrulur,*

*Ozguchbilaavrishur.*

*Sandaqocharsundilach,*

*Mandatinarqarligach,  
Tatmagotarsunduvac,  
Erkak kishi uchrashur.*

The content of the poem: Clay covers everything. The poor and the feeble are the ones who suffer and are in trouble; their fingers are cold and they try to heat them by blowing with their mouth.

The goldfinch will run away from you. The swallow enjoys in me, the nightingale delights us, the male and females meet in summer. [5]

The purpose of presenting the excerpts from "DevoniLughat-t- Turk" is to show that the songs were created even at that time, and the matter is, were these songs sung with music or sung in undertones? That is the question we are asking.

Looking back on this question, we go back to ancient history. In addition to religious beliefs, our book of 'Avesto' contains material and information about art, science, and literature. This book was written at the end of the VII century and early VI centuries B.C.

Part of this book was Visparad which consist of 24 chapters that contain songs of worship. The part of 'Yasna' consists of 72 chapters dedicated to the anthem of gods, sacrifices and religious ceremonies.

The Yash part consists of 22 songs to the gods and goddesses.

As you can see the Visparad, Yasna, and Yashparts of "Avesto" included the songs. [6]

**Analysis and results.** This historical fact confirms that the song and music and musical instruments have a long history. Just as a mother's lullaby and a child's language are spoken in it, so the song and music is the bond between mother and child. [7]

Today, it is our duty to open the history of music, especially the roots of our nation, to guide young musicians, composers, singers and musicians to investigate the date and place of creation of the musical instruments. As the actions taken without knowing the past will surely cause a mistake. As the writer Ismatullah Mujiziy says, we need to know the history of music and the musical instrument that had been created

since the time of Prophet Noah's great-grandson and bring it to the general public. For this purpose, Persian, Arabian scholars, art historians and historians of the Oriental Studies Research Institute in Tashkent should help in this noble work, and the media, periodicals, radio and television creators should be involved. [8]

A single scientist cannot do this scientific work. This work is expected by many. We know that 'Avesto' is the oldest book, but it is already known that Noah's grandchildren dealt with it initially. [9]

The reason we cite examples from 'Avesto' is that 'Avesto' was a holy book of the Zoroastrian religion and it was widely spread in Central Asia, Iran and Azerbaijan. There are two different perspectives on its origin. Proponents of this view claim that the Zoroastrian religion is spread from the Midwest and it is called the Western theory, while representatives of the second view consider its origin in Central Asia, defending their views in the name of Eastern theory and supported by many Orientalists. Yes, the historical, scientific, geographical terms have proven that 'Avesto' is linked to Central Asia. In the legend of 'Avesto', the founder of Zoroastrianism wrote about his native land: "It is a country where countless troops are led by leaders and the bests, and the highlands and the high mountains provide water for livestock. There are vast lakes, wide river vessels (these rivers are the Amu Darya and Syrdarya), and their waves are filled with water from Iskat (Assyrian "Ishkuzan" - Scythia), Pourut (Cain Valley), Mour (Merv), Khareva (Aria), Gav. (Sughd province), Sughd (Soghd), Khwreism (Khorezm). [10] **Conclusion.** It is clear from this legend that the birthplace of 'Avesto' is in Central Asia. The hymns of the gods in the book, religious rituals, and worship songs are also songs that people of the earth have sung. In addition, it would be advisable to concentrate on the Zoroastrianism, the Buddhist productions, and the monism, ancient Buddhist poems written by our ancestors after 'Avesto', as well as worship songs and music.

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**UDK: 378.091.315.7****THE IMPORTANCE OF ELECTRONIC EDUCATION RESOURCES IN  
THE EFFECTIVENESS OF THE LESSON****Makhmudova Malokhat Akhmatovna****Senior Lecturer, Navoi State Pedagogical Institute****Faculty of Physics and Mathematics****E-mail address: [maloxat\\_1977@mail.ru](mailto:maloxat_1977@mail.ru)****Nasirova Shoiri Narmuradovna****Doctor of Technical Sciences, Associate Professor, Navoi State Pedagogical****Institute, Faculty of Physics and Mathematics****E-mail address: [nasirova\\_61@mail.ru](mailto:nasirova_61@mail.ru)**

**Abstract:** This article emphasizes the importance of e-learning resources in classroom performance. E-learning, including text, graphics, sound, animated materials on a computer screen, allows you to study, edit and record. The use of information technology in lectures, workshops, laboratories and independent forms of training will be effective.

**Keywords:** education, resources, computer, software, interactive, projector, electronic board, multimedia, technology.

**Аннотация:** Ушбу мақолада электрон таълим ресурсларини дарс самарадорлигидаги аҳамияти кўрсатиб берилган. Ўқув материалнинг электрон шаклда бўлиши, яъни матнли, графикли, овозли, анимацион материалларни компьютер экранига кўриш, ўрганиш, ўзгартириш киритиш ва ёзиб олиш янада чуқурроқ ўрганишга имкон беради. Ўқитишнинг маъруза, амалиёт, лаборатория ва мустақил таълим шаклларида ахборот технологияларнинг қўлланилиши тезлик билан ўз самарасини беради.

**Калит сўзлар:** таълим, ресурс, компьютер, дастур, интерактив, проектор, электрон доска, мультимедиа, технология.

**Аннотация:** В этой статье подчеркивается важность электронных учебных ресурсов в эффективности класса. Электронное обучение, включая текст, графику, звук, анимационные материалы на экране компьютера, позволяет

изучать, редактировать и записывать. Использование информационных технологий в лекциях, практических занятиях, лабораториях и независимых формах обучения будет эффективным.

**Ключевые слова:** образование, ресурсы, компьютер, программное обеспечение, интерактив, проектор, электронная доска, мультимедиа, технология.

### **Introduction.**

Based on the goals and requirements of the Decree of the President of the Republic of Uzbekistan “On the Strategy of Action for the Further Development of the Republic of Uzbekistan” (February 7, 2017, PF-4947) Reforms in the continuous education system are aimed at the improvement of the national education system, the implementation of the “national model” in accordance with the world standards, and the enhancement of our spirituality. Special emphasis is also placed on eliminating serious shortcomings in the existing system of training through the development of close cooperation and mutually beneficial collaboration among the education system, science and industry [1].

Reforming the education system is aimed at building a new generation of educators with the highest professional culture, creative and social activity, and the ability to participate in public and political life independently. The significance of modern pedagogical technologies is very substantial in accomplishing the current tasks. Studying and applying pedagogical and information technologies is based on the need to improve the quality of education and training. The essence of pedagogical technology is the pedagogical process, which aims at accelerating students’ performance and the pace of its outcomes and securing positive results [2].

### **Literature review.**

At present, the rise of scientific thinking, as well as scientific techniques, is taking place dramatically and intensively. Therefore, it is essential for teachers to keep up with modern knowledge.

Problems of computerization of education in the Republic and introduction of information technologies in educational process M.M.Aripov, U.S.Begimkulov,

N.I.Taylakov, U.Yuldashev and methods of organization of use of computers in professional training N.A.Muslimov, A.D.Askarov.

On theoretical bases of designing the educational process and the development of interpersonal e-learning resources. I.A. Bashmakov, F.M.Zakirova have done research work, the importance of using multimedia technologies and tools in the learning process and their use bases. , Studied by M. Bekmuradov, B. Rajabov.

The use of a computer during the classroom provides new and unique opportunities for teachers and students to interact with interactive teaching materials. We need to be aware of modern programming languages for interactive tutorials created by the teacher, so that they can be readily accepted by students. The utilization of other computer training tools, such as projectors, electronic boards, increase the amount of information using visual applications, thus facilitating the efficient use of classroom time [3,4].

Nowadays, creating modern electronic applications as well as electronic study programs by using the possibilities of modern programming languages - Delphi, Matlab, Mathematica, Math, Maple, C - make the learning process qualitative. As a result, the effectiveness of the teaching will increase and students' interest and attitudes will change positively[4].

### **Research Methodology**

Improving the quality of teaching depends on the use of new teaching methods. In the new teaching methods, a student should be constantly moving forward, to be more specific, a student should be able to acquire, process, and apply the knowledge gained to solve specific problems. The use of information technology in lectures, practice, labs, and independent forms of learning gives its fruitful outcomes quickly. For example, the use of virtual stands in the laboratory classroom is the basis for the good quality of the training.

The incredible development of computers and software products opens up great opportunities for the use of information technology in education. Training materials can be made in the form of multimedia systems and can be made available to the public through computer networks and transmission facilities. The widespread introduction

of computer technology into the education system requires revision of all types of training materials. Multimedia e-learning materials should be developed for each form of teaching [5].

Usually, information and communication technologies are rarely used in practical and laboratory studies. However, research in the field of teaching technologies shows that it is in these forms of learning that the resources for improving the quality of teaching are hidden. The fact is that, in traditional teaching methods, it is not always easy to engage the group and control their study performance. The availability of electronic learning of textbooks facilitates a deep learning, by editing and recording text, graphics, sound, and animated teaching material on your computer screen.

The electronic form of the training material is connected to an existing local network, which enables performing tasks in groups and information sharing. Computer-based computer and software tools allow students to take a personalized approach to the topic studied, to form their own ideas and to increase their activity [6].

The teacher is able to monitor and record each student's progress through the server computer and how the tasks are fulfilled.

Sharing single information hyperlinks(platform) provides a creative, collaborative learning experience for students and teachers.

In order to organize such training, the teacher needs to have the knowledge and skills in e-resource development programs and the availability of technical tools to provide the user interface in the classroom.

Modern teaching technology is an integrated (whole, dependency) system in which students acquire theoretical knowledge, skills, and experiences that are based on educational objectives as a well-organized set of elements of pedagogical activity focused on education. [7]

As a result of the full use of e-learning resources in the learning process, the following will be achieved:

- 1) they accept, understand, accumulate, but they do not recover consciously;

2) analyzes, compares, summarizes, and implements practical actions in direct collaboration with the teacher;

3) independently search for solutions to problems, independently determine ways and means of achieving expected results.

The higher the quality of e-learning resources made by modern programming tools, the more effective the learning process is [8,9]. Knowledge of interactive teaching methods is a special form of communicative activity in which learners are involved in the learning process and have the opportunity to explain what they know and think.

Pedagogical collaboration between students and teachers at classes using e-learning resources will encourage the student to remain indifferent, to think independently, to be creative, and to maintain a constant interest at the subject being taught[10].

### **Analysis and results**

Information and communication technologies, which are being developed in the educational system, serve to raise the educational process to a higher level. Of course, it is important to use modern techniques to make the learning process more meaningful. Besides, the use of modern means of computer, multimedia, internet, distance learning, a unique information environment and information and communication technologies is giving its results.

The success of the pedagogical experiment in the pedagogical experiment testifies to the need to consider organizational and pedagogical aspects in this process. Therefore, particular attention was paid to these aspects. The organization of the experimental work was organized with the knowledge of the views and opinions of the professors and teachers of the Navoi State Pedagogical Institute. The experimental work was carried out among students studying in "Informational Teaching Methods" of Navoi State Pedagogical Institute. A total of 168 students were selected for the experimental and control groups.

During the experiment, discussions and observations were conducted with professors and teachers of computer science on the main features of the information

and educational environment. The results of the interviews and observations were attended by 28 professors and 168 students of computer science.

According to a survey of professors, 56.4% of teachers need to use e-learning resources in the classroom, 28.6% need to independently use 14.8% of difficult topics. can be used for assimilation, 0,2% believe that it does not help to master knowledge.

According to the survey results, 45% of teachers need to use e-learning resources in the classroom, 40.3% can be used independently, and 14.4% can be used to master difficult subjects. 0.3% thought it would not help them in acquiring knowledge.

Summary of the pilot phase The results of the number of data collected in 2019 were analyzed and summarized, and a mathematical-statistical analysis was performed using the Student-Fisher criterion to verify its reliability. The results of the calculations showed that the average improvement of the experimental group was higher than that of the control group, which is 11.2%.

### **Conclusion.**

E-learning materials are guaranteed ahigh quality and effectiveness in all forms of learning.

The demand for e-learning resources for today's youth is even more complex. Education resources should be comprehensive, up-to-date, youth-friendly and innovative. Therefore, it would be desirable to use new programming languages.

Expected benefits of new pedagogical technology in the education system, its benefits, and the principles of improving the effectiveness of the lesson. By organizingonline learning resources createdby usingmodern programming languages, students will be able to enrich their knowledge, improve their remembering the materials, make lessons interesting, and improve their thinkingabilities, broadens the outlook, encourages students to work on themselves, teaches them to express and defend their own ideas.

E-learning resources for science are widely used in student learning, student evaluation, and learning management.

The analysis shows that the research is mainly focused on improving the use of information technology in educational institutions, the development of students'



innovative potential, and the development of a didactic provision of the learning process aimed at developing independent creative activity. and little attention has been paid to its implementation. This calls for a comprehensive study of the issue of developing students' ability to use modern technology in developing independent thinking.

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**SCIENTIFIC BASIS OF MODERN UZBEK NATIONAL ART**

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**Аннотация.** Мустақиллик ўзбек санъатига анъанавийлик, миллийлик шу билан бирга замонавий мавзуларда эркин ижод қилиш имкониятларини ҳада этди. Ўзбек санъатини ривожлантириш, уни янги-янги жабҳаларини очиб бериш эса санъат фидойиларининг олдида турган бош масалага айланди. Мазкур мақолада замонавий ўзбек миллий эстрада санъатининг ривожланиш тарихи ва тенденциялари тадқиқ этилган бўлиб, мақола соҳа ижодкорларининг амалий ишлари таҳлили асосида тайёрланган.

**Калит сўзлар.** Муסיқа, санъат, эстрада, сахна, хонанда, академик хонандалик, мумтоз хонандалик, анъанавий хонандалик, муסיқа ижрочилиги, лапар, ўлан, халқ ижодиёти.

**Annotation.** Independence has given Uzbek art a chance to create both traditionalism and nationalism, as well as the freedom to create contemporary themes. The development of Uzbek art and the discovery of new aspects of it have become a major challenge for art lovers. This article explores the history and trends in the development of modern Uzbek national music and is based on an analysis of the practical work of the artists in the field.

**Keywords.** Music, art, pop, stage, singer, academic singing, classical singing, traditional singing, music performing, lapar, ulan, folk art.

**Аннотация.** Независимость дала узбекскому искусству возможность создавать как традиционализм, так и национализм, а также свободу создавать современные темы. Развитие узбекского искусства и открытие новых его

аспектов стали серьезной проблемой для любителей искусства. Эта статья исследует историю и тенденции современной узбекской музыки и основана на практическом анализе работы артистов в этой области.

**Ключевые слова.** Музыка, искусство, поп, эстрада, певец, академическое пение, классическое пение, традиционное пение, музыка, лапар, улан, народное творчество.

**Introduction.** Uzbek national music plays a special role in glorifying the ideas of national independence, strengthening the honor and dignity of independence in the minds and hearts of our compatriots, and upbringing the young generation as a healthy child.

The fact that singing is, in general, the spiritual and enlightenment factor on the minds and hearts of people, reflects the serious and promising goal of building a humane society in our country.

The origins of traditional Uzbek music, music, and word art dates back to BC. Since ancient times, the peoples of Uzbekistan have been highly cultured. The archaeological excavations include sculptures of musicians and dancers, musical instruments represented in fine arts, live performances of singers and musicians that have come down to us over centuries, folklore and written literature, scientific and historical sources and artifacts. is a bright sign.

The peoples of Central Asia have been performing music and singing since ancient times and have been performed by musicians and singers. This art is based on the unique musical traditions of each nation and has developed as an independent musical creation in the course of a long historical and cultural development. Many Orientalists have written separate treatises on this type of art. They include Al-Kindiy, Al-Farabi, Ibn Sina, Ibn Zayla, Beruni, Al-Maari, Zayniddin Ghazali, Jaloliddin Rumi, Al-Khorezmi, Abdulqadir Nayi, Ar-Ghazi, Sayfiduddin Urmawi, Masud Al-Sherazi, Abdulqadir Maraghi, Muhammad Nishopuri, Al-Husseini, Qutbiddin Sherozi, Abdurahman Jomi, Binoi, Alisher Navoi, Zahiriddin Babur, Najmiddin Kawkabi, Darvesh Ali Changi, Fitrat and many others commented on the music culture and its artistic and aesthetic features and peculiarities.

Large-scale musical shows such as "musical drama", "musical comedy", "operetta", "opera", "ballet", "symphony", "concert", "romance", as well as in the literature and fine arts of Uzbek music. species have been successfully assimilated. In each of these areas, works are inspired by the national spirit and at the same time can be considered as universal values, together with our traditional ancestors of centuries-old traditional musical values that have been inherited from our ancestors. In this complex of musical culture there is a special place and potential of pop art.

**Main part.** Nowadays the term "variety" is widely used. Its essence comes from two different meanings. In a broader sense, this concept includes stage, stage music and, in general, stage productions (small dramatic, song, instrumental music, choreography, circus). It is also appropriate that the term "variety" from the French language means "stage", "stage", "platform". The term "variety" refers to music in a narrow sense based on a combination of certain performance and artistic elements.

It is noteworthy that in modern Uzbek music culture, the term "variety" is used not only to describe the types of art associated with the stage, but also to the specific direction in music. Hence, the term "variety" refers to music in a narrow sense based on a combination of certain performance and artistic elements. In this context, "pop" is expressed in a special sense of expression, and is represented as a separate independent direction in music (as opposed to folk and professional music).

The music scene, which is mainly an amateur field of music production and execution, has formed itself in Uzbekistan. In particular, its foundation was established in the second half of the last century because of the work of professional musicians - composers, singers and musicians - and reached its first stage of development.

Uzbek pop music, which began to form in the early 20th century as a socio-political situation, can be divided into two periods:

the first is a time when traditional genres - song, lapar, aristocracy;

and the second period is the beginning of the stylistic processing of folk genres based on the requirements of musical variety [4].

In the early years, the goal of politicizing public life and influencing public consciousness was achieved through the promotion of artistic creativity. One of the

best musical genres in this was the song. Traditional Uzbek songs and yalla bands have been moved from the family atmosphere to the political scene of the society, first being updated in their subject matter and then in shape. It was during the 1920s-30s that Tamara Khanum and Mukhiddin Qori-Yakubov became active singers. Tamarahanim's performance, although characterized by its performances, is enriched by its more scenic features.

In the 1920s and 1930s, in the process of the formation of Uzbek pop music, the activities of musical theater groups were unlimited. After all, the repertoire of the musical troupe that operated in the aforementioned years included not only stage productions but specially prepared concert programs. These include the Uzbek State Concert-Ethnographic Troupe (1926–1927), the Kokand Musical-Dramatic Troupe (1929), the Uzbek State Musical Ensemble (1929), and the Uzbek State Music Theater (1929), led by Muhiddin Kori-Yakubov. As an example (1932) [7].

The Tashkent Radio Committee, established in 1927, has also played a major role in promoting the rich art of the new world. The traditional music samples presented to the audience will be performed by an ensemble led by Yunus Rajabi. Famous singers such as Domla Halim Ibodov, Khoji Abdurahmon, Matyusuf and other singers from Tashkent including Mulla Tuychi Tashmuhammedov, Shorahim Shoumarov, Rizqi Rajabi, Imomjon Ikromov, Hayrulla Ubaydullaev and Karim Zakirov will be included in the ensemble. Although a large part of the ensemble program was composed of instrumental songs and instrumental tracks, the songs of the composers on the new theme also began to play a special role. This category includes a number of songs such as "Factory", "Unite", "We Are All" and "Collective March".

One of the events that has contributed to the rapid development of new Uzbek pop music is the regular Decades, Festivals and the Olympics. Examples of such political events are, for example, the Eastern Evening in 1920, the 1924 All-Union Exhibition of National Economy, and many others. The featured events featured sample programs performed by famous singers and musicians. It should also be noted that amateur teams played a great role in this process. In such communities, there were many talented musicians and composers, including Imomjon Ikromov, Komiljon

Jabborov, Nabi Hasanov, singers Ochilhon Otakhonov, Tavakkal Kadyrov, Fakhriddin Umarov, who have taken on their professional background and have been loved by our people lately.

In the 1930s, major organizations in the formation of Uzbek pop music were the Uzbek State Music, Variety and Circus Association (1931 - 1936), the State Variety and the State Philharmonic Society of Uzbekistan (1936 - 1938). ].

In the history of Uzbek singing there have been such great artists that it is difficult to imagine the development of a period art without their name and creativity. Halima Nasirova is also one of the founders of Uzbek music and singing. Halima Nasirova, a singer of miraculous opera, who is known as the nightingale of the Uzbek people, is one of the artists who has taken every song to a perfect masterpiece.

Another young singer, Saodat Kabulova, is one of the newcomers of the Uzbek singing industry. In his work, European vocal features are closely linked to the Uzbek national singing style.

Over the years, the compositions created by our composers have made a significant contribution to the development of pop music. Among them are Hoji Abdulaziz Rasulov, Tuhtasin Jalilov, Yunus Rajabiy, Imomjon Ikromov, Komiljon Jabborov, Fakhriddin Sodiqov, Saidjon Kalonov, Nabijon Hasanov, Komiljon Otaniyozov, Muhammadjon Mirzaev, Ganijon Toshmatov, Orif Qosimov, Gulomjon Khojikulov, , Nematjon Kulabdullaev and other master composers relied mainly on folk traditions in their works. Each of them created their own way of making music. They paid great attention to the exact style, tone and tone of the works - the intonation, the music and the words. They have resorted to various sophisticated techniques to make the music more vibrant and polished. In addition, their works have a unique national spirit and philosophical mood that gives the songs beauty and lifelongness. Such creative skills have, of course, come about and developed through years of hard work and a thorough knowledge of the folk musical heritage [6].

**Conclusion.** Yunus Rajabi's work is unique and versatile. He has performed 20 musical dramas, about 200 songs and songs, a profound knowledge of Uzbek folk music and "Shashmaqom". People's Artist of Uzbekistan Tuhtasin Jalilov is one of the first

composers to introduce musical folklore into Uzbek musical dramas. Mukhtorjon Murtozoev wrote poems of various contemporary poets and composed colorful folk songs. Muhammadjon Mirzayev left a mark in the history of Uzbek music of the 20th century. Many of his songs and songs have played a strong role in the hearts of our people.

Consequently, Uzbek pop music, which was formed under the influence of social and political situations during the 1920s and 1950s, was enriched by the use of traditional genres such as lapar, yalla and labor, and on the other hand, the folk music genres. The songs that were created as a result became a place in the hearts of the people.

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**CONTEMPORARY FACTORS OF CREATING SPEECH ACTORS IN  
IMPROVING THE ARTISTIC SKILLS.**

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**Аннотация.** Мазкур мақолада, актёрлик маҳоратининг асосий ифода воситаси саналган “Саҳна нутқи” фанини ўқитиш ва сўз устида ишлашнинг услубий жиҳатлари ёритилган бўлиб, саҳна асарларининг бадиий савиясини такомиллаштиришда нутқий характер устида ишлашнинг замонавий омиллари тадқиқ этилган. Асар ғояси ва мазмунининг ёритилишида, персонаж характери чизгиларини топиш, бадиий сўз таъсирчанлигига эришиш йўлидаги вазифалар белгиланган.

**Калит сўзлар:** Саҳна нутқи, нутқий характер, актёр, режиссёр, сўз, санъати, бадиий ижро, бадиий савия.

**Annotation.** This article outlines the methodological aspects of teaching and working on the subject of “Speech”, which is the main expression of acting skills, and explores contemporary factors of speech performance in improving the artistic quality of the stage productions. The ideas and content of the work outline the objectives of finding characters of character and achieving the artistic expression.

**Keywords:** Stage speech, speaking character, actor, director, word, art, artistic performance, artistic quality.

**Аннотация.** В данной статье описываются методологические аспекты обучения и работы над предметом «Речь», который является основным выражением актерского мастерства, и исследуются современные факторы речевой работы в повышении художественного качества сценических постановок. Идеи и содержание работы определяют цели нахождения персонажей и достижения художественного выражения.

**Ключевые слова:** сценическая речь, говорящий персонаж, актер, режиссер, слово, искусство, художественное исполнение, художественное качество.

**Introduction.** Along with all forms of art and fiction, theater art plays a special role in shaping and nurturing the spiritual world of a person in maturity. There is a so-called language scene in the world, with a series of important factors that inspire people to think and encourage new research. Indeed, every factor demanding the performing arts must always be at the level of growth, development, formation and discovery in the process of manifesting new charm and new appearance.

Theater is a mirror that reflects the rise of each national culture and the nation's maturity. Theater art reflects reality through many forms of art, influencing it in every aspect of its movement and development, while simultaneously taking a deep look into the spiritual realm of many audiences. Indeed, theater art plays an important part in shaping the minds, worldviews and aesthetic tastes of thousands of people by affecting their emotions.

**Main part.** The peculiarity of theater art is that it is created by the cooperation of playwright, actor, director, artist, composer, dancer and many other artists. There is one person who defines the nature and essence of performing arts. This is an actor. One of the founders of the School of Theater Arts KS Stanislavsky said, "The only king and sultan of the stage is a talented actor." Only an actress can bring to life a performance with her actions and creative imagination. It gets the viewer excited and takes it to the reality he is living in. So the viewer goes to the theater to enjoy a spiritual nourishment and cultural entertaining, mainly to see how the animation of events that are happening and possible, and the characters and the characters in it, revives in real life what is happening and possible. That means the actor plays a leading role in theatrical art. Consequently, theatrical art gives the audience a sense of spiritual strength and color.

One of the leaders of the Uzbek national theater, renowned director Mannon Uighur, is not only unaware of the fact that during the staging of the play, the actors pay attention to their content and image as well as their eloquence and pure

pronunciation. Because, for this to happen, the actor must have the ability to create a powerful image, influence, in other words, to create an image.

As we know, the Uzbek National Theater has taken a serious approach to the literary language, especially Uzbek language, since its inception. The longevity of the performances, the ideological integrity of the performance, the sturdy and perfect artistic solution of the director is a versatile and unique expression tool, the power and power of words. Perhaps this is why the characters' characters have long been stored in the audience's memory and impressed. Several historical works on the national theater scene, whether they are poetry or prose, have gone through a lot of discourses about the language of the work, the speech of the artist, and, of course, the perfection of stage speech in contemporary theater performances. It is a product of traditions.

People's Artist of Uzbekistan, Professor Nazira Alieva says in her monograph "Art is my life": "At that time, it wasn't until the words were fully mastered. Because when you go out to play, the actor thinks more about his actions, directing them to a particular goal, to convey the essence of the image correctly, so that the word and its essence have no time or opportunity to think about the meaning and appeal of the speech. " Professor Lola Khodjaeva also acknowledged that she was convinced of her work in the theater. Attractive and expressive speech, fluent and original speech by artists such as O.Jalilov, M.Yusupov, H.Khojaeva, M.Umarhojaev, G.Azamov, Z.Sadrieva, T.Sultonova, I.Boltaeva, M.Yakubova voices of theater directors and enthusiasts of the Uzbek literary language Mannon Uyghur and Orphan B bojonov pronunciation and word processing experience the full performance art is the main factor in achieving the goal of perfection. "

Nazira Alieva, an expert on the whole process of working on a word in a creative group of the play "Alisher Navoi", directed by Mannon Uyghur and Nazira Alieva at the National Theater in 1948, says: "The Alisher Navoi performance is the only language and pronunciation of Uzbek speech. it can be argued that it is a turning point. " The ability to speak to the character and social status of each protagonist, the sound of a wide range of scenes, the ability to find the appropriate intonation, and the

attention, demand and consistent performance of a sensitive director like Mannon Uighur make the play sound and lively. remains.

Reference to historical-themed works on the stage of theaters of the Republic due to independence, historical figures; good works are being made to refer to works that reveal the true story of the statesmen, famous commanders, writers, and poets, which tell the true and difficult life of the poet. At the Uzbek National Academic Drama Theater, a historical drama by Zulkhumor Solieva was staged by the Honored Artist of Uzbekistan Valijon Umarov. Following the premiere of the play, critics and historians gave critical and critical comments on the work in press, television and radio. As a speech consultant, from the reading of the play to the presentation of the play, the emphasis on the creative process over the language of the work, the pronunciation and the word action, to address some of the deficiencies in today's stage speech and process of word processing. The movement worked on the character of the characters. In the course of the work, the technique of speaking technique was regularly given daily to a group of actors before rehearsals.

It is well-known that the poem is dedicated to the life of the poet Uvaysiy and it contains ghazals, individuals, and rubais written on it. The great representatives of our classical poetry have won the attention of many people. From the very beginning of the process, the actors had to have a thorough knowledge and understanding of the rules of the weight, the nature, the meaning of the vocabulary, the peculiarity of the pronunciation of the syllables. As we have already mentioned, the plot of the work and the events of the play are well known. The main factor that we are focusing on is the characters' character traits and their full interpretation. We see the first of the heroine Uvaysi as a kind mother. In his conversations with the well-known poet Nodirabegim, we also observe the fulfillment of the director's duties in keeping with the rules of Aruz, in the ghazals of poetess Zamani. Secondly, in the words of rubai or ghazal, read aloud in dissatisfaction with the turmoil in the palace, Uvaysi's enthusiasm for the people is reflected in his enthusiasm for peace. Third, because of the feminine qualities of femininity, demeanor and sweetness, the actress (S. Rametova) is able to fully reveal the character of her hero. The right play has scenes enriched with lyrical scenes, but at

the very core there are scenes of violence against the people. These cannot be solved by simply reading ghazals or in a circle of mushaira. In the process of dividing the play into roles and character analysis, the words in that language were a bit of a challenge for the actors. Another example is a vividly convincing statement in the first scene of the seal of a conspiracy against Sheikhu Islam (T.Muminov) and Kazi Kalon (P.Nasirov), who was pressured by both sides. In the struggles for the throne, the actions of the palaces on the basis of the secret plans and their impatience in their realization are expressed in sharp characters. When the minister was conscientiously stamping on a poor job, the judge shouted "Hmmm" in a shaky voice, "Hmmm ...", causing the minister to stamp out his shaking finger. Another episode expresses the shocking and horrible consequences of this seal so vividly that, in a minute or two of silence, the People's Artist of Uzbekistan, Rihsivoy Avazov, was able to fully realize his inner state.

The sister of Amir Umarhon has described the image of Oychipopuk (M.Kholikova) as a rebellious, arrogant, humanistic woman. He emphasizes every word with pride and pride. His character enhances the tension between the characters. Oychipopuk, whose smooth behavior and attempts to conceal his plans, which are hiding in the midst of his ambitions, seems to claim that his position in the palace, the only ruler in the palace, does not compromise his son's succession. The actress was able to find new facets of her character in every rehearsal. It is important to note that the palace dresses of the period were almost identical to those of women. Nodirabegim, Uvaysiy and other female heroes change their clothes one or more times depending on the sequence of events. The color of the costumes in the lyrical scenes and the glamorous looks was also chosen for the occasion. At Oychipopuk, the dress looks heavy and cold as if it were made of lead because of its roughness and stiffness. The words that Uwaisy made in the process of forcing her to leave the palace make her lessons and poems completely unnecessary for the daughters of the palace, and in the case of slander, she has a keen eye, with no physical activity, but only in her words. The dress itself also looks like a "snake." The People's Artist of Uzbekistan, Holy Kholiqova, portrayed the heroic, sympathetic, and sometimes amused nature of the

hero, taking into account all the defects and shortcomings of human beings in some of the theater repertoire, modern appearances in television shows and feature films. The appearance of a convincing and impressive, sharp, sharp character in Oychipopuk's image depends, first and foremost, on the skill of intelligent and creative researchers who are able to clearly identify and absorb the prince's intentions. Certainly, the actor's image is related to his or her grief, his lifestyle, his dress, his face and body, his speech, his step-by-step appearance, in general, make his character's characters more animated and enriched.

The critics of theater and literary critics who participated in the public discussion that followed the presentation of the play acknowledged that there was a significant shortcoming in the consistency and logic of the story. However, the creative team has worked to increase the ideological and educational impact of historical drama, and to strengthen the contradictory changes in the character of the characters based on the author's intentions and ideas.

Future artists will be taught the speech technique of a student who teaches, researches and implements the techniques of speech and vocabulary as well as the stages of its development and formation, and will give them a “Scenic Speech” to help them overcome all deficiencies and achieve effective performance. Students will go through a fascinating, complex and mathematical process of “Scenes Speech”, which is both theoretical and practical. As the stage talk is an integral part of theatrical art and the main expression of the art of acting, it must always be in the artist's attention, be refined and pure in all aspects of the creative search chain as the most important object of the performance.

**Conclusion.** A teacher and student who realized that the word's value, function, and load on stage more than once in life, and how important it was to convey it clearly and clearly to the viewer, was also one of the foremost aspects of effective speech. should approach. In the work of the word, each of the works has to pay special attention to the study and mastering of the ideological content, the logical consistency in the story's development, the character of the character, and the purpose of clarifying its burden. It is necessary to clearly explain why each word is said in the text, find hidden



ideas in the context of a particular word, and the meaning and purpose of each sentence or section. It is well-known that the first stage of a student's creative process of speaking is the visual literary passages. Requirements for creating a small landscape, such as seeing, feeling, reacting, all the other elements of speech technique whether it is a short story or a full story, a finished work, analytical ideas such as the author's idea, the relevance of the topic, the higher purpose, the leading behavior. to be able to interpret processes correctly. Only then will the actor acquire the perfection of artistic expression, as well as the ability to be independent in all stages of working on a word in a play. The aforementioned Uzbek School of Performing Arts preserves a strong tradition of professional theater professionals in the professional theater arts, and the introduction of modern-day theater art, in particular, into the teaching of art.

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## READING SEQUENCES AND PRINCIPLES IN TEACHING ENGLISH

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**Abstract:** This article is devoted to teaching reading by using its principles and sequences. There are expressed reading principles and sequences in teaching English in the given article.

**Key words:** SLL, foreign language teaching, reading skill, effective reading, principles and sequences.

**Аннотация:** Данная статья посвящена обучению чтению с использованием его принципов и последовательностей. В данной статье изложены принципы и последовательности чтения при обучении английскому языку.

**Ключевые слова:** SLL, обучение иностранному языку, навыки чтения, эффективное чтение, принципы и последовательности.

**Annotatsiya:** Ushbu maqola o'qish tamoyillari va ketma-ketliklaridan foydalanib o'qishga bag'ishlangan. Ushbu maqolada ingliz tilini o'qitishda o'qish tamoyillari va ketma-ketliklari ko'rsatilgan.

**Kalit so'zlar:** SLL, chet tillarini o'qitish, o'qish mahorati, samarali o'qish, tamoyillar va ketma-ketliklar.

**Introduction.** Reading is the skill of understanding written words and using in teaching foreign languages. Reading is a part of the way we use language in daily life to gather information, communicate with others and also for enjoyment. Reading always occurs in context, that is, what we read is part of a broader situation or an extended text .

**Main part.** Reading is connected with sequencing. Sequencing is one of many skills that contributes to students' ability to understand what they read. Sequencing refers to the identification of the components of a story or a topic such as the beginning, middle, end to the ability to retell the events within a given text in the order in which they occurred. The ability to sequence events in a text is a key comprehension strategy, especially for narrative texts. Finding meaning in a text depends on the ability to understand and place the details, the sequence of events, within some larger context—the beginning, middle, and end of a story. The ordering of events in a story, along with connecting words such as once upon a time, then, later, afterwards, and in the end, are good examples of textual features, an understanding of which gives the reader a way of integrating the story's individual parts into its larger framework—and thereby understanding the author's purpose. [1], [3].

Why Is It Important? As students listen to or read text, they are best served if they can understand the information as it is presented and then recall it at a later point. One of the easiest ways to recognize the order of events is to look out for the sequencing words or transitions that are used to connect the various parts of the text. Some of these words and phrases also act as signals to provide an indication of whether the event will be located in the beginning, in the middle, or toward the end of the text's chronology. There are a wide variety of 'signal words' and the following represent just a few of the most common, as well as where they are most likely to occur. For example, in stories we can use such kind of words.

#### Beginning

- *Once upon a time / Once there was*
- *In the beginning*
- *First of all*

#### Middle

- *Meanwhile*
- *After that*
- *Suddenly*

End

- *In the end*
- *Finally*
- *After all.*

When we cannot remember the names of people, places, things we can use reading sequences in order to teach such kind of words for instance, so as to remember the sequences of names of Smith, Martin, Igor, Lucy, Emily, we can use the first letter of these names such as "SMILE" for above mentioned names. [4], [5], [6].

It is important reading principles for teaching foreign languages as reading sequences. There are a lot of reading principles in teaching foreign languages, for instance, the reading material should be easy for learners also suitable for learners' level and age. In helping beginning readers select texts that are well within their reading comfort zone, more than one or two unknown words per page might make the text too difficult for overall understanding. Intermediate learners might use the rule of hand-no more than five difficult words per page. Hu and Nation suggest that learners must know at least 98% of the words in a fiction text for unassisted understanding 1.

It follows that, for extensive reading, all but advanced learners probably require texts written or adapted with the linguistic and knowledge constraints of language learners in mind. A variety of reading material on a wide range of topics must be available. The success of extensive reading depends largely on enticing students to read. To awaken or encourage a desire to read, the texts made available should ideally be as varied as the learners who read them and the purposes for which they want to read. Books, magazines, newspapers, fiction, non-fiction texts that inform, texts that entertain, general specialized, light, serious. For an inside track on finding what your students are interested in reading, follow William's advice: "Ask them what they like reading in their own language, peer over their shoulders in the library, ask the school librarian". Varied reading material not only encourages reading, it also encourages a flexible approach to reading. Learners are led to read for different reasons. Learners choose what they want to read. The principle of freedom of choice means that learners can select text as they

do in their own language, that is, they can choose texts they expect to understand, to enjoy or to learn from. Correlative to this principle, learners are also free, indeed encouraged, to stop reading anything they find to too difficult, or that turns out not to be of interest[3;51] Certain instructional methods are more effective than others. Many of the more effective methods are ready for implementation in the classroom. [1], [4].

To teach reading well, teachers must use a combination of strategies, incorporated in a coherent plan with specific goals. A teacher who addresses only one area of reading or uses one instructional approach will probably not be successful.

Reading comprehension – understanding what is read – is best supported when teachers use a variety of techniques and systematic strategies to assist in recall of information, question generation, and summarizing of information. Teachers must be provided with appropriate and intensive training to ensure that they know when and how to teach specific strategies. Teachers must know how children learn to read, why some children have difficulty reading, and how to identify and implement instructional strategies for different children.

**Conclusion.** Reading sequences and principles are very important for teaching reading because they include effective methods and ways of teaching reading skills. According to reading principles reading skill needs to be practiced every day. Learners read further reading materials such as newspapers, journals, fiction books two hours a day in order to improve reading speed and widen their outlook. The purpose of reading is usually related to pleasure, information and general understanding. According to reading sequences, we need reading sequences in order to read instructions, stories, activities such as a picture story. Reading sequences also help us to understand the meaning of topics, activities, games .

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## OPPORTUNITIES FOR PROMOTING INTANGIBLE CULTURAL HERITAGE PROTECTION IN THE COURSE OF MOTHER LANGUAGE AND LITERATURE AT PROFESSIONAL COLLEGES

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**Аннотация:** Мазкур мақолада касб-хунар коллежларида “Она тили ва адабиёт” фанини ўқитиш жараёнида номоддий маданий мерос муҳофазасини тарғиб қилиш имкониятлари ўрганилган. Шунингдек, ўқув фанидаги мавзулар таҳлили ва мавзу юзасидан методик тавсиялар берилган.

**Таянч сўзлар:** Номоддий маданий мерос, муҳофаза, касб-хунар таълими, “Она тили ва адабиёти” фани, касб-хунар коллежи, давлат таълим стандарти, ўқув режа, фан дастури, “Миллий истиқлол ғояси”, мавзулар таҳлили, ўқув режа, ДТС, ўқув адабиёти, методик тавсия.

**Аннотация:** В настоящей статье исследованы аспекты охраны нематериального культурного наследия в процессе преподавания предмета «Родной язык и литература». Также даны методические рекомендации по тематическому анализу предмета.

**Ключевые слова:** Нематериальное культурно наследие, охрана, профессиональный колледж, государственный стандарт образования, учебный план, программа предмета, анализ тем, учебный план, ГСО, учебная литература, методическая рекомендация.

**Annotation:** This article explores aspects of safeguarding intangible cultural heritage in the process of teaching the subject "Native language and literature". It is also given guidelines on a thematic analysis of the subject.

**Keywords:** intangible cultural heritage, protection, vocational college, the state standard of education, curriculum, program of the subject, the analysis in curriculum, SSE, educational literature, methodical recommendations.

**Introduction.** Part II of the "State Program for the Protection, Preservation, Promotion and Use of the Intangible Cultural Heritage in 2010-2020" approved by the Cabinet of Ministers of the Republic of Uzbekistan on October 7, 2010 - , Section IV - "Training and organization of training of specialists in the field", paragraphs 21, 22, 23, 24, 26, 27, 30, 32, 33, and higher education. in educational institutions e scientific, organizational and methodological activities [2].

At present, there is a great need for professionals who are familiar with all aspects of the Intangible Cultural Heritage (NMM) and capable of directing the intangible cultural heritage for the benefit of society, with a complete understanding of conservation activities. It is also desirable to improve the system for the safeguarding of the intangible cultural heritage of the students.

- Effective organizational, pedagogical forms and tools will be developed and put into practice in spiritual and moral education of the younger generation based on the rich national cultural and historical traditions, customs and universal values. The priority of upbringing and comprehensive development of the person is ensured. In order to improve the general and pedagogical culture, educational activities among the population of the country will be improved [4. 12].
- NMM is presented in the following areas:
  - - oral traditions and forms of self-expression, including language at the same time as a reflection of intangible cultural heritage; ижро

**Main part.** Numerous researchers have done research on various NMM problems. This research has been analyzed in the context of NMM trends, and is an important issue in the education system, including for students of vocational colleges (SMEs), and in the development of NMC knowledge and skills in students.

To analyze the concepts of intangible cultural heritage in the CRC, it is necessary:



Study of the state educational standards, curriculum, curricula providing quality secondary specialized vocational education within the RCC;

- Determining the extent to which qualified teachers are equipped with intangible cultural heritage;
- Analysis of the educational disciplines and subjects in the curriculum;
- The organization and carrying out pilot work;
- Development of methodical recommendations.

To date, the NCC has analyzed the state educational standards, curricula, syllabus.

We will analyze the possibilities of improving the NMC protection system for SME students in the example of "Mother tongue and literature".

According to the syllabus, the course "Mother tongue and literature" is taught at the RCC for a total of 120 hours per 1-3 semesters. The analysis of vocational colleges' curricula and curricula explored the possibilities of promoting NMM protection in the teaching of Mother tongue and literature [3]. As a result, the topics were analyzed in the context of the NMM and the possibility of promoting NMM protection in 44-hour (22-semester I-22-semester-22-hour) topics was identified.

As a result of the analysis, the following guidelines were developed to address the topics outlined in the curriculum for improving NMC protection and promoting the learning process: [7].

On the subject "Mother tongue":

- to state that language in the oral traditions and forms of self-expression of NMC is a factor that reflects the intangible cultural heritage;
- selection of texts in the NMM content;
- Expression of NMM content in the selected text;
- Reading and analyzing examples of NMC oral traditions and forms of self-expression, performing arts;
- Compilation of terms based on the terms NMM;
- to use the words given in the works of Yusuf Khos Hajib and A. Navoi;
- use of narrations and proverbs concerning speech ethics;

- Use of terms and phrases in the NMM content;
- Classification of NMC professions;
- Definition of NM occupations;
- Preparation of test questions in NMM content.
- Write a statement on the topic representing the NMM and analyze it.

On the subject of Literature:

- To pay attention to the spiritual significance of NMM samples in literature.
- to analyze rituals and traditions in the studied artistic work;
- Interpretation of terms NMM in the studied art work;
- to identify and describe the NMM trends in the studied artifact;
- to master the values inherent to the Uzbek people in the artistic work studied;
- to analyze the similarities and differences of the heroes of the studied art work to heroes in other poems;
- reading and analyzing excerpts from the NMM directions presented in the study;
- to explain the ethical concepts in the work of art;
- Conducting interviews on the spiritual significance of the habits recorded in the artistic work studied and to date;
- to write a statement on the spiritual and educational value of modern forms of NMM in the artistic work studied;
- Choosing and memorizing poems, ghazals, poems in NMM content;
- Organization of poetry in the context of NMM;
- to analyze traditions, values, crafts passages related to the heroes of fiction;
- conducting bytes of NMM content;
- to analyze the customs and traditions of these people in the works of foreign literature, to compare them with the customs and traditions of the Uzbek people;
- Writing a statement on the subject that represents the NMM content.
- Preparation of test questions in NMM content.

The course "Mother tongue and literature" provides the opportunity to study proverbs, parables, stories, legends and stories based on the collection of unique, purple words and phrases that are the wealth of NMM in the content.

Effective use of scientific and technological advances in the development of the student, in close connection with the social development of education, and the adoption, analysis, theorizing, summarizing, summarizing and delivering information to the student is one of the major problems facing the modern education system. It is therefore desirable to integrate elements of the NMM into the content of the subjects.

The NMC protection system was analyzed on the basis of secondary special and vocational education and is outlined in the table below. [7], [8].

**Conclusion.** The teacher must influence and convince the student in improving the NMC protection system in the learning process. As a result, consistency in the implementation of NMCs and guidelines is shaped by the set of tools, methods and techniques that influence student protection. Following topics are recommended:

- preparation of joint educational literature on the continuity and continuity of educational institutions;
- development and implementation of training materials;
- popularization of NMC protection based on experimental results.

In summary, the NMC's successorship should be implemented in order to create and maintain the aforementioned NMM knowledge and skills.

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## MODERN PROBLEMS OF GEOGRAPHY

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### REGIONAL SPECIALIZATION AND CONVERGENCE OF FOOD INDUSTRY IN KHOREZM REGION

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**Abstract:** In this article the regional specialization and convergence of the food industry in Khorezm region is determined based on statistics.

**Key words:** specialization, the spatial division of labor, fritredism, interdependence, food industry cluster, industrialization.

**Аннотация:** мақолада Хоразм вилоятида озиқ-овқат саноатининг ҳудудий ихтисослашуви ва мужассамлашуви статистик маълумотлар асосида таҳлил қилиб аниқланган.

**Калит сўзлар:** ихтисослашув, ҳудудий меҳнат тақсимоти, фритредизм, мужассамлашув, озиқ-овқат саноати кластери, индустриалашув.

**Аннотация:** В статье на основе статистических данных проанализированы региональная специализация и интеграция пищевой промышленности в Хорезмской области.

**Ключевые слова:** специализация, региональное разделение труда, фритредизм, интеграция, пищевой кластер, индустриализация.

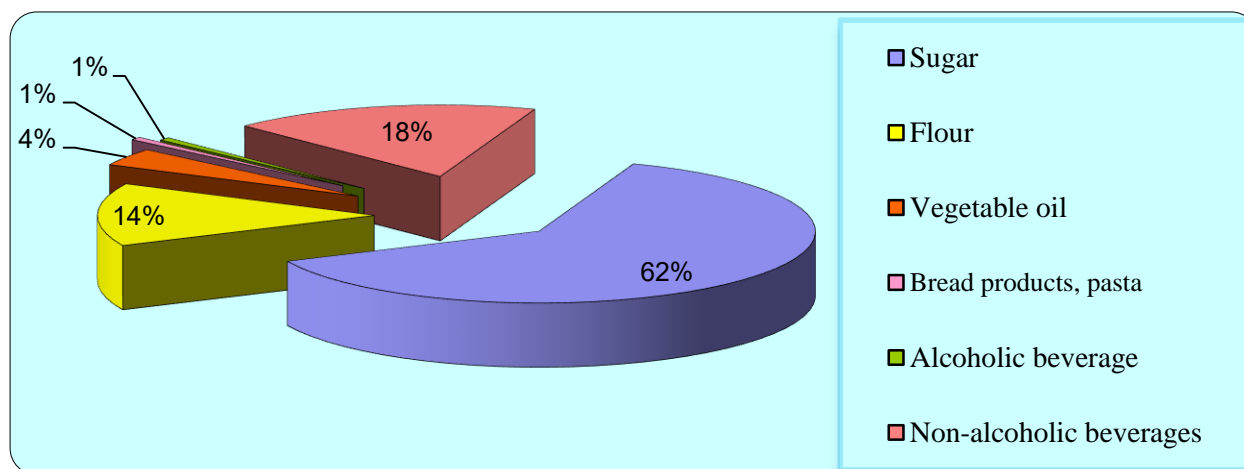
**Introduction.** Specialization comes from the division of labor, improves changes and varies during the social development. Household specialization and its aspects show the economical state of the area. Wide use of the idea of fritredism at the

end of the 19<sup>th</sup> century lead to deeper meanings of international labor division, and development of regional and local specializations. Countries with different social development rate took their place in the world market and during the growth their household specialization changed, too [7; 16 – p.].

**Literature review:** Theoretical and methodological foundations for the study of the development and regional organization of the food industry, especially the industries and territorial structure of the processing industry were learnt from the scientific literature of Voronin V.V., Sharygin M.D., Dyankonov K.N., Kasimov N.S., Tikunov V.S., Kolosovsky N.N., Saushkin Yu. G., Soliev A., Karshibaeva L., Abdunazarov H.M. and A. Khrushchev's. However, the development and regional organization has not been food industry has been largely explored in the works of the above-mentioned scientists and researchers. In addition, the food industry of Khorezm region is not deeply studied as a separate research object.

**Research methodology:** The analysis of this article uses geographic comparison, regionalization, statistical system structure and extrapolation methods.

**Analysis and results.** Hazarasp and Urgench , respectively, accounted for 43 and 24.6 per cents in the regional food industry in 2018. Since these areas have large manufacturers and are situated in the centre, their local production batch is reasonable. After these two Shavat, Hanka, and Bagat comes on top. Central railways and highways passing through them enables the development of industries in them. The flour milling companies are mostly in Hanka, Urgench and Shavat.



**1-picture. Breakdown of the region's food industry sectors (with large proportions) 2015.** Picture: is made according to the information given by the Khorezm region statistics department.

Because people have been consuming various types of products increasingly, demand for flour and bread products decreased lately. Over the years 1991 and 2015 in large flour milling companies producing have declined. In 2015 67.1 thousand tons of flour was produced which is 2.3 times less than in 1991. Moreover, the imbalance in manufacture that has urged over the last few years is appearing, too. For example, more than half of the food products originated in the region come from Urgench city and central district. Currently, Eastern, Southern and especially North-western regions' contributions are very low. This situation intervenes to the region's territorial set and growth, and therefore, needs to be taken care of seriously.

Khorezm region made up 2.5 per cent of the country's GDP in 2016. In 2015 in the region 20.6 per cent of the regional GDP was from food industry. Large companies in the region are basically specialized in sugar (62%), nonalcoholic drinks (18%), flour (14%) and vegetable oil (1-picture). However, as mentioned above, food processing rate in the region is very low. Nowadays, majority of the food products are imported. That means it is very essential to develop the next steps of the agroindustry and find investors for it.

**1-table**

**Specialization of the region in flour milling (2015)**

Companies	Type of product	Quantity in tons
“Khonla grain products” JSC	flour	31,3
	Bread products	0,7
	Pasta products	0,2
“Khorezmgrainproducts” JSC	Flour	12,0
	Bread products	0,66
Shavat grain products” JSC	Flour	15,5
	Bread products	0,56
«Bagat grain» JSC	Flour	8,4
	Bread products	0,56
SPBE subjects	Flour	63,8
	Groat	6,1
	Bread products	20,1
	Pasta products	3,8

Source: Data of the Khorezm Regional Department of Statistics



Limited resources and passive industrialization has caused the light and food industries to take the lead and hasn't allowed agro culture to develop. This situation created problems for territorial set and improvement of the food industry and now it is vital to deal with these problems. In regional GDP food industry is 20.6% and flour industries in 8.1%. And in the food industry flour industry takes the lead. In 2015 3.2% of the food products in the countries were in the region. "Khonka grain products" JSC, "Khorezm grain products" JSC, "Shavat grain products" JSCs are the largest producers of the field (1- table).

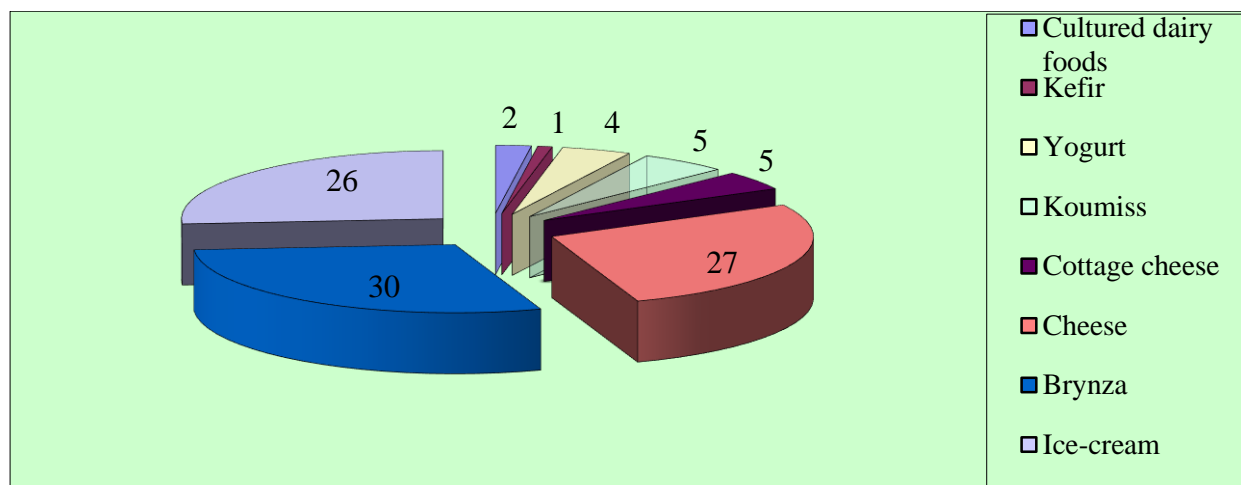
About 30% of industrial output is produced in the small business and entrepreneurship sector. The share of small businesses is 85.5% and 94.9% respectively for bakery and pasta products, and now occupies a leading position in the industry. The flour industry is the leader in the industry. In 2015, flour production accounted for 87%. Bakery and pasta production is next. Among large enterprises are JSC "Khonka don products" and JSC "Shovot don". However, the volume of production varies by years. For example, JSC "Khonka don" with low capacity was the leader in the region in terms of production in 2015. As mentioned above, most of the bread and pasta is produced by small businesses. In the production of bakery products "Urgench bakery" in Urgench, "Temir Yolchi", "Khorezm bread", "Murot polvon", "Khorezmmatlubotsavdo" in Yangibazar district, "Temir Yo'li" in Urgench, Business Hazorasp in Hazorasp district, which are the largest producer, of bakery products in the largest assortment.

In 2015, the region produced 2,480 tons of bakery products, with 56.4% of the total production volume in the "Khonka grain products" JSC and "Khorezm don" JSC. 9/10 of pasta is produced by small enterprises and only large enterprises produce pasta at "Khonka don Product", which produces 12.5% of the industry's products. The main capacities of the network are Bagat 30.5%, Khanga 26.3%, Urgench 23.1% and Shovot district 17.5%, which produce 97.1% of the sector's output. In other districts of the region flour mills are concentrated in small enterprises. The districts of Gurlan and Khiva are slightly different. In accordance with the above indicators, the regional specialization and concentration of production is highest in Bagat, Khonka, Urgench

and Shavat districts. In particular, regional specialization is much higher in Urgench and Shavat than in Khonka and Bagat districts.

As it is noted in the oil and fat industry of the region, the only large industrial enterprise is in the joint-stock company “Urgench yog-moy”. Certain changes have occurred in the specialization of JSC “Urgench yog-moy”. In particular, the decline in the supply of technical seeds required the enterprise to produce more fat than other raw materials. In 2007, the company started production of soybean oil based on technological equipment. The network produces a wide range of non-food products including cotton seeds, soybeans and sunflower oil. The branch is narrowly specialized. The enterprise's production combinations are not complen. For example, there is no production of margarine from vegetable oil waste.

The meat industry is a bit more productive. Most of the meat is processed by small businesses, with about 1% of processed meat produced in the region. The volume and assortment of meat processing and meat production are increasing in the region. However, despite the fact that the region produces 1, 2 times more live meat than consumer demand, a number of meat products are imported from neighboring regions and abroad.



**3-picture. Specialization of the milk industry (in per cent) 2015.**

Source: Data of the Khorezm Regional Department of Statistics

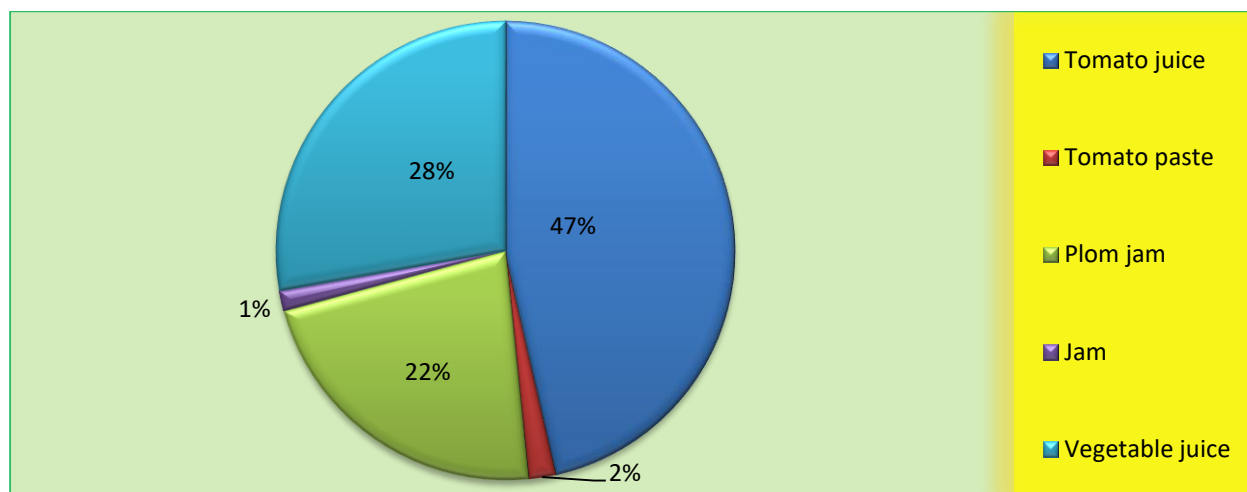
The rate of poultry and mutton production is particularly low. Approximately 2/3 of meat production is produced in Urgench district and 1/3 in Urgench. Among other administrative units, meat is processed only in Shavat and Yangibazar districts.

Regional specialization and territorial concentration of industrial production is naturally high both in Urgench district and Urgench city.

It should be noted that the meat industry is not one of the specialized branches of the region. In the food industry, 1.7% of the sector's output comes from the meat industry. The dairy industry goods are also produced by small businesses. 9.6% of milk produced in the country is produced in this region (2015). The level of milk processing in the region is 7.4%.

At the same time, the range of dairy products is small. In the dairy industry, the main products are bryza cheese, cheese and ice cream (3-picture). Only certain businesses in the industry produce certain types of dairy products. These include “Horezm Holod”, LLC “Besharyk Sut”, “Gefest” and “Tillo Domor”.

Given the fact that dairy products have a special place in the population's consumption and most of the dairy industry is exported, expanding the volume and range of products is a key issue. The regional composition of milk production is similar to the meat industry. Urgench district accounts for 65% of the total network output and 28% is in Urgench city. The industry's share in industrial production and food industry is 4.5–7.4% respectively.



**4-picture. Canned food industry occupation (in per cent) 2015.**

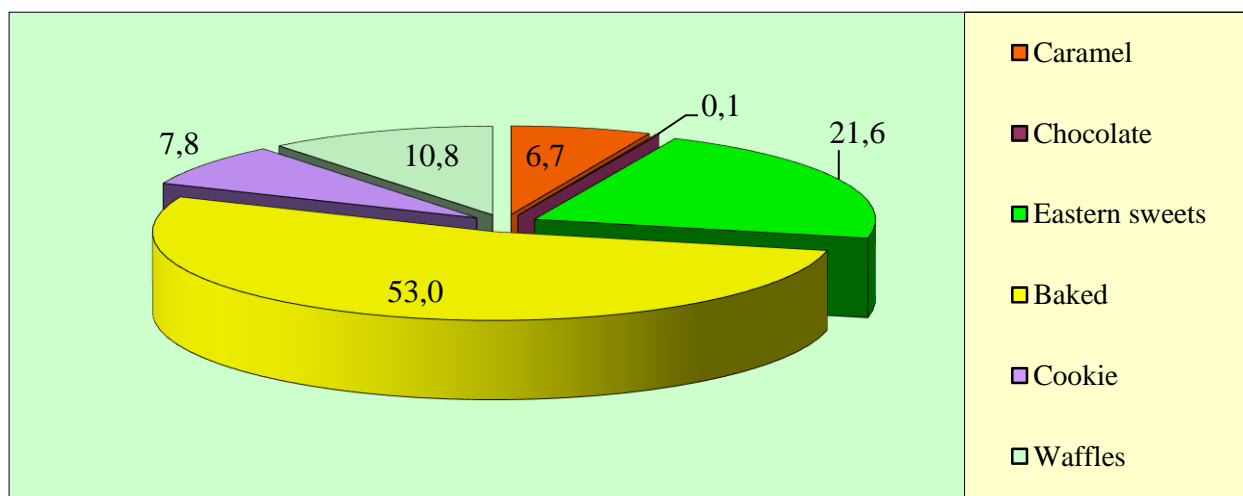
Source: Data of the Khorezm Regional Department of Statistics

In 2015, the region produced 1027 conventional jars, 695.3 thousands of which or 67.7% accounted for tomato paste, juice, drinks, pastes, purees, ketchup and sauces. At the same time, the company produces canned fruit and jam products. As can be seen from the abovementioned, tomatoes and vegetable juices are most commonly produced

in the region. They account for 46.5% and 27.8% of the sector's output. The following are the production of ground fruit jams, tomato paste, and jam (4-picture).

The industry is mainly concentrated in small businesses, most of which are narrowly specialized. The industry produced 3.6% of gross industrial output and 16.1% of food production. The territorial structure of the sector is very imperfect. Two thirds of the total production is concentrated in Urgench, 35% in Urgench, and 2% in Gurlan district.

The confectionery industry produces a wide range of biscuits, cakes and cookies, waffles and caramels. In 2015, it produced 1.5 thousand tons of various confectionery products, of which 29.3% was made from sugar, the rest was made from a mixture of flour and other components. Manufacturing in the industry is based on old technology, sometimes in the form of handicrafts. For example, small businesses account for 53% of cookies, 21% for oriental sweets, 10.8% for waffles, 7.8% for cakes and cookies, and 6.8% for caramel and chocolate products.(5 - picture).



**5-picture. The confectionery industry breakdown (in per cent) 2015.**

Source: Data of the Khorezm Regional Department of Statistics

Given the fact that the region is importing chocolate, caramel, and a number of confectionery products from outside and from the rest of the region, it is clear that there is a need to use the domestic opportunities for network development. The region produces the highest number of confectionery products in Urgench (52%), Gurlan (25%) and Bogot (19%) districts, and in Urgench, Honka, Khiva and Koshkupir districts. The share of the industrial sector is small and the capacity of the sector is mainly concentrated in the small business sector. In particular, “Shirin” LLC in

Urgench, “Nazokat Kamronbek” in Gurlan district, “Ganja Vali” private enterprise in Urgench district are small enterprises producing large amount of confectionery products in the region.

**Conclusion:** The analysis shows that, although there are many branches of the food industry in the region, they are narrowly specialized. Although most of the industrial products are concentrated in large enterprises, they are mainly focused on primary strategic products: flour, vegetable oil and sugar. Although the food industry is growing rapidly in the area of small business and private entrepreneurship, businesses in this sector can only meet domestic demand for certain types of products.

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