SCIENTIFIC RESEARCH OF THE SCO COUNTRIES: SYNERGY AND INTEGRATION 上合组织国家的科学研究:协同和一体化

Proceedings of the International Conference Date: June 8

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Beijing, China 2022

# 上合组织国家的科学研究:协同和一体化 国际会议

# 参与者的英文报告

# International Conference "Scientific research of the SCO countries: synergy and integration"

Part 1: Participants' reports in English

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# Proceedings of the International Conference "Scientific research of the SCO countries: synergy and integration". Part 1 - Reports in English

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这些会议论文集结合了会议材料——研究论文和科学工作者 的论文报告。他们检查研究问题的技术和社会学方面。一些 文章涉及人格专业化研究问题的理论和方法论方法和原则。

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# 组织保护公司利益免受外部威胁 ORGANIZATION OF PROTECTION OF THE COMPANY'S INTERESTS FROM EXTERNAL THREATS

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抽象的。 文章围绕公司在微观层面的运作, 外部环境的影响, 分析了影响业务 流程效率和提高公司竞争力的因素。 特别关注经济安全的各个方面。

关键词:公司、经济和数学模型、经济安全、风险、对冲、竞争力、所有者、收入、买方、卖方。

**Abstract.** The article describes the existing areas around the functioning of the company at the micro level, the influence of the external environment, analyzes the factors that affect the efficiency of business processes and increase the competitiveness of the company. Particular attention is paid to aspects of economic security.

*Keywords:* company, economic and mathematical models, economic security, risks, hedging, competitiveness, owner, income, buyer, seller.

Consider the economic security of the company from the point of view of the external environment. And here the interests of the owner come to the fore, and as the main criterion for evaluating economic security, we will take the income from the company's activities.

Suppose that a company can produce many types of products I. As an inde-

pendent variable, consider the volume of output  $x_i$ . Each type of product  $\forall i \in I$  is characterized by the vector  $a_i = (a_{i,j}), j = \overline{1,7}$ 

 $a_{i,1}$  - the amount of the owner's income per unit of product *i*;

 $a_{i,2}$  - unit selling price *i*;

 $a_{i3}$  - amount of tax payments per unit of product *i*;

 $a_{i,4}$  - the volume of own work (labor intensity) in value terms per unit of product *i*;

 $a_{i,5}$  - the cost of materials, raw materials, components, energy and other resources coming through the supply chains, in the price of a unit of product *i*;

 $a_{i6}$  - labor costs per unit of product *i*;

 $a_{i,7}$  - deductions from the cost of fixed capital per unit of product *i* (depreciation).

In addition, for each type of product  $i \in I$ , the probability of selling products  $p_i$  is determined.

Company capabilities are characterized by the vector  $C = (C_j), j = \overline{1,7},$ where

 $C_{\scriptscriptstyle 1}$  - the amount of the minimum income that satisfies the owner of the company;

 $C_2$  - company's share capital;

 $\tilde{C_3}$  - company's working capital;

 $C_4$  - payroll amount;

 $C_5$  - company's revenue.

Then the problem is formulated as follows: to determine the structure and volume of output from a given set I, delivering the maximum income of the owner [8], i.e.

$$y = \sum_{i \in I} p_i a_{i,1} x_i \to max$$

subject to the following restrictions:

• the volume of output of all types of products is limited by the value of fixed capital (if necessary, the value of fixed capital can be represented by a vector characterizing its structure), the value of  $\alpha$  is determined based on the planned or ongoing depreciation policy,  $0 \le \alpha \le 1$ .

$$\sum_{i \in I} a_{i,7} x_i \leq \alpha C_2$$

• labor costs are limited by the size of the wage fund

$$\sum_{i\in I}a_{i,6}x_i\leq C_4$$

• the volume of accounts payable should be limited to a fixed share of the proceeds from the sale of the company's products, where the value of  $\beta$  fixes the share of proceeds used to pay off accounts payable,  $0 \le \beta \le 1$ 

$$\sum_{i\in I} a_{i,6} x_i \leq \beta C_5$$

• the volume of receivables is limited by the available amount of working capital, taking into account tax payments and work in progress, defined as the volume of own work (labor intensity) in value terms, attributable to each unit of output *i*;

$$\sum_{i \in I} (a_{i,3} + a_{i,4} + a_{i,5}) x_i \le C_3$$

As a result of solving the problem, the maximum possible income of the owner is estimated, which is compared with the income that he expects. If the received income y significantly exceeds the minimum income that the owner expects, then one can count on the fulfillment of mutual obligations of the owner and the company. The owner's income is assessed taking into account the company's tax burden and is closely linked to the range of products produced. In addition, as a result of solving the problem, not only the mission is revealed as the main goal of the company that justifies its existence, but also the contours of the company's vision and its architecture are determined.

The following model is devoted to formalizing the process of interaction between a company and consumers of products in terms of determining the best conditions under which all manufactured products are sold and at the same time maximum revenue is achieved. Usually, when modeling such processes, the emphasis is on meeting demand. The parameters of the proposed model include the maximum amount of receivables, the conditions for the sale of products, the volume of output, and unit prices. As an additional effect from the application of the model, the possibility of minimizing working capital due to the timely receipt of payments for sold products is considered. This ensures the economic security of the company. From the reduction of the period of receipt of payments for the sold products, an increase in the profitability of the enterprise and, as a result, an increase in the income of the owner follows.

Suppose that a company can produce many types of products I, which are sold in a set of strategic business areas S. For each type of product, the output  $a_i$ , is given, which must be sold. Revenue for products sold may not be received immediately after the transfer of products to the buyer, but after some time. Therefore, the process of formation of receivables is dynamic and is carried out for a certain set of periods  $t \in T$ . Therefore, the probability vector of realization  $\{p_{i,s,t}\}$  of products  $i \in I$  in each strategic management zone  $s \in S$  on a given set of periods Tis given. At the same time, for  $\forall i \in I$  and  $\forall s \in S \sum_{t \in T} p_{i,s,t} = 1$ .

For each strategic management zone, the following are set:

 $c_{is}$  - the price at which a unit of product *i* is sold in the strategic economic zone *s*;

 $f_{i,s,min}$ ,  $f_{i,s,max}$  - the minimum and maximum range of possible sales volumes of products of the type  $i \in I$ . (The lower limit of the volume of sales in the strategic economic zone is determined by economic feasibility, and the upper limit depends on its capacity, the market segment that enterprises can count on based on the pricing policy and the severity of competition).

As an independent variable, consider the value  $x_{i,s,t}$ , which characterizes the number of units of production *i*, for which payments are received in period *t* from the strategic management zone *s*.

Then the problem of minimizing the receivables of the company is to determine such values of the variables  $\{x_{i,s,t}\}_{i \in I, s \in S, t \in T}$ , so that the functional characterizing the deviation from the given receivables D of the amount of revenue, received in each period from each strategic economic zone for each type of product, taking into account the probability of its receipt, reached a minimum [8], i.e.

$$F = |D - \sum_{t=0}^{|T|} \sum_{s=1}^{|S|} \sum_{i=1}^{|I|} c_{i,s} p_{i,s,t} x_{i,s,t} | \to min,$$

subject to the following restrictions

• the volume of output of each type must be fully realized

 $\sum_{s \in S} \sum_{t \in T} x_{i,s,t} \ge a_i \text{ for } \forall i \in I,$ 

• the volume of sold products of type i, released in the period t = 0, in each strategic management zone must be within the specified limits

# $f_{i,s,min} \leq \sum_{t \in T} x_{i,s,t} \leq f_{i,s,max} \text{ for } \forall i \in I, \forall s \in S.$

The mathematical model is designed to assess the impact of the product sales process on the company's revenue. The proposed model is characterized by a number of parameters:

• D - specified receivables;

•  $f_{i,s,min}$ ,  $f_{i,s,max}$  - restrictions on the possible volume of product sales in the strategic economic  $\forall i \in I, \forall s \in S$ ;

•  $c_{i,s}$  - the price at which a unit of product *i* is sold in a strategic business area *s*;

•  $\{p_{i,s,t}\}$  - the probability vector of product sales  $i \in I$  in each strategic business area  $s \in S$  for a given set of periods T, which, on the one hand, is a measure of the risk of a given volume of product sales, and on the other hand, this vector characterizes the conditions for selling the company's products in the strategic zone;

•  $a_i$  – output volume of product *i*.

Each of the above parameters is the result of analytical studies related to forecasting the state of the enterprise's external environment. The result of the forecast cannot be unambiguous, since different assumptions are used for each version of the forecasting process, which have a significant impact on its value. The proposed model allows you to integrate the results of forecasting and evaluate the response of the enterprise to the proposed conditions of activity.

Thus, the model, in essence, represents the model of the mission of the enterprise, which determines its purpose and the way the owner receives income. A sufficient variety of model parameters makes it possible to analyze different variants of the enterprise mission based on various scenarios. These scenarios assume a change in the range of products, their output volumes, prices for them, as well as the composition of strategic business zones and their capacity, depending on the pricing policy pursued and the possible amount of receivables. The limitation of receivables is caused by the desire to ensure, at the expense of incoming proceeds, the fulfillment of the enterprise's obligations for wages, repayment of accounts payable, tax payments and income of the owner. At the same time, it is assumed that the volumes of output of products that are in demand are sufficient to fulfill the listed obligations. In this case, the timing of receipt of payments for the delivered products is the factor that is designed to fulfill the listed obligations of the enterprise and, thereby, ensure its economic security. The proposed model is the manager's tool that allows not only to substantiate the mission of the enterprise, but also to check the effectiveness of the marketing policy, including the pricing strategy.

The economic security of a company largely depends on the position taken by the state, which refers to all levels of legislative and executive power.

The state, seeking to create the necessary conditions for the company's activities, must take into account a lot of factors that can provide competitive advantages, thereby contributing to an increase in the owner's income. But the state uses the same factors for taxation, since it believes that the owner should share his income for the possession of the benefits that are provided to him. The main such factors include the territory and its location, the availability of the necessary resources, the proximity of sales markets, the availability of labor and its competencies, skills, traditions, as well as the degree of infrastructure development and externalities. These effects include [3]:

• negative, mainly related to the increase in anthropogenic pressure on the territory and impact on the environment;

• positive, associated with a multiplier effect, stimulating the creation of other enterprises, in one directly or indirectly interacting with this.

Depending on the characteristics of the product and the technology of its

production, these factors affect the efficiency of the enterprise in different ways. Thus, it is from the point of view of income from the activities of the enterprise that the owner considers the policy of the state in the field of economy, finance, loans, taxes.

To build a model for assessing the impact of the size and structure of the tax burden on the size of the company's income, it is necessary to have the following data. First of all, a set of types of manufactured products I and a set of strategic business zones S, in which these products can be sold, must be determined. In addition, a set of cost elements J is defined. For each strategic economic zone  $\forall s \in S$  the vector  $\delta_s = \{\delta_{s,i}\}$ , is set, each component of which determines the value of tax and customs rates per element of the price of the enterprise's products. Each component of the vector  $\delta_{s,i}$  corresponds to the total value of tax and customs rates corresponding to the conditions of production and sale in the strategic economic zone s.

For each type of product  $\forall i \in I$  a vector is given that characterizes the price structure  $a_i = \{a_{i,i}\}$ , where *j* – is the index of the price element, and  $a_{i,i}$  – is the value of the price element *j* of product *i* in value terms. The sum of the elements is the price of the product, i.e.  $c_i = \sum_{j \in J} a_{i,j}$ .

For each type of product  $\forall i \in I$  and each strategic economic zone  $\forall s \in S$  the following is set

• interval of production volume *i*, which can be sold in the strategic economic

zone  $s [n_{i,s}^{min}, n_{i,s}^{max}]$ ; • for the boundaries of the output volume interval *i*, the probabilities of realization of these output volumes  $[p_{i,s}^{max}, p_{i,s}^{min}]$  in the strategic management zone *s*, are determined, where the first probability corresponds to the lower boundary.

Tax payments for each unit of production  $\forall i \in I$  in the strategic economic zone  $\forall s \in S$  are

$$f_{i,s} = \sum_{j \in J} a_{i,j} \, \delta_{s,j}$$

Then, by varying the range (types of products), the volume of its sales in different zones of strategic management, with the same output in value terms, it is possible to reduce the tax burden of the enterprise and thereby increase the company's profit and the owner's income. If the volume of sales of company B, products is given, then it is required to determine such values of the set of elements  $\{x_{i,s}\}$ , so that the functional characterizing the volume of revenue minus tax payments [5], i.e.

$$F = \sum_{i \in I} \sum_{s \in S} p_{i,s} \ x_{i,s}(c_i - f_{i,s}) \to max$$

peaked when the constraints below were met, where.

 $x_{i,s}$  - sales volume *i* in the strategic economic zone *s*;

 $p_{i,s}^{T}$  - the probability of selling the volume  $x_{i,s}$  of products  $i \in I$  in the strategic

economic zone  $s \in S$ . This probability is determined from the relation

$$p_{i,s} = p_{i,s}^{max} - (p_{i,s}^{max} - p_{i,s}^{min}) \frac{(n_{i,s}^{max} - x_{i,s})}{(n_{i,s}^{max} - n_{i,s}^{min})}$$

The following restrictions are imposed on the values of model variables  $\{x_{i,s}\}$ :

• the total output of all types of products should not exceed a given value B, i.e.

$$\sum_{i\in I} c_i \sum_{s\in S} x_{i,s} \le B$$

• the volume of sales of each type of product in each strategic economic zone should be within the specified limits, i.e.

$$n_{i,s}^{min} \le x_{i,s} \le n_{i,s}^{max}$$

The presented model makes it possible to assess the prospects of a particular strategic economic zone if it is impossible to use price competition. But if in any strategic area of management there is an opportunity to raise the price of their products, then the situation can change dramatically, taking into account the new relationship between price, profit and tax payments. Then, the priority of the pair (products, strategic management area) can be obtained by ranking the values

$$R_{i,s} = \frac{c_i - f_{i,s}}{c_i} \text{ for } \forall i \in I \text{ and } \forall s \in S$$

If the order in the ranked series does not change when the price changes, then the priorities remain unchanged.

The economic security of an enterprise depends not only on the efficiency of the production processes used, but also on interaction with partners that supply the necessary components, including materials, components, energy resources, and information [2].

For the architecture of an enterprise, including its logistics system, to be effective, it must satisfy a number of requirements [4]:

1. It is necessary to ensure the interaction between the production and logistics systems of the enterprise in order to release products in accordance with the concluded contracts for its supply, with the coordinated work of all production links according to a single schedule.

2. Ensuring the continuity of production and the continuity of the involvement of the main business processes of the enterprise in the implementation of the production program. These requirements are contradictory, since there is either an incomplete use of capacity due to insufficient scope of work, or interruption of the production period due to lack of capacity, or due to both at the same time due to an imbalance in the structure and magnitude of capacities relative to the structure and volume of output. under signed contracts. Therefore, a compromise between the continuity of production and the use of capacity is achieved while meeting the deadlines for the implementation of contracts.

3. Ensuring the reliability and reliability of planning the implementation of the production program of the enterprise, which is represented by a set of concluded contracts for the supply of products. The subject of the contract is an agreement on the timing and volume of product delivery [1]. The problem lies in coordinating the terms and volumes of delivery in accordance with the capabilities of the enterprise, its capacity structure and the structure of the production program, which represents the entire set of contracts concluded.

Therefore, there is a constant need for supply planning, which includes:

• selection of suppliers who can provide the components necessary for the production of products;

• determination of the nomenclature and volume of supplies in each planning period based on the capabilities of the enterprise.

These opportunities are associated with limiting the cost of the supplied components, which in each planning period affects the cost of production, as well as the amount of funds that can be allocated based on the company's revenue and the distribution of this revenue according to obligations, including tax deductions, remuneration for personnel, income owner, depreciation and other payments. It should also be taken into account that the revenue received from the sale of products of the previous production cycle is spent, which, on the one hand, is designed to finance both the costs of the current production cycle and the purchase of the necessary components to create products for the next period (fig. 2).

Thus, it is necessary to take into account the (time) lag that inevitably arises in the process of financing the production process. Given the change in production volumes from period to period, as well as the restrictions on the supply of each component necessary for the production of products, and other circumstances mentioned above, it is inevitable that the amount of funds allocated for the purchase of components necessary for production is subject to wide fluctuations.

The model of interaction between an enterprise and suppliers is based on a number of hypotheses.



Figure 2. Distribution of logistics management decisions by periods

As the first hypothesis, the assumption is used that the process of the enterprise functioning can be represented as a sequence of planning periods. In each period, regardless of the presence or absence of changes in the production program, the following processes are repeated:

• planning production volumes and purchasing the necessary components for subsequent periods;

- sale of products manufactured in previous periods;
- receipt of proceeds from the sale of products manufactured in previous periods;
- financing of production in the current period;

• purchases of the necessary components for the production of products in subsequent periods.

A repeating sequence of processes makes it possible to represent the process of interaction between an enterprise and suppliers in the form of a static model.

The second hypothesis: the enterprise has sufficient storage space to accommodate all purchased components necessary for the production of products.

The third hypothesis: the supply of the necessary components for the production of products can be carried out each planning period in batches, the size of which is determined by the supplier.

The fourth hypothesis: each product requires the purchase of its components. From this assumption it follows that parts that are repeated for a number of types of products are manufactured at the enterprise. And the purchase of the necessary components is preferable for economic reasons.

Fifth hypothesis: the price per unit for all supplied components does not depend on the volume of supplies.

And so, we will assume that three sets are defined:

I - a set of nomenclature of products manufactured by the enterprise;

J - a set of components necessary for the production of these products;

S - a set of partners supplying the components necessary for the production of products.

Each partner can supply a certain subset of the required components  $J_s \in J$ . For each component  $\forall j_s \in J_s$  the following are defined:

 $n_{j,s}$  – the number of components (materials, components) in the supplied lot;  $c_{j,s}$  - unit price;

 $k_{j,s}^{min}$ ,  $k_{j,s}^{max}$  - the minimum and maximum number of games that this partner can deliver *s*. The minimum number of batches of products is determined by the economic feasibility of their production, and the maximum value is dictated by the need to maintain relations with all enterprises that order the components they need;

 $p_{j,s}$  – Reliability of delivery of components on time and in a given volume ( $0 < p_{j,s} \ll 1$ ). Reliability depends not only on the partner's ability to produce

and ship components according to the contract, but also on the ability to transport within the specified time.

As a variable of the model, we use the variable  $x_{i,j,s}$ , which characterizes the number of batches of the component  $j \in J$ , supplied by partne  $s \in S$ , for products  $i \in I$ .

For the enterprise, the value B is set, which limits the volume of purchases of components for this planning period. This value is determined by the currently available and expected to be received (according to the payment calendar) part of the proceeds, which can be used to purchase the necessary components. On the other hand, the amount of purchases of the necessary components is determined based on the planned production volumes for the next period. In case of a lack of funds allocated for the purchase of components, it is necessary to obtain a loan to increase working capital. Otherwise, accounts payable arise, the problem of repayment of which must be foreseen in subsequent periods.

Each unit of production  $\forall i \in I$  is characterized by the vector  $a_i = \{a_{i,j}\}$ , where  $a_{i,j}$  – is the required amount of components  $j \in J$  (materials, components) for the production of product  $i \in I$ . And for each product the planned output volume  $d_i$  is given.

In addition, for each product  $\forall i \in I$  for each component  $j_i$  the value of stocks at the beginning of the planning period  $m_{i,i} \ge 0$  is set.

Then the task is to determine such a set of values  $\{x_{i,j,s}\}$ , which provides a minimum cost for the purchase of components necessary for the production of the planned volume of output, i.e. functionality that takes into account the reliability of supply, i.e.

$$F = \sum_{i \in I} \sum_{j \in J} \sum_{s \in S} p_{j,s} c_{j,s} n_{j,s} x_{i,j,s} \to min$$

must reach a minimum under the following conditions [7]:

• purchases of components should not exceed the specified value B

$$\sum_{i \in I} \sum_{j \in J} \sum_{s \in S} c_{j,s} n_{j,s} x_{i,j,s} \le B$$

• purchases of components from each partner must be within a certain range

$$k_{j,s}^{min} \leq x_{i,j,s} \leq k_{j,s}^{max} \text{ for } \forall i \in I, \forall j \in J, \forall s \in S$$

• purchases of components must ensure the release of the planned output for each product

$$\frac{1}{a_{i,j}}(m_{i,j} + \sum_{s \in S} n_{i,j} x_{i,j,s}) \ge d_i \text{ for } \forall i \in I \text{ and } \forall j \in J$$

The above model allows, depending on the options for the planned volume of output, to determine the most profitable purchase volumes from the point of view of management, varying:

• the composition of suppliers and the volume of purchases from them by changing such parameters as the price per unit  $(C_{j,s})$ , which may depend on the volume of supplies, or by limiting the number of supplied lots  $(k_{j,s}^{min}, k_{j,s}^{max})$ ;

• the amount of reserves due to changes in the parameters of the reliability of supplies  $(p_{j,s})$ ;

• volumes of purchases (B,  $d_i$ ).

In general, the model makes it possible to evaluate the consequences of various decision options regarding the provision of production with the necessary components.

The first limitation takes into account the possibility of creating stocks in case of non-delivery of components on time and in a given volume. The stock value in this case is equal to

$$\sum_{i\in I}\sum_{j\in J}\sum_{s\in S}(1-p_{j,s})c_{j,s}n_{j,s}x_{i,j,s}$$

These stocks can play the role of insurance for future periods or can be created in case of a planned increase in the volume of production of a particular product. In addition, it is possible to create stocks of the necessary components of the product if deliveries are made over long periods. The creation of stocks may be due to seasonal fluctuations in demand for the company's products. Thus, the model takes into account the possibility of inventory management.

The second limitation allows varying the composition of suppliers and the volumes of components purchased from them. Changing the boundaries allows you to determine the most profitable option, where there will be more than one supplier of certain components, which reduces the dependence on the behavior of this partner.

The third limitation is directly related to the expected output volumes and allows you to closely link production planning and its provision with the necessary components.

The solutions obtained for the above tasks make it possible to coordinate the economic interests of all stakeholders in the activities of the enterprise and thereby ensure its economic security, thereby minimizing threats from the internal and external environment.

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# 组织保护公司利益免受内部威胁 ORGANIZATION OF PROTECTION OF THE COMPANY'S INTERESTS FROM INTERNAL THREATS

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抽象的。 文章从微观层面描述了公司运作的现有领域,内部环境的影响,分析了影响业务流程效率和提高公司竞争力的因素。 特别关注经济安全的各个方面。

关键词:公司、经济和数学模型、经济安全、风险、对冲、竞争力、所有者、收入、买方、卖方。

Abstract. the article describes the existing areas around the functioning of the company at the micro level, the influence of the internal environment, analyzes the factors that affect the efficiency of business processes and increase the competitiveness of the company. Particular attention is paid to aspects of economic security.

*Keywords:* company, economic and mathematical models, economic security, risks, hedging, competitiveness, owner, income, buyer, seller.

Any manager (owner of a business process) must be empowered, responsible and given the necessary resources. In the course of his activities, he makes management decisions for which he must be held accountable. And any management decision has positive and negative consequences. Therefore, threats - are the negative consequences of early management decisions, since in reality, under the same conditions, some companies prosper while others go bankrupt. Therefore, it would be advisable to move from the term "threats" to the term "economic security of the company".

Under economic security, it is proposed to understand the timely fulfillment of mutual obligations by the company on the one hand, and the owner, staff (primarily management), customers, partners and the state on the other hand (fig. 1, tab. 1) [6]. Each of the parties can contribute both to the prosperity and bankruptcy of the company.



Figure 1. Mutual obligations of the parties to economic activity

## Table 1.

Party of obligation	Criterion	Obligations
1.Clients	Availability and amount of receivables	Failure to fulfill the obligations by product buyers (customers)
2.Company	Availability and amount of accounts payable	Failure to fulfill the obligations to partners for the supplied materials, raw materials, energy resources
3.Company	Late repayment of loans (delay in repayment by terms and amount)	Failure to fulfill the obligations to credit institutions
4.Company	Existence of debts on tax payments (lag behind deadlines, amount)	Failure to fulfill the obligations to the state
5.Company (staff)	Availability of finished products in warehouses (value of stocks, share of monthly output)	Release of products that are not in demand
6.Company	Non-payment of dividends (date of last payment, amount of dividends)	Failure to fulfill obligations to the owner
7.State	No tax refund (date, amount)	Failure to fulfill the obligations by the state
8.Partners	Stopping production due to non-delivery of raw materials, in accordance with contractual obligations, which indicate the terms, amount and terms of payment for the supply	Failure to fulfill the obligations by partners

Criteria for assessing the fulfillment of obligations

Hence the division into external and internal aspects of economic security, i.e. external and internal threats.

Let's consider the tendencies which are shown in the internal environment of the company. In this regard, it is necessary to consider the actions of management, that is, the owners of business processes. A manager is an administrator acting in accordance with the job description, i.e. an official. According to modern views on managerial decisions, an official first of all solves problems related to his own well-being and often does not solve the problems of the company if they contradict his interests. In other words, the manager solves the problems of the company if they coincide with his own interests.

To maintain and strengthen his position, the manager strives to increase:

a) the number of personnel subordinate to him;

b) the amount of financial resources that he can dispose of;

c) to shift his responsibility to another person, preferably directly subordinate to him, while maintaining his powers intact.

All these trends are clearly confirmed in reality. The number of "management personnel" is increasing, the size of which is growing faster than the number of core personnel. This additional staff, removing part of the responsibility from the manager (i.e., the owner of the business process), to strengthen their position, begins to produce new instructions and reporting that do not have any impact on the company's performance. These instructions limit the powers, but do not reduce the responsibility of the owners of the main and logistical business processes that make up the essence of the company's core business. Thus, the quality of management decreases, the company's costs increase, but the position of the owners of management business processes is strengthened by reducing their responsibility. At the same time, as a rule, there are no restrictions on the growth of administrative costs. When drawing up the company's staffing table for the next year, it is always possible to expand the management staff at the expense of the cost of maintaining the main staff.

This ignores the fact that competitive advantages, as a rule, are a consequence of the competencies of personnel employed in the core and logistics areas.

To confirm what has been said, it is enough to look at the approved organizational structure of almost any company, where there is not even a hint of the main activity of the company, although the purpose of developing an organizational structure is to distribute powers, resources and responsibilities between the owners of management, core and logistics business processes. Recently, the main production units (main business processes) do not appear in the organizational structures of companies. At best, there are owners of business processes that solve the problems of logistics and promotion of the company's products to the market. Thus, tendencies to transfer responsibility to the lower levels of the management hierarchy without transfer of authority increase costs, but do not increase economic security and create internal threats. These threats are created as a result of the activities of management personnel independent of the mission of the company, ignoring the main activity, but defending their own interests at the expense of the interests of the owner and key personnel, who, as a rule, embody the main competencies and competitive advantages of the company.

From the point of view of the internal environment, the economic security of a company depends on the efficiency of using its assets in accordance with the adopted mission, that is, the production and sale of products planned for production. But output is directly dependent on demand, which usually has a periodic (seasonal) character. In the event of a drop in demand for the company's products, free capacities appear, which it is advisable to use to organize the production of additional nomenclature. Therefore, considering the economic security of the company from the point of view of the effective use of its assets, prerequisites are created for the timely and complete fulfillment of mutual obligations by the company, on the one hand, and by personnel, on the other.

Suppose that the company is focused on the production of mass products, the sale of which is associated with a certain risk. It is assumed that the company produces several types of the main range of products and has the opportunity to organize the production of an additional range of products at the available free capacities.

If payment for the company's products is made in a timely manner, then the incoming proceeds should not only reimburse the costs, including payment for supplies by partners necessary for the production and sale of components and services, but also provide income to the owner and staff, tax deductions to the state. The efficiency of the use of assets directly depends on the activities of the personnel, which should [9]:

• to identify, on the basis of forecasting, the prospects for the sale of a particular product (company's mission);

• evaluate the company's capabilities to organize the production of the most promising products in terms of profitability (company's vision);

• determine the required volumes of output of the entire range of products planned for release in order to achieve the minimum required profitability of the company (general strategy of the company);

• identify the necessary competencies of personnel to achieve sufficient competitiveness of products (business strategies necessary for the implementation of the general strategy);

• carry out the design of the company's architecture [10], including the production, logistics, management and organizational structure, as well as the information system that ensures the functioning in order to determine the necessary operating and logistics costs, pricing policy (functional strategies).

The main nomenclature is a list of products that characterizes the specialization of the company, which determines the presence of the necessary variety of business processes (technological processes and equipment, competencies and qualifications of the main production personnel).

The additional nomenclature includes products that do not correspond to the specialization of the enterprise, using temporarily free capacities arising from the presence of technologically necessary equipment that is not used continuously. For the production of products related to the additional nomenclature, production units engaged in assembly operations can be created. In addition, if necessary, supplies of the necessary components are organized. The purpose of organizing the release of an additional product range is to reduce the costs of production of

the main product range.

The main product range  $\forall i^o \in I^o$  is characterized by the vector  $\{a_{i,j}^o\}$ , where  $a_{i,j}^o$  - is the amount of business process resources  $j \in J$ , required to produce a unit of product  $\forall i^o \in I^o$ . In addition, the unit price  $c_i^o$  for the main item must be determined. The independent variables are the vector  $\{x_i^o\}$ , each element of which  $x_i^o$  determines the volume of output of the main product range  $i^o \in I^o$ 

For the main nomenclature, the problem of maximizing the output of products should be solved, i.e., it is necessary to determine such values of the elements of the vector  $\{x_i^o\}$ , so that the functional characterizing the volume of output of the main nomenclature in value terms, taking into account the probability of realizing the entire volume of output  $p_i^o$ , i.e.

$$F^o = \sum_{i^o \in I^o} p_i^o c_i^o x_i^o \to max$$

reached its maximum when the following constraints were met

• the amount of resources used for the release of the main nomenclature of resources for each business process does not exceed its capacity, i.e.

$$\sum_{i^o \in I^o} a^o_{i,j} \, x^o_i \leq b_j, \text{ for } \forall j \in J,$$

• the profitability of each type of product of the main nomenclature should not be lower than the specified level of profitability  $x_{i,min}^{o}$ , i.e.

$$x_i^o \geq x_{i,min}^o$$

where  $x_{i,min}^{o}$  – determines the volume that is minimally necessary to achieve a given profitability of the products of the main nomenclature.

The probability of realization in a given volume implies the receipt of all (if the probability is equal to 1) or part  $(1 > p_i^o > 0)$  of payments for products. If we assume that payments for products are stretched over time, then there is a need to increase working capital to finance current production. This negatively affects the return on equity and leads to a drop in the owner's income, thereby reducing his interest in income and, consequently, reducing the economic security of the enterprise.

The task of planning the production of products of the additional nomenclature is to determine the set  $\{x_{i^d}\}$ , each element of which  $x_{i^d}$  determines the volume of output of the additional nomenclature  $i^d \in I^d$ , so that the functional characterizing the output of the additional nomenclature taking into account the probability of its realization  $p_{i^d}$ , i.e.

$$F^{d} = \sum_{i^{d} \in I^{d}} p_{i^{d}} c_{i^{d}} x_{i^{d}} \to max$$

reached its maximum when the following constraints were met

• the costs of missing business processes required for the release of products

of an additional nomenclature should not exceed the amount of available free capacity for existing business processes

$$\sum_{j^{dd} \in J^{dd}} \sum_{i^{d} \in I^{i}} a_{i^{d}, j^{dd}} x_{i^{d}} \leq \sum_{j^{d} \in J^{d}} b_{j^{d}},$$

• the value of the additional nomenclature of resources used for the production of products for each of the existing business processes does not exceed its capacity

$$\sum_{i^{d} \in I^{d}} a_{i^{d}, j^{d}} x_{i^{d}} \le b_{j^{d}}, \text{ for } \forall j^{d} \in J^{d}$$

Thus:

1) the boundary between the main and additional nomenclature is established,

2) the limit of expansion of the enterprise's capacity for the production of products of an additional nomenclature is determined.

The proposed system of models makes it possible to assess the feasibility of producing products, determine the best range of products, and thereby increase the profitability of the enterprise.

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### 为特大城市郊区农业用地的住宅设施登记提供条件(以彼尔姆边疆区郊区为例) PROVISION OF CONDITIONS FOR THE REGISTRATION OF RESIDENTIAL FACILITIES ON AGRICULTURAL LAND PLOTS IN THE SUBURBS OF A MEGALOPOLIS (ON THE EXAMPLE OF THE SUBURBAN DISTRICT OF PERM KRAI)

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抽象的。 在发现俄罗斯土地法典某些条款与城市规划文件之间存在矛盾的基础上,确定了对在农业用地上竖立的基本建设对象进行国家地籍登记的问题。 对农用地不动产登记条件进行了考察,提出了建议,审议了将建成耕地转为其他类别土地的方案,并提出了具体方案。

关键词:农业用地,登记,农业用地,未利用地,聚居地,公共地籍图。

Abstract. On the basis of the identified contradictions between certain provisions of the Land Code of Russia and urban planning documentation, the problems of putting on the state cadastral registration of capital construction objects erected on agricultural land have been identified. The search for conditions was carried out and recommendations were given for the registration of real estate objects on agricultural land, options were considered and proposals were substantiated for the transfer of built-up arable land to land of other categories.

*Keywords:* Agricultural land, registration, agricultural land, unused land, land of settlements, public cadastral map.

As you know, the potential of the Russian agro-industrial complex is very high. Agricultural production is an important sector of the country's economy. The Russian Federation has land resources capable of ensuring not only the food security of the state, but also making it possible to export agricultural products abroad. However, in a number of regions of the country, for example, in the Ural zone, the non-chernozem zone of the country, a significant part of agricultural land remains unclaimed or unused for its intended purpose. For example, according to the estimate of the Ministry of Agriculture of the Perm Krai, unused agricultural land in 2021 was less than 50%. There are many reasons for this, but, first of all, it is connected with the difficult natural conditions of the northern territories of the country. Hence the high costs of agricultural production compared to the southern regions of the country, the lack of interest of both land owners and potential investors in farming in the zone of risky farming.

Economic, political, social transformations in the country at the end of the last century had a negative impact on the agricultural economy. There was also a drop in demographic indicators within the boundaries of rural areas, and the migration of the rural population to cities increased. At present, Russia can be called a country of "dying villages". The standard of living in settlements differs significantly from the standard of living in a large city, in terms of income, level of social and engineering infrastructure. Differences in the level and quality of life are the main reason for the outflow of the population from rural areas to cities. The result is abandoned settlements, unused agricultural land.

At the same time, the need of Russian citizens for their own land is gaining momentum. Today, the most popular land plots in the suburbs of large and largest cities are agricultural land with the type of permitted use "gardening". The cost of such plots is lower compared to the lands of settlements. Urban dwellers willingly acquire such plots, erect residential buildings on them, cultivate the land in accordance with the type of permitted use. However, due to the existing contradictions between the provisions of land and town planning legislation, as well as municipal town planning documentation, the use of land plots located on agricultural land as part of agricultural land is recognized as not corresponding to the intended purpose, and the objects erected on these plots are not subject to state registration. [1, 2, 3].

The high demand for once unclaimed agricultural land for gardening and construction of real estate on the plots has led to a conflict of interest not only between authorized bodies, but also between the government and copyright holders.

So, in the Frolovsky rural settlement of the Perm municipal district of the Perm Krai, located in close proximity to the city of Perm, gardening associations of citizens are represented (both built-up and with no capital construction projects), including located on agricultural land as part of agricultural land (figure 1).



Farmland mapPublic cadastral mapFigure 1. An array of land plots with the type of permitted use "horticulture",<br/>located on agricultural land from agricultural land

Analyzing the structure of undeveloped horticultural associations classified as agricultural land, we can conclude that already at the stage of organizing the territory (allocation of land plots for roads, driveways and common areas), about 30% of agricultural land is withdrawn from agricultural circulation. It should be noted the insignificance of the areas of land, bred for horticulture. The total area of horticultural associations within the boundaries of the settlement is just over 800 hectares, or 4.5% of the total area of the settlement. The total area of horticultural associations of citizens established on agricultural land is 92 hectares, or 12.5% of the total area of agricultural land. At the same time, more than 80% of the land is not cultivated and is overgrown with forest. At the same time, the inclusion in the circulation of agricultural land, which is currently not cultivated and overgrown with woody vegetation, will require significant investment.

According to satellite imagery 2021 (figure 2), the total area of overgrown agricultural land in the composition of agricultural land on the territory of the Frolovsky rural settlement is 550 hectares. Most of this area, according to official data, is listed as arable land.



Figure 2. An example of overgrowing of agricultural land with trees and shrubs (https://onesoil.ai/ru/)

The actual state of land plots overgrown with trees and shrubs and land plots of horticultural associations corresponds to the characteristic signs of non-use of agricultural land from agricultural land for its intended purpose or use in violation of the legislation of the Russian Federation [4].

The analysis showed that the areas of unused land overgrown with forest vegetation are many times larger than the land used by the townspeople for gardening. Thus, the area of horticultural associations is 13% of the total area of agricultural land, while the area of arable land overgrown with trees and shrubs is more than 75% (figure 3).



- Площадь сельскохозяйственных угодий заросших древесно-кустарниковой растительностью
- Площадь садоводческих объединений расположенных на сельскохозяйственных угодьях
- Прочие сельскохозяйственные угодья

Figure 3. The structure of agricultural lands of agricultural land in the Frolovsky rural settlement

The costs of reclamation of both agricultural lands are high, as is the payback period for reclamation costs. Today, unfortunately, the involvement in the circulation of unused land in order to obtain agricultural products is of no interest either to municipalities, or to agricultural organizations, or to potential investors.

Today there is a situation where most of the agricultural land of the surveyed area is overgrown with trees and weeds. The reason is the lack of economic incentives for potential producers for agricultural production, the lack of the necessary equipment, labor resources. At the same time, citizens are ready to actively use these lands, create horticultural associations, engage in horticulture, and build garden and individual residential buildings. In other words, use and cultivate land that is not of interest to the agricultural sector. However, the construction of residential buildings on agricultural land is contrary to the Land Code of the Russian Federation [5]. And without the possibility of seasonal or permanent residence, without permission to build a house, the acquisition of land for urban residents loses its meaning. There is a contradiction between the provisions of town planning documentation, the provisions of land and town planning legislation. The Land Code of the Russian Federation prohibits construction on agricultural lands as part of agricultural land, indicates that these lands are "particularly valuable lands and have a special legal regime that does not allow the withdrawal of such lands from agricultural circulation", and also emphasizes that for such lands there is a principle of conservation of targeted use [5]. The Town Planning Code states that "town planning regulations are not established for agricultural land as part of agricultural land" [6].

However, all these provisions are violated in the urban planning documentation (Rules for land use and development). The rules of land use and development (RLD) often establish urban planning regulations on agricultural land, as well as gardening associations of citizens are included in the boundaries of agricultural land.

From legal contradictions, social conflicts arise between the right holder and government officials, when the owner of the land plot (the bona fide acquirer) is misinformed about the possibilities of using the land. For example, when one authorized body allows construction based on the rules of land use and development, another authorized body refuses the right holder to take further actions, such as state cadastral registration, guided by the provisions of the Land Code.

Of undoubted interest is the ecological aspect of the problem. An analysis of information on the state and use of land, annually prepared by the territorial bodies of Rosreestr, shows that degradation of agricultural land is observed almost throughout the entire territory of the Russian Federation. The main negative processes include water and wind erosion, flooding of the territory, waterlogging and waterlogging, salinization, and so on. Soil degradation is expressed in the quantitative and qualitative deterioration of its properties, which leads to changes in the functions of the land as the main means of production, as well as a natural resource. This also reduces the natural and economic significance of the land. As a result, there is a general decline in the production potential of the land fund.

Currently, citizens are ready to acquire unused agricultural land and improve it. But, when purchasing a plot, each owner expects the construction of real estate objects on this plot, which categorically does not correspond to the intended use of such a plot. There is a clear contradiction hindering the development of land relations. Thus, in the Perm Krai there are about 603 thousand hectares of arable land out of 1,627 thousand hectares. (37%) are not currently used for various reasons. Large commodity producers are giving up part of the agricultural land, and a significant part of the urban and rural population is ready to use part of this land on certain conditions. Based on the existing contradictions, it is necessary to consider ways and options for providing unused land plots for gardening with the possibility of building a residential or garden house and its subsequent registration.

The legally permitted and simplest option is to transfer land plots to the lands of settlements, by joining them to existing settlements or by creating new ones. The proposed transfer of land to the category of settlements would allow all interested citizens to register their capital construction projects and, if possible, register in such houses.

However, the costs of creating new settlements, or expanding the boundaries of existing ones with the subsequent creation of engineering, social infrastructure, and the construction of social facilities, are unreasonably high. Local governments are unable to finance such projects. Calculations show that the payback period for investments can be tens and even hundreds of years. Thus, this option for resolving the existing contradictions has both positive and negative sides (figure 4).



*Figure 4.* Contradictions arising from the inclusion of plots of horticultural associations of citizens in the boundaries of settlements

Due to the inability to carry out legal construction on lands intended for the production of agricultural products, land plots acquired for gardening are abandoned and continue to overgrow with weeds and trees and shrubs. At the same time, specialists of various levels recognize that the introduction of these land plots into economic circulation is impossible and economically inexpedient [1,2].

To date, the problem of registering capital construction facilities on land plots provided for gardening by citizens on agricultural land, caused social tension and the emergence of many lawsuits.

There is no doubt that this problem must be urgently addressed. Moreover, it should be solved taking into account the territorial, natural, economic and social characteristics of specific territories. In each of the subjects, taking into account the above conditions, their own vision of the problem can be formed, and, consequently, the decisions made must correspond to these features.

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## 俄罗斯联邦国家监督体制改革的必要性和方向 THE NEED AND DIRECTIONS OF REFORMING THE SYSTEM OF STATE CONTROL AND SUPERVISION IN THE RUSSIAN FEDERATION

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抽象的。减轻业务结构的行政负担,提高控制和监督机构活动的效率,从完全和全面的国家控制过渡到基于风险的方法,包括根据损害风险程度对检查进行差异化规划受保护的对象,需要对俄罗斯的控制和监督活动进行改革。俄罗斯联邦监管活动体制改革的主要目标是提高安全水平,消除企业实体过重的行政负担。为此,将取消国家控制(监督)制度领域不相关的规范性行为,代之以新的行为。本文概述了正在进行的改革框架内的法律文件。根据所采取措施的结果,控制和监督机构的活动应重新转向预防和预防违规行为。

关键词:控制,监管,基于风险的方法,改革

Abstract. Reducing the administrative burden on business structures, increasing the efficiency of the activities of control and supervisory bodies, the transition from complete and total state control to a risk-based approach, involving differentiated planning of inspections, depending on the level of risk of harm to protected objects, necessitated a reform of the control and supervisory activities in Russia. The main goal of the reform in the system of control and supervision activities in the Russian Federation is to increase the level of security and eliminate the excessive administrative burden on business entities. To this end, irrelevant normative acts in the field of the state control (supervision) system will be canceled, instead of which new acts will be adopted. The article presents an overview of legal documents in the framework of the ongoing reform. Based on the results of the measures taken, the activities of control and supervisory bodies should be reoriented to the prevention and prevention of violations.

Keywords: control, supervision, risk-based approach, reform

The content of the concept of "control" includes the direction of the activity of the subject of control in relation to the object in order to achieve certain re-
sults, that is, a comparison of reality with the desired state. State control is a type of control depending on its subject, along with public, private and international. Accordingly, the object of state control is the state authorities endowed with this authority in the field of activity assigned to them. The subject of state control is represented by the activities of public authorities, institutions and organizations and citizens. The implementation of this type of control is carried out on the basis of the principles of legality, respect for human rights and freedoms, objectivity and accuracy, purposefulness, flexibility, and effectiveness.

From December 2016 to 2025, the priority program "Reform of Control and Supervisory Activities" is being implemented in the Russian Federation. Expected results of this program:

- reducing the level of damage to legally protected values (reducing the number of deaths due to controlled types of risks, reducing the number of diseases and poisonings, victims and injuries due to controlled types of risks) by 15% from the level of 2015 by the end of 2018 and by 50% by the end of 2025 ;

- reduction in the level of material damage for controlled types of risks by 10% from the level of 2015 by the end of 2018 and by 30% by the end of 2025;

- reduction in the implementation of state control (supervision) and municipal control of the administrative burden on organizations and citizens engaged in entrepreneurial and other activities by at least 20% compared to 2016 by the end of 2018 and by 50% by the end of 2025;

- growth of the index of quality of administration of control and supervisory functions, including the optimization of the use of labor, material and financial resources used in the implementation of state control (supervision) and municipal control, by 2 times by the end of 2025. [one]

It is planned to form a modern and efficient system of state control aimed at reducing socially significant risks. The following two areas of reform are distinguished:

1) building a new system of mandatory requirements that correspond to the current level of technological development and a risk-based approach;

2) establishment of detailed rules relating to the organization of control and supervision activities.

As part of the implementation of the program, it is necessary to develop and implement, including a risk management system in control and supervisory activities, a system for preventing offenses and mechanisms for assessing the effectiveness and efficiency of control and supervisory activities, as well as eliminating redundant, outdated and duplicating mandatory requirements.

According to the Program, the development of departmental risk management systems in control and oversight bodies involves several stages related to the achievement of each of the four levels of maturity of departmental risk management systems, including:

- formation of complete registers of controlled objects, establishment of risk categories (hazard classes) and criteria for classifying objects as such, assigning objects to a certain risk category (hazard class), introducing a model for maintaining lists of objects up to date, ensuring publicity and availability of lists of objects, their categories risk (hazard classes) and criteria for assigning objects to them;

- creation of a system for collecting objective data that allows keeping records of the harm caused, determining risk indicators and indicators for the implementation of the "dynamic model", as well as introducing a model for updating risk indicators and indicators for the "dynamic model" depending on changes in risk profiles;

- reassessment of risks on a regular basis, depending on the actual distribution of damage by risk categories (hazard classes), including using "big data" arrays;

- introduction of interdepartmental risk maps, international comparison of the effectiveness of risk management systems.

The reform of the system of control and supervision in the Russian Federation is supervised by the Deputy Chairman of the Government of the Russian Federation (Head of the Staff of the Government of the Russian Federation) and the Minister of Economic Development of the Russian Federation.

In July 2020, the State Duma of the Russian Federation adopted Federal Law No. 248-FZ "On State Control (Supervision) and Municipal Control in the Russian Federation", in which "state control (supervision), municipal control in the Russian Federation refers to the activities of control (supervisory) bodies aimed at preventing, identifying and suppressing violations of mandatory requirements, carried out within the powers of these bodies by preventing violations of mandatory requirements, identifying their violations, taking measures provided for by the legislation of the Russian Federation to suppress identified violations of mandatory requirements, eliminate them consequences and (or) restoration of the legal situation that existed before the occurrence of such violations. [2]

The law came into force on July 1, 2021, but some articles entered into force on January 1, 2022 and come into force on January 1, 2023, respectively. The law stipulates the following:

- application of risk-based approach;

- the possibility of using alternative regulatory instruments;

- list and order of control and supervisory measures;

- procedures for prevention and other measures to prevent risks;

- the procedure for bringing controlled persons to responsibility and challenging the actions of the inspector;

- expansion of guarantees for citizens, legal entities and individual entrepreneurs in the course of their state control (supervision), municipal control. The system of state control (supervision) includes three levels:

1) federal state control (supervision) - the powers of state authorities of the Russian Federation on the subjects of the jurisdiction of the Russian Federation and on the subjects of joint jurisdiction of the Russian Federation and the constituent entities of the Russian Federation;

2) regional state control (supervision) - the powers of a constituent entity of the Russian Federation on subjects of joint jurisdiction of the Russian Federation and subjects of the Russian Federation and on subjects of jurisdiction of a constituent entity of the Russian Federation;

3) municipal control - the powers of local governments to resolve issues of local importance. [2]

Also in July 2020, Federal Law No. 247-FZ "On Mandatory Requirements in the Russian Federation" was adopted, which defines the legal and organizational framework for establishing and evaluating the application of the requirements contained in regulatory legal acts that are related to the implementation of entrepreneurial and other economic activities, assessment of compliance with which is carried out within the framework of state control (supervision), municipal control, bringing to administrative responsibility, granting licenses and other permits, accreditation, product conformity assessment, other forms of assessment and examination. [3]

Thus, the reform of control and supervisory activities in the Russian Federation is in full swing. Normative acts are adopted in accordance with the ongoing reform program. The law on state control (supervision) defines: systems and principles of state control (supervision); system of state control (supervision) bodies; subject and object of state control (supervision); control and supervision production. However, before the end of the reform, there is still a lot of time and a lot of measures need to be taken. It is necessary to form an effective and transparent process of control and supervision activities, develop directions for the development of mechanisms for preventing violations of mandatory requirements and remote control, study and implement foreign experience and international standards.

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## 支付特许权使用费延期确定货物完税价格机制的应用特点 FEATURES OF THE APPLICATION OF THE MECHANISM OF DEFERRED DETERMINATION OF THE CUSTOMS VALUE OF GOODS WHEN PAYING ROYALTIES

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注解。目前,由于目前的司法实践模棱两可,将许可费计入货物完税价格的问题变得越来越重要。 尽管FCS就这个问题提出了建议,但仍有一些问题没有得到解决,例如广告产品的版税。

在这方面,研究了将特许权使用费计入货物完税价格的理论和实践方面,分析 了法院对此问题的裁决实例,并考虑了0CTS负责人的建议和解释。

在研究了上述材料后,结合实践中的普遍特点,提出了改进将特许权使用费计入货物完税价格的程序的建议。

关键词:完税价格、特许权使用费、确定标准、延迟确定完税价格的机制。

Annotation. Currently, the issue of including license fees in the customs value of goods is becoming increasingly relevant due to the ambiguous current judicial practice. Despite the recommendations issued by the FCS on this issue, some aspects still remain unresolved, for example, royalties from advertising products.

In this regard, the theoretical and practical aspects of including royalties in the customs value of goods are studied, examples of court rulings on this issue are analyzed, and recommendations and explanations of the head of the OCTS are considered.

Having studied the above materials, recommendations are given to improve the procedure for including royalties in the customs value of goods, taking into account the prevailing features in practice.

*Keywords:* customs value, royalties, criteria for determination, mechanism of deferred determination of customs value.

The general provisions on the procedure for determining the customs value of

goods are regulated by the EAEU Customs Code, Chapter 5. The customs value is formed from the value of the goods and the amount of all expenses incurred by the participant of foreign economic activity during their transportation to the Russian Federation. Based on its value, the customs payments required for payment are calculated, that is, duties, taxes, excise taxes and fees.[1]

The basis for determining the customs value of imported goods should be, to the maximum extent possible, the value of the transaction with these goods, i.e. to determine the customs value, it is necessary to first apply the first method (according to the value of the transaction with imported goods), and if it does not allow an assessment, then the second method is applied, and so on, each method sequentially, up to the sixth (backup method).

The most common method of determining the cost in practice is the first one. Its essence lies in the fact that, depending on the terms of the transaction for the purchase and sale of goods, the value of the goods specified in the shipping documents (invoice, contract) changes by the amount of additions and deductions that arise during the delivery of goods to the checkpoint. In order to unify the understanding of the rights and obligations of the parties, basic terms of delivery have been developed, which define the obligations of the seller and the buyer for the delivery of goods, establish the moment when the risk of accidental death or damage to the goods passes from the seller to the buyer. The conditions are called basic because they set the price structure depending on whether shipping costs are included in the price of the goods or not. All basic terms and conditions with the corresponding trade terms are included in the collection of INCOTERMS.

Article 40 of the Customs Code of the EAEU provides additional charges to the price of the goods. That is, at the legislative level, it is clearly stipulated which additional costs need to be added or deducted from the customs value.

Thus, additional charges may include remuneration to agents, brokers, packaging costs, loading and unloading, insurance, as well as royalties.

Additional charges are indicated in the declaration of customs value for goods in section B of columns 13 to 23. Each type of expense has its own code in accordance with the classifiers used when filling out the DT. Section B is filled in through a special dialog box, including information about license fees in paragraph 15.

It should be noted that royalties are any payments related to the use of an IPO by entrepreneurs, registered properly. The object of the license agreement may be a patented production technology, trademark, copyright object, etc.

This type of accrual is one of the more difficult types of license payment to account for in the customs value, since it provides not only a fixed payment, but also interest deductions, which cannot always be immediately predicted. The condition on the amount of remuneration and the procedure for determining it is one of the essential conditions for a paid contract concluded on the basis of civil relations between the parties.

When making a decision on the inclusion of royalties in the CU, it does not matter whether the copyright holder is a person of the EAEU member state or not. But at the same time, it is necessary to pay attention to the following issues – an analysis of the terms of the license agreement, as well as other documents related to license payments. This situation occurs when royalties are not included in the price actually paid for the goods.

At the same time, it is necessary to answer two questions.

1. Do royalties relate to imported goods? (hereinafter referred to as the criterion of relevance).

2. Whether the payment of royalties is a condition for the sale of imported goods for export to the customs territory of the EAEU (hereinafter referred to as the criterion of the terms of sale).

At the same time, both criteria must be met simultaneously.

If, as a rule, there are no problems with the first question, and everything is quite obvious, then it is the second question that generates a lot of disputes with customs authorities. This is due to a number of factors, starting with an insufficiently detailed analysis by customs of the terms of foreign economic contracts and licensing agreements mediating the import of goods, and ending with a misinterpretation by customs authorities (and after them by the courts) of the wording "sale for export".

When analyzing these criteria, it should be borne in mind that the sale of assessed (imported) goods is understood as their sale for export to the EAEU TT.

When determining whether royalties relate to a given product, it is not taken into account how the amount of royalties is calculated, but why they are paid and what exactly the licensee receives in exchange for their payment.

The most common situation in which license payments can be considered as related to the goods being evaluated is a situation in which imported goods contain an IPO and (or) are made using an IPO in respect of which rights under the license agreement are presented.

Thus, the answer to the question whether the payment of royalties is a condition for the sale of assessed (imported) goods for export to the customs territory of the EAEU is obvious in the case when both the license agreement and the foreign economic contract are concluded, for example, between the same persons, and both documents are interrelated, contain references to each other and they provide for the payment of royalties as one of the conditions for the delivery of goods. However, such explicit conditions are rarely included in contracts.

At the same time, even in the absence of such obvious provisions regulating legal relations for the supply of goods and payment of royalties, customs authorities very often add customs payments. To do this, it is not even necessary for the declarant to pay any royalties. It is sufficient that, for example, a person to whose address goods containing an intellectual property object are imported pays royalties to the copyright holder. This position is due to the fact that the customs authorities equate the wording "sale for export to the territory of the Union" with the wording "import into the territory of the Union".

When conducting an analysis, it is necessary to determine what type they belong to: whether they are used in the development of products of their own production, the performance of work or, for example, the implementation of managerial or organizational decisions. The criteria indicating the need to include royalties for the use of know-how technologies in the customs value of imported goods include the existence of a link between royalties and imported products on the principle of the original reason for paying payments to the licensor and the existence of a link between royalties and the agreed terms of purchase of goods.

To establish signs of such a connection, it is necessary to analyze the license agreement under which the technology transfer from the licensor was carried out, as well as the supply contract.

The dependence of the sale of the valued goods on the payment of royalties may also occur in cases where the contract under which the goods are sold for export to the EAEU TT does not contain a direct indication of the payment of royalties as a condition for the sale of the valued goods, especially when the copyright holder and the seller are different persons.

Due to the fact that royalties are often paid, as mentioned above, not immediately, but as interest on the sale of goods, a mechanism for deferred determination of the customs value of goods has been introduced.

The procedure for the deferred determination of the customs value of goods was approved by the Decision of the Board of the Eurasian Economic Commission dated June 19, 2018 No. 103.

When using the deferred determination of the customs value of goods, it is stated:

• during the customs declaration of goods - the preliminary value of the customs value of goods;

 $\bullet$  after the release of the goods - the exact value of the customs value of the goods.[2]

In this case, the contract must establish the procedure for calculating such payments, which are unknown on the day of registration of the goods declaration. In accordance with the Procedure, the customs authority conducts customs control of the preliminary value of the customs value, as well as customs control of the exact value of the customs value. According to Section IV of the Procedure, when carrying out control of the preliminary value of the customs value, the customs authority verifies compliance with the conditions of application of the procedure, including compliance of the terms of the contract with the conditions provided for by the Procedure. In case of non-compliance with these conditions, including in case of non-submission of relevant documents, the preliminary value of the customs value is considered as the customs value of goods declared according to method 1 without applying the Procedure. [3]

On the one hand, the deferred determination of the customs value solves the problem of the impossibility of accurately determining the customs value at the time of importation of goods if, according to the terms of the license agreement, royalties are calculated and paid after the sale of goods on the domestic market. However, it is quite difficult to correlate the fact of the sale of goods on the domestic market with each specific DT, in respect of which the preliminary customs value was calculated. On the other hand, the application of the Procedure will require the improvement of the accounting system, which should make it possible to compare the data on the sale of goods on the domestic market with specific DTS in order to declare the exact value of the customs value within a period specified by law (no more than 15 months). In addition, some of the goods declared in a particular DT may not be sold on the domestic market for 15 months. In some cases, importers will need to change the terms of the license agreement, taking into account the provisions of the Procedure.

Despite these difficulties, the entry into force of the Procedure for Deferred Determination of Customs value makes it possible to implement the principles of the WTO and the legislation of the EAEU, according to which the customs value should be determined on the basis of actual data on the transaction price. [4]

Thus, taking into account these existing problematic aspects, it is necessary to set out in the methodological recommendations the features of accounting for foreign trade participants in order to compare the goods sold with a specific DT, as well as to hold consulting meetings of foreign trade participants with customs authorities in order to correctly draw up license agreements to exclude legal conflicts on this issue. It is also necessary to consider the possibility of making additional payments for the goods actually sold later than the 15-month period established in the legislation, since this condition is not always feasible.

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## 按人口使用电子国家和市政服务的水平对俄罗斯联邦地区进行聚类 CLUSTERING OF REGIONS OF THE RUSSIAN FEDERATION BY THE LEVEL OF USE OF ELECTRONIC STATE AND MUNICIPAL SERVICES BY THE POPULATION

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抽象的。本文探讨了俄罗斯数字公共管理的方法以及数字化影响下的经济转型。在根据该指标对俄罗斯联邦的组成实体进行聚类的帮助下,特别注意该地区人口对电子公共服务的使用。确定了地区和全国人口使用电子公共服务的现状。 关键词:数字经济,数字化,国家工程,数字公共管理,集群

**Abstract.** The article considers approaches to digital public administration in Russia and the transformation of the economy under the influence of digitalization. Particular attention is paid to the use of electronic public services by the population in the regions, with the help of clustering the constituent entities of the Russian Federation according to this indicator. The current state of the use of electronic public services by the population in the regions and the country as a whole is determined.

*Keywords:* digital economy, digitalization, national project, digital public administration, clustering

Today, digital transformation concerns most areas of human life. All over the world, the digitalization of social, economic and political aspects of the functioning of society is taking place. The governments of different countries and various commercial companies are going through stages of digitalization, because of this, the overall picture of the world is changing. The Internet is no longer a secondary means of communication, receiving services and information. It is an integral part of human life [7].

On the way to the formation of a digital society, there are many areas of development: information and communication technologies, digital economy, information security, the formation of specialized personnel, artificial intelligence, etc. All this is an integral part of the future transformation. In addition to these areas, special attention is paid to the development of the digital state. At the moment there is no clear definition of this direction. But the following definition describes it more capaciously: "A digital state is a state that works with digital transformation - with new digital realities in the economy and society, and at the same time uses new digital tools and processes"[3].

One of the directions for the development of such a state is digital public administration, which is designed to improve the existing relationship between the government, organizations and the population. Through the introduction of digital technologies and platform solutions in the areas of public administration and the provision of public services, including in the interests of the population and small and medium-sized businesses, government management is being digitalized [2]. The formation of digital public administration has a number of advantages:

- reduction of bureaucratic costs in the provision of services;

- the ability to monitor the quality and effectiveness of the provision of public services to the population;

- digital transformation of interaction between the government of the country and regions with the population and organizations;

- the flow of work processes without the direct participation of a person;
- formation of feedback and response from the user;
- direct participation of citizens in receiving services;

- formation of incentives for bodies and organizations responsible for the provision of public services [12].

In Russia, within the framework of the national program "Digital Economy", the Federal Project "Digital Public Administration" is being implemented, aimed at achieving the national goal "Digital Transformation", defined by Decree of the President of the Russian Federation of July 21, 2021 № 474 "On the National Development Goals of the Russian Federation for period up to 2030". One of the goals of this project is to increase the share of socially significant services in electronic format up to 95%. To this end, the country is implementing measures in several areas:

- digital transformation of social and public services to the population;
- encouraging citizens to receive relevant services in electronic format;
- formation of opportunities for citizens to access digital services;

- creation of a comfortable and unified electronic environment to ensure the satisfaction of the population and organizations [10].

Russia is not the only country that is developing digital public administration. Indirectly, the effectiveness of decisions made on the federal program can be tracked using the international e-government development index (EGDI) [1]. In this 2020 world ranking, Russia ranked 36th out of 193 countries. The leaders of the rating were Denmark, South Korea and Estonia. For Russia, this is a good result. However, it is important to understand here that this index is only one of the ways to assess the effectiveness of the development of digital government. For the country, it is necessary to take into account territorial features, regional factors, ways and methods of achieving the goals.

Currently in the Russian Federation there are obstacles to the formation of sustainable e-government. The effectiveness of their elimination can form the basis for evaluating the effectiveness of digital public administration in Russia. Such obstacles include: the level of information security, insufficient digital illiteracy of the population, access to information and communication technologies (ICT) and confidentiality [6]. By gradually removing these barriers, the government of the country and the governments of the regions can develop and improve digital public administration.

To assess the effectiveness and conduct ongoing monitoring of the actions taken, statistical indicators of the digital economy are determined, the collection and analysis of which allow monitoring the development of digitalization and digital public administration in the country.

An important indicator of the effectiveness of decisions made is the proportion of the population that uses the mechanism for obtaining state and municipal services in electronic form. A feature of the indicator is its dependence on the above obstacles. So, when the digital illiteracy of the population is eliminated, the percentage of people using electronic services will increase or, for example, covering more and more territories with communications and the Internet, the number of users of public and electronic services in digital form will also increase, etc.

Based on this indicator, it is possible to trace the effectiveness of the implementation of digital public administration not only in the country, but also in each subject of the Russian Federation. Data on the share of citizens using the mechanism for receiving state and municipal services in electronic form as a percentage for the period 2014-2020 was taken from the official website of the Federal State Statistics Service [11]. The calculation methodology is formed as the ratio of the population aged 15-72 years old, who used electronic state and municipal services, to the total population, interacting with state authorities and local self-government within one year. Data are presented for 85 constituent entities of the Russian Federation.

Initially, it is worth considering the general dynamics of changes in the share of citizens using the mechanism for receiving state and municipal services in electronic form as a percentage in the period from 2014 to 2020. The radial diagram, where the subjects of the Russian Federation are located on the circumference (Figure 1), shows the percentage of use of electronic public services by the population and the deviation from the average value for 2014 and 2020.

# Scientific research of the SCO countries: synergy and integration

During the observation period, the average value of the use of electronic public services in the Russian Federation increased from 27.9% to 76.8%. Absolutely every region has improved its indicator compared to the base year. The maximum and minimum rates in 2014 were Primorsky Krai (66.1%) and the Republic of Dagestan (1.8%), respectively. The maximum and minimum rates in 2020 are the city of Moscow (93.7%) and Magadan Oblast (49.1%), respectively. It is also worth noting that in 2014 the studied indicator has a more chaotic distribution, there is a significant gap between the maximum and minimum values. By 2020, the deviation from the average value for the constituent entities of the Russian Federation becomes much smaller.



*Figure 1.* The dynamics of the use of electronic public services by the population, %

The dynamics of the use of electronic public services by the population. For a more comprehensive study of the indicator, it is necessary to classify the subjects of the Russian Federation, find common trends and patterns in the development of groups of regions, visualize the data obtained and give recommendations for the further development of digital public administration. The implementation of the tasks set is feasible with the help of cluster analysis. To do this, it is necessary to take the logarithm of the original sample, which will reduce the asymmetry of the data and obtain a distribution close to normal. Further, based on the obtained results, we build a dendrogram based on the Ward method [4]. The tree diagram

makes it possible to see the intermediate result, which we will later use to form the final clusters (Figure 2).



*Figure 2.* Dendrogram of the subjects of the Russian Federation on the use of digital public services by the population

The subjects of the Russian Federation are located vertically on the dendrogram, and the communication distance between them is horizontally. Figure 2 shows that connections of varying degrees of size are formed, which indicates that the regions of Russia really form groups according to the trait under study. It is advisable for further research to take the number of clusters equal to 3 or 4, where the sizes are equally significant in all groups of subjects.

Next, using the k-means method [8] we group the objects around a given number of centers (Figure 3).



Figure 3. k-means clustering

On the horizontal axis in figure 3 are the years, on the vertical axis is the percentage of use of electronic public services. More precisely, the Y-axis is the result of taking the logarithm of the values under study. On two graphs, the curves represent the dynamics of the average values of a certain cluster.

When dividing the subjects of the Russian Federation into 4 groups, one cluster is in contact with others and has an abnormal development trend. When the remaining 3 clusters are in the form of a logarithmic function, 4 is in the form of a curve.

For 3 clusters, a steady hit is observed. Accordingly, a more preferable end result would be a classification with 3 clusters. All 3 groups of subjects have positive growth, as well as the all-Russian indicator. Every year the gap between the averages is getting smaller, but at the same time the general trend towards growth and the position of groups in the overall ranking is not disturbed. For further convenience of use, we will give names to the clusters. Cluster 2 (with the lowest average) - "lagging" (12 subjects of the Russian Federation fall into it), cluster 1 - "moderate" (33 subjects of the Russian Federation), cluster 3 (with the highest average) - "advanced" (40 subjects of the Russian Federation) (Figure 4).



Figure 4. Distribution of regions in the Russian Federation by clusters, %

Based on the above data, a map of regions was compiled depending on their belonging to the cluster (Figure 5).



Figure 5. Results of clustering subjects of the RF

The overall picture of the use of electronic public services by the population for the period under review looks promising. Of the 85 entities, only 12 are lagging behind (14% of the total). Given the decrease in the gap every year 2 and 3 places from 1, some regions will move from a lagging cluster to a moderate or advanced one. It is noticeable on the map that a large concentration of advanced subjects of the Russian Federation is located in the central and southern regions of Russia. The SFD is dominated by a cluster of temperate regions, with the exception of the Republic of Buryatia and Tomsk Oblast, where the first is a lagging region, the second is an advanced region. In the Far East, there is parity among clusters, all of them have the same number of constituent entities of the Russian Federation.

Thus, most of the regions of Russia (86%) have a sufficient level of use of electronic state and municipal services by the population.

This study made it possible to study the patterns of distribution of subjects of the Russian Federation into groups, as well as identify lagging regions that need to be paid closer attention in order to improve performance based on data from advanced territories by borrowing experience and development tools.

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## 大学互动教育环境中教学解释学的特殊性 THE SPECIFICITY OF PEDAGOGICAL HERMENEUTICS IN THE INTERACTIVE EDUCATIONAL ENVIRONMENT OF THE UNIVERSITY

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抽象的。教学过程本质上是人为组织和协同的系统,解释学机制与这些系统相关联。任何知识、认知或实践活动的方法、文本或符号都需要识别作者、研究人员最初赋予它们的意义。这可以使用解释学技术来实现。然而,每个学生在思考所学知识时,都有自己的具体想法,表达了关于文化价值的现代观念。本文的目的是揭示意义创造教育技术在理解所研究的知识和了解知识在其发展中的作用方面的潜力。文章的材料是在对交互式学习技术大师班组织实验工作的结果进行比较理论分析和概括的过程中收集的。

关键词:教学诠释学、交互技术、意义创造技术、协同方法、知识解释技巧、个人意图

Abstract. Pedagogical processes by their nature are artificially organized and synergistic systems, in connection with which the mechanisms of hermeneutics work in them. Any knowledge, method of cognitive or practical activity, text or symbol requires the identification of the meaning that was originally invested in them by the author, the researcher. This can be achieved using hermeneutic technologies. However, each student, when thinking about the knowledge being studied, has his own specific thoughts that express modern ideas about the values of culture. The purpose of this article is to reveal the potential of meaning-creating educational technologies in understanding the knowledge being studied and seeing the role of knowledge in their development. The material of the article was collected in the process of comparative theoretical analysis and generalization of the results of *experimental work on the organization of master classes on interactive learning technologies.* 

**Keywords:** pedagogical hermeneutics, interactive technologies, meaningcreating technologies, synergetic approach, knowledge interpretation skills, personal intention

A synergistic approach to pedagogical processes requires expanding the possibilities of variant learning, built on different ways of understanding and explaining the world and taking into account the intentions and mental characteristics of students in professional education. In educational cognition, in the presence of pre-developed education standards, such a position is internally contradictory, but at the same time productive. The inconsistency of variable learning is due to the fact that scientific knowledge requires the purity of their meaning, essence, does not allow subjective opinion and the attitude of their author, students and other opponents. And in education, the same scientific knowledge, on the contrary, requires the introduction of variability, authorial positions, different opinions of opponents, and the creation of an emotional background around them. In education, to the essence of knowledge and scientific methods, it is also necessary to introduce knowledge about knowledge, knowledge about methods, knowledge about the significance of knowledge and methods of activity for a person, knowledge about how to use them in different areas of human life. To do this, it is necessary to reach languages more vivid and richer than the language in which scientific knowledge is given in a narrower area of nature or society.

In the pedagogical sense, knowledge should be brought to the level of understanding, which is impossible without a comprehensive disclosure, explanation of the history of the emergence of knowledge, the nature of the author's searches, positions and assessments, and the inclusion in them of the person who is currently learning them. Consequently, there is an urgent need to develop students' skills of interpreting knowledge and methods of activity. And the methods of interpreting texts and knowledge have been developed in hermeneutics as a general scientific theory and practice of understanding and interpreting reality and knowledge about it, embodied in texts [8]. The concept of hermeneutics in the scientific literature has different interpretations, such as "the art of interpreting and understanding texts" [1], "the art of interpreting the true meaning of texts" [9], "the science of interpreting facts, events" [6], "the art of understanding and self-knowledge " [10]. Comparison of these definitions makes it possible to establish the logic of the application of hermeneutic technologies in pedagogical processes. Researchers believe that the pedagogical essence of hermeneutic technology is the identification of the meaning of texts using the methods of interpretation, understanding and explanation [7]. Thus, at the level of the classical understanding of education,

it justifies the goal of identifying the potential meaning of texts, its understanding and interpretation in the form of assimilation of ready-made knowledge. At the level of synergistic positions, it is necessary to move on to interpretation and self-knowledge, in which students' own thoughts and meanings should arise regarding the potential meaning of knowledge, which is invested in them by the authors of knowledge creation or methodologists who proceeded from subject, professional or social goals.

In any interpretation of the concept of hermeneutics, the key point is the text, which is understood as everything that is artificially created by man [3], knowledge and methods of cognitive and practical activities, including those that make up the content of education. At the same time, it must be borne in mind that in the practice of teaching, scientific knowledge is considered as truth that is not subject to doubt, revision, development, different explanation and different understanding. The high achievement of understanding texts in education is the identification of the meaning embedded by the author in the text, knowledge, method of activity during its primary creation.

However, scientific knowledge, being objective characteristics of the connection between natural phenomena and society, is limited by the primary meaning of their authors. The disclosure and understanding of this meaning and meaning does not yet ensure the development of their own mental and creative capabilities of future specialists who will have to work in the new economic, technological and social conditions of the development of society.

The hermeneutic approach to vocational education requires an appeal to hermeneutic technologies, the purpose of which is to develop the ability of students to search for the potential and their own meaning of the studied texts, knowledge and methods of educational cognition.

The theoretical foundations of pedagogical hermeneutics were developed in the study by A.F. Zakirova. At the heart of her concept of hermeneutic interpretation of pedagogical knowledge, she considers the idea of integrating the logical-epistemological and value-semantic principles of interpretive activity [2]. With the hermeneutic approach, the logical-epistemological aspect is aimed at developing methodological skills in processing and analyzing texts, and the value-semantic aspect concerns the disclosure and use of the intentional and mental characteristics of the cognizing subject and the development of his ability to create new meanings, significance and prospects for the studied values of culture in new social living conditions. In this regard, in pedagogical hermeneutics, interpretation becomes a priority, requiring both the identification of the author's meaning and its explanation in the sense of the cognizer in the new social conditions of life. Adhering to this position, in our study, interactive and meaning-creating educational technologies have been developed, tested and experimentally substantiated. As a result of the study, it was revealed that the essence of learning is realized in the interaction of the student's cognitive activity with the activity of the teacher, interaction with information from different sources, the interaction of students among themselves and the orientation of students' searches for the future in project-based learning. But such interaction can only be achieved by touching on the intention, as the orientation of the students' goals to certain areas of knowledge or ways of activity, and based on mentality as a characteristic of their internal culture and style of thinking. Accordingly, meaning-creating educational technologies become the basis of interactive technologies, which allow creating an interactive environment in the educational process in which different meanings of students are stimulated and supported in the same knowledge and methods of activity for all, included in the content of education [4].

In accordance with the synergistic characteristics of pedagogical processes in the basis of meaning-creating educational technologies, it is necessary to consider adequate conceptual provisions that need to be guided in hermeneutical technologies for organizing the educational process.

So any student must be perceived and evaluated as a source of his own thoughts, only they do not appear spontaneously, but need constant targeted stimulation, support and support by the efforts of teachers.

Students' own thoughts arise not to ready-made knowledge, but to their variations, contradictions, uncertainty and surprise. Such situations can be created when studying knowledge in any scientific and subject area. There are ample opportunities for this in the humanities, but the determination of students to create and express their thoughts depends on the form of questions of teachers, addressed to conflicting details. So M. Gorky in a song about the Falcon says that "those born to crawl cannot fly". Creating a situation of doubt that the proletarian writer warns the common people not to claim power will allow organizing a discussion of the audience, during which different meanings of students can be obtained. Each artistic and folklore text contains a great potential for compiling such educational tasks.

Sense-creating technologies can also be used in the natural sciences, creating doubts about the contradictions of scientific knowledge. To do this, you can offer tasks of a different nature. So in mathematics, one can bring the concepts of Euclid, given by him to the point and line. He called a point "that which has no dimensions" and a line "length without breadth". If a line is a set of points, how do you get the length from the dimensionless points? In chemistry, water is said to be a concentration of hydrogen and oxygen ( $H_2O$ ). The question "Is it possible to drink water from a test tube where these gases are pumped in the indicated ratio"? Or in physics, diffusion is called "the phenomenon of the penetration of molecules of one substance into the intermolecular space of another substance". The question

of what was in this space of the first substance before the penetration of new molecules leads to emptiness or dark matter.

Situations of contradictions and doubts can also be created when studying new knowledge or identifying prospects for the development of this knowledge. Argumentation by each student of his thoughts will be carried out using hermeneutic technologies. Their diversity helps to reveal the specifics of students' self-knowledge, as well as the possibilities for students to interpret the potential meaning of authors and researchers in its modern presentation. Thus, the mechanisms of hermeneutics become in demand in the process of finding the meaning of students come to in the process of such technologies, leads them to an understanding of the prospects for their own development. The skill of the teacher in this case lies in the ability to draw students' attention to different aspects of the phenomena being studied.

The study of the hermeneutic potential of meaning-creating learning makes it possible to identify more productive interactive technologies: variable learning tasks, the method of key questions, reflection on associative images, a combination of basic and auxiliary knowledge, dialogic equality, brainstorming with the addition of substantiating one's ideas, mobilization of internal intention, role interaction, dialectics contradictions, hermeneutic circles interaction, reference to the history of knowledge creation, reasoning about scientific research [5].

Monitoring the manifestation and level of development of the skills of students' sense-creating abilities includes: an emotional response in situations of success and difficulties, an enthusiastic state, spontaneity of questions, efficiency in the flow of thoughts, determination in one's position, striving for original thoughts, a tendency to create and resolve conflicts of thoughts, striving to the identification and resolution of contradictions, the focus on the search for variable knowledge and ways of knowing.

Generalization of the characteristics of the possibilities of using the mechanisms of hermeneutics in meaning-creating technologies in vocational education allows us to formulate a number of scientific and methodological provisions:

1. Since pedagogical processes are related to synergistic systems, it is advisable to use hermeneutic technologies in them in terms of interpreting knowledge and methods of activity.

2. The productivity of the use of hermeneutic interpretation mechanisms in pedagogical processes is due to sense-creating technologies that ensure the creation by the student of his own thoughts and meanings in the same for all knowledge included in educational standards.

3. Meaning-creating educational technologies make it possible to bring students to self-knowledge and the ability to see and evaluate the prospects for their development.

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# 电气计算中的信息技术 INFORMATION TECHNOLOGIES IN ELECTRICAL CALCULATIONS

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注解。本文讨论了使用信息技术在使用虚拟物理实验室"电子原理"和 TINA-TI 程序的 SPICE 模拟器进行电气计算中的应用。 关键词:信息技术,电气计算,方案。

Annotation. The article discusses the use of information technology in conducting electrical calculations using the virtual physical laboratory "Principles of Electronics" and the SPICE simulator of the TINA-TI program.

Keywords: information technology, electrical calculations, scheme.

In today's world, information technology plays an important role in the formation and development of the electrical and energy industries, so the quality of graduate training is an important indicator for selection and demand in the labor market.

One of the problems of improving the quality of the educational process is the state of the technical equipment used in the classroom in the discipline of electrical disciplines. Often outdated, both technically and morally, can be broken, presented in insufficient quantities for all students. Therefore, one of the most effective and affordable ways to conduct various physical experiments is the introduction of information technology into the higher education system. With the help of specialized training programs, simulation programs, a student can independently simulate certain processes, control the results of his actions, change the initial data and visualize the result of the experiment.

The virtual physical laboratory "Beginning of Electronics" is an electronic kit that allows you to simulate the processes of assembling electrical circuits on a computer, study the features of their work, measure electrical quantities as it is done in a real physical experiment. The purpose of the training is to learn how to assemble electrical circuits and perform current and voltage measurements on the basis of a virtual experiment. The main element of visualization is the mounting table, on which the student can "solder" various parts. "Soldering" of parts to the desired contacts of the circuit board is carried out by dragging them from the panel to the circuit board [2]. When using this virtual laboratory, the forms of classes with students can be different: a laboratory workshop, a demonstration, the opportunity to work independently.

Exercise. On the mounting table, assemble the circuit, the diagram of which is shown in Fig. 1. It is known that the resistance is 200 ohms, the lamp is 2.5 V, the DC voltage source is 12 V, the key, the multimeter is in DC digital ammeter mode. Task: to learn how to work with an electronic (digital) ammeter [3].





The electric current is 47.9 mA. The device can be turned on in another section of the circuit and make sure that the readings do not change, or simultaneously turn on two multimeters in different parts of the circuit and make sure that the readings of the devices are identical.





Exercise. On the mounting table, assemble the circuit, the diagram of which is shown in Fig. 3. It is known that the resistor is 510 Ohm, the lamp is 12 V, the key, the connecting wires, the DC voltage source is 12 V. Task: to learn how to work with an electronic (digital) voltmeter [3].



Figure 3. Electrical circuit diagram

The voltmeter is connected in parallel to the section of the circuit where the voltage is to be measured. Unlike current, the voltage in different parts of the circuit is different. To check this, it is enough to measure the voltage across the resistor (Fig. 4).



Figure 4. Chain on the assembly table

Another interesting tool is the TINA-TI program, which is a SPICE simulator with an intuitive graphic design that allows you to master the software in a short time [1]. This program has no restrictions on the number of devices and structures used, it copes with complex circuits without difficulty, and is used to predict the actions of various analog techniques and switching power supplies.

With the help of the TINA-TI program, it is possible to form a plan of any complexity from scratch, combine parts of previously prepared solutions, control and establish many qualitative characteristics of the circuit.

A task. For the electrical circuit in Figure 5, we will write equations for determining currents using Kirchhoff's laws.



Figure 5. Loop currents in the diagram

Consider the solution of the problem in the TINA-TI program.

Let's choose 6 resistors (---) and 2 voltage sources (0). We connect the elements and get a diagram (Fig. 6).



Figure 6. Wiring diagram in TINA-TI

To find the value of direct current, we perform the sequence of actions shown in Figure 7.

The current values found in the TINA-TI program are indicated in the table (Fig. 8) and coincide with the values obtained in the analytical solution of the problem.



Figure 7. Analysis tab

🚟 Напряжения/Токи	×
I_R1[1,5]	1,15A
I_R2[1,4]	525,47mA
I_R3[3,6]	-1,69A
I_R4[0,1]	1,67A
I_R5[5,2]	-539,26mA
I_R6[0,2]	13,78mA
I_VS1[6,5]	-1,69A
I_VS2[2,4]	-525,47mA
I_VS3[0,3]	-1,69A
Показать Г Узловые напряжения Г Другие напряжения	Г Токи П Выводы
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Figure 8. Calculation results table

So, today there is a large selection of electronic circuit simulators. Most programs have a convenient and intuitive interface, which makes it easy to design complex electrical circuits, design multilayer printed circuit boards.

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## SKA-Neftyanik-2 曲棍球运动员在跨经向飞行条件下的功能状态特征 FEATURES OF THE FUNCTIONAL STATE OF THE SKA-NEFTYANIK-2 BALL HOCKEY PLAYERS IN THE CONDITIONS OF TRANSMERIDIONAL FLIGHTS

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抽象的。 文章致力于研究SKA-Neftyanik-2队员在比赛期间在4小时时差飞行 中适应和再适应过程中曲棍球运动员功能状态指标的变化问题。 (在新西伯利 亚市和克麦罗沃市的比赛)。 在 2019 年 10 月至 2020 年 1 月进行的研究过程 中,发现在气候条件急剧变化的 4 个时区的跨经向飞行会导致运动员出现急性不 同步症状,需要身体紧急适应。 运动员的适应过程在表现强度以及适应和重新 适应的速度方面具有明显的个体特征,适应 4 到 8 天的波动。

关键词:曲棍球运动员,经纬线过境,去同步,适应,硬件软件复合体"Omega-C",功能状态。

Abstract. The article is devoted to the problem of studying the changes in the indicators of the functional state of ball hockey players in the process of adaptation and readaptation of the SKA-Neftyanik-2 team players during the competitive period during flights with a 4-hour difference (competitions in the cities of Novosibirsk and Kemerovo). In the course of the study conducted from October 2019 to January 2020, it was revealed that transmeridional flights over 4 time zones with a sharp change in climatic conditions cause symptoms of acute desynchronosis in athletes, requiring urgent adaptation of the body. Adaptation processes in athletes have a pronounced individual character in terms of the strength of manifestation and the rate of adaptation and readaptation with fluctuations from 4 to 8 days of adaptation.

*Keywords:* ball hockey players, transmeridional crossings, desynchronosis, adaptation, hardware software complex "Omega-C", functional state.

## Introduction

The problem of preparing high-class athletes for the most important competitions is closely related to the study of the mechanisms of adaptation of the body to changes in the conditions of the competition.

The results of athletes' performances depend on many reasons. Of course, first of all, this is the level of the athlete's athletic form, his versatile readiness to perform the upcoming work. However, climatogeographic conditions of competitions, features of relocation (flight), factors of desynchronosis, etc. can have a significant impact.

The competitive activity of ball hockey players is characterized by a very strict competition calendar (up to 20 games per year), holding games in various time and climatic conditions with private transmeridional crossings with a 4-7 hour difference. At the same time, the daily biorhythms consciously change, which leads to significant changes in the psychophysical and functional state of athletes.

As part of the state budget research work on the topic ""Development of methods of competitive training of athletes in bandy" commissioned by the Ministry of Sports of the Russian Federation for 2018 - 2020 [5]. a study was conducted on the level of functional state of ball hockey players in the process of athletes' adaptation to heavy competitive loads in conditions of trans-meridian flights.

The level of the functional state of hockey players plays a significant role in the process of adaptation of athletes to heavy competitive loads in the conditions of transmeridional flights [1], [2], [4].

# The experimental part

We studied the processes of adaptation and readaptation of the SKA-Neftyanik-2 team players during the competitive period during flights with a 4-hour difference (competitions in the cities of Novosibirsk and Kemerovo). The assessment of the functional state was carried out using the Omega-C hardware and software package, which allows determining the level of adaptation to physical exertion, fitness indicators, energy supply, psycho-emotional state and an integral indicator of athletic form on the basis of a cardiorhythmogram [3]. It is of particular interest to evaluate the indicators of vegetative and humoral regulation, which allows us to assess the speed of adaptation during transmeridional flights, the quality of general adaptation and allows us to give a definite forecast of changes in the functional state of an athlete.

The athletes of the SKA-NEFTYANIK-2 team were examined in the morning hours in the laboratory of "Monitoring of physical condition" of the Far Eastern State Academy of Physical Culture. The number of examined ball hockey players varied between 19-23 people.

## Results

The examination on October 2-3, 2019 at the end of the preparatory period revealed sufficiently high indicators of functional condition. The level of adaptation

is  $0,8\pm 0,06$ , fitness is  $0,85\pm 0,05$ , energy supply is  $0,73\pm 0,21$ , psycho–emotional state is  $0,75\pm 0,17$  and the indicator of athletic form is  $0,78\pm 0,18$ . The indicators of training reserves, energy supply and management were also high. The intensity index ranged from 25,9 to 161,6 (66,7±13,6).

It was revealed that the three athletes' functional state indicators were significantly lower than average, and the stress index significantly exceeded the norm (120,6-161,6), to which the coach's attention was drawn.

A high level of positive correlation was found between most of the indicators, and a negative one with the intensity index (0,8 - 0,9). When compared with the beginning of the preparatory period (July 2019), it is possible to note an improvement in most indicators: the level of adaptation – by 19,4%, fitness – by 6,2%, energy supply – by 15,9%, psycho–emotional state - by 13,6%, fitness and physical condition – by 12.9%. The reserves of management and energy supply increased by 14-16%, the tension index decreased by 30,5%.

Thus, the effectiveness of planning and conducting the preparatory period can be considered proven.

After losing the match with Vostok on January 30 - 31, 2020 and returning to Khabarovsk, a significant decrease in indicators can be observed during the examination on February 2 (the second day of adaptation) compared to the initial data from January 23 - 24 (Table 1).

The name of the indicator	Initial state Readaptation M1±m M2±m		Δ, %	t <sub>p</sub>	р
The level of adaptation	0,74±0,04	0,54±0,13	27,03	1,47	>0,05
Level of fitness	0,89±0,04 0,56±0,14		36,65	2,30	<0,05
The level of energy supply	0,64±0,03 0,51±0,10		20,47	1,27	>0,05
Psychoemotional state	0,68±0,03 0,53±0,11		21,88	1,30	>0,05
Integral indicator of athletic form	0,74±0,03	0,54±0,11	27,26	1,71	>0,05
Physical condition	4,15±0,16	3,29±0,61	20,90	1,42	>0,05
The indicator of athletic form	4,15±0,16	3,29±0,61	20,90	1,37	>0,05
Heart rate	64,77±2,80	72,86±6,22	12,49	1,19	>0,05
Reserves of fitness	0,69±0,04	0,49±0,13	29,03	1,50	>0,05
Energy supply reserves	0,69±0,03	0,53±0,11	22,86	1,42	>0,05
Management reserves	0,62±0,04	0,50±0,10	19,72	1,19	>0,05
Tension index	58,51±7,76	165,23±57,42	182,40	1,84	>0,05

The functional state of hockey players on the second day of readaptation

Table 1.

On the second day of readaptation, all average indicators of functional state decreased (from 19,7 to 36,6%). Due to the large scale of individual indicators, the difference turned out to be unreliable (p>0.05), with the exception of the level of fitness (p<0,05). It should be noted an increase in heart rate by 12,5% and a sharp increase in the intensity index from  $58,5 \pm 7,7$  to  $165,2 \pm 57,4$ .

The analysis of individual readaptation processes revealed the following changes. Of the surveyed 15 hockey players, on the second day of adaptation, 6 people showed a sharp decrease in adaptation, the level of fitness and energy supply, as well as reserves.

There was a significant increase in the pulse rate and an increase in the tension index. As an example, we cite the data of hockey player B.K.: levels of adaptation 0,61 - 0,51; fitness 1,0 - 0,58; energy supply 0,52 - 0,49; control 0,40 - 0,25; tension index increased from 29 to 134,3, and pulse – from 47 to 58 beats / min.

On the contrary, in four athletes, the process of readaptation was smoothed out, and in one – with an increase in functional state: athlete G.A. – levels increased by 3,1-8%, reserves – by 8-24%, and pulse and tension index decreased by 11 and 81%, respectively. The rest of the hockey players showed a moderate decrease in functional indicators. From the above, we can conclude that there is a need for an individual approach to optimizing the adaptation processes during readaptation after a transmeridional flight through 4 time zones, as well as to individual planning of the competitive load.

Let's analyze the processes of adaptation of hockey players when flying through 4 time zones from east to west. The study of adaptation was carried out when moving to Novosibirsk and Kemerovo in the conditions of an intensive cycle of All - Russian competitions from February 6 to 11, 2019. (4 games in 6 days).

As can be seen from Table 2, the average indicators of the functional state of hockey players on the second day of adaptation after the flight worsened by 6-18%, and the tension index increased by 63%. At the same time, it should be noted that due to the significant spread of data, the difference turned out to be unreliable (p>0,05).

Table 2.

west (4 time zones, average indicators							
	Initial data	Adaptation days (difference with initial data)					
Indicator		2		4		6	
		Δ, абс.	Δ, %	Δ, абс.	Δ, %	Δ, абс.	Δ, %
The level of adaptation to physical exertion	0,78±0,04	0,67	-15	0,73	-7	0,79	+2

Dynamics of functional indicators of hockey players when flying from east to west (4 time zones, average indicators)

The level of fitness of the body	0,86±0,05	0,8	-7	0,8	-7	0,89	+4
Energy supply level	0,76±0,04	0,63	-18	0,68	-11	0,71	-7
Psychoemotional state	0,75±0,04	0,66	-12	0,67	-11	0,75	0
An integral indicator of "athletic form"	0,79±0,04	0,69	-13	0,72	-9	0,79	0
Physical condition	4,31±0,22	3,88	-9	4,11	-5	4,32	+1
Heart rate	71,0±2,56	76,24	+8	71,11	+1	72,0	+2
Reserves of fitness	$0,78{\pm}0,05$	0,74	-6	0,67	-15	0,82	+6
Energy supply reserves	0,77±0,04	0,68	-12	0,73	-6	0,79	+3
Management reserves	0,75±0,05	0,62	-18	0,68	-10	0,68	-10
Tension index	58,86±10,04	95,98	+63	85,9	+46	61,03	+4

Scientific research of the SCO countries: synergy and integration

By the fourth day of adaptation, almost all indicators of the functional state improved somewhat (except for reserves and fitness level), but they were lower than the initial state by 5-11%. The increase in the tension index decreased from 63 to 46%.

Normalization of most indicators of the functional state of hockey players occurred by the sixth day of adaptation. Thus, the level and reserves of fitness increased by 4-6% compared to the initial data; the level of adaptation to physical exertion, physical condition and reserves of energy supply increased by 1-3%. However, even on the sixth day of adaptation, the management reserves, the tension index and the level of fitness were not fully restored.

The individual course of adaptation processes after the flight varies greatly among hockey players. In almost all the studied indicators, a decrease in the results of some athletes or an improvement in others can be registered.

On the second day of adaptation, the greatest decrease in indicators occurred in the management reserves of 12 people out of 15 surveyed, the level of adaptation to physical exertion, energy supply and tension index – in 8-11 athletes. The level of fitness decreased the least – in three people. At the same time, an increase in the level of fitness was noted in six athletes, and management reserves and energy supply increased in just one case. In 2-6 people, the functional data has practically not changed.

On the fourth day of adaptation, the reserves of energy supply in 8 people were lower than the initial ones, an increase in heart rate at rest was noted in 10 people. A decrease of 7 indicators was registered in 4 people. Meanwhile, for individual
athletes, most of the indicators approached the initial ones (1 - 4 people), and some even exceeded the initial ones:

- 10 athletes had an integral athletic form and a psychoemotional state higher than the initial ones;

- 8 athletes have energy supply and management reserves;

- 6 people have levels of adaptation and fitness, as well as reserves of energy supply.

On the sixth day of adaptation, fatigue from the competitive load affected. Further improvement occurred only in the indicators of fitness reserves (8 people), the indicators of psycho-emotional state, management reserves and the tension index deteriorated somewhat. The functional state of the rest of the athletes has practically not changed.

Summing up the results of the survey, it is necessary to emphasize the great individuality of the adaptation processes of hockey players when moving with a four-hour time difference. Thus, normal or even reduced basic indicators of functional state were registered on the second day of adaptation in 9 people, on the fourth - in 7, and on the sixth day - in 7 out of 15 people.

Thus, both the time difference and the competitive load during this period influence the adaptation process during transmeridional flights. The coaches of the team should take into account the specificity of the adaptation processes and individually approach the formation of the team at individual games.

#### Conclusions

The conducted studies have shown that transmeridional flights over 4 time zones with a sharp change in climatic conditions cause symptoms of acute desynchronosis in athletes, requiring urgent adaptation of the body.

The study of the complex of factors of sports-pedagogical, psychophysical, socio-economic and others revealed that the most significant of them, primarily determining the psychophysical state and performance of an athlete, are:

- a) climatogeographic (longitude) movement;
- b) temporary (latitudinal) movement;
- c) total flight time (travel time).

Adaptation processes in athletes have a pronounced individual character in terms of the strength of manifestation and the rate of adaptation and readaptation with fluctuations from 4 to 8 days of adaptation. Hence, the approach to competitive training should be of a complex individual nature.

The planning of competitive training should take place taking into account the identification of the criteria of athletes' readiness for competitive activity and with the use of complexes of various pedagogical and biomedical means.

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# 沟通和组织能力作为未来护士管理人员软技能的组成部分 COMMUNICATION AND ORGANIZATIONAL SKILLS AS A COMPONENT OF SOFT SKILLS IN FUTURE MANAGERS OF NURSES

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概括。本文讨论了培养未来护士领导者软技能以及评估沟通和组织技能的重要性。 护理学士不仅要具备专业能力,还要具备"生态"领导者的素质。

关键词:软技能,组织能力,沟通技巧,护士长。

软技能是在包括护理在内的任何工作环境中取得成功所必需的个人素质。从成为专业人士的一开始——从学生开始,就必须培养软技能。

**Summary.** This article discusses the importance of developing soft skills in future nurse leaders and evaluating communication and organizational skills. Bachelors of nursing should have not only professional competencies, but also have the qualities of an "eco" leader.

Keywords: soft skills, organizational skills, communication skills, nurse leader.

Soft Skills are personal qualities necessary to achieve success in any work environment, including nursing. It is necessary to develop soft skills from the very beginning of becoming a professional – from a student.

The training programs for nurses and nursing supervisors are designed to educate, serve as role models and guide current and future nurses in developing soft skills that will lead to the development of emotional intelligence.

The student's design and research activity is the basis for the formation of creative potential, the manifestation of leadership abilities and communication links. The Department of Higher Nursing Education trains the heads of secondary medical staff, among the leadership positions it allocates senior nurses of the department and chief nurses of hospitals (or other institutions).

One of the ways to increase cognitive interest is to involve students in project activities. The project method is the essence of developing, personality-oriented learning, forms students' ability to think independently, to acquire and apply knowledge, to carefully consider decisions, to plan their actions clearly. Currently, the project method harmoniously complements the traditional training system.

#### Purpose

To establish the level of development of soft skills, such as communication and organizational skills, in future bachelors of nursing.

The study involved 53 respondents studying from the first to the fourth year of bachelor's degree in the Department of Nursing.

The survey method was used for the study, 40 questions were included in the questionnaire, which revealed the communicative and organizational abilities of the respondents. The survey was conducted through an online questionnaire. ("Communicative and organizational inclinations" by the authors V.V. Sinyavsky, V.A. Fedoroshin (KOS)).

Processing of results and interpretation. The number of answers matching the key for each section of the methodology is calculated, then the estimated coefficients are calculated separately for communication and organizational abilities according to the formula:

#### K = 0.05 \* S, where K is the value of the estimated coefficient C is the number of responses matching the key.

The estimated coefficients can vary from 0 to 1. Indicators close to 1 indicate a high level of communication and organizational abilities, close to 0 - a low level. Primary indicators of communicative and organizational abilities can be presented in the form of assessments indicating different levels of the studied abilities.

Table 1. Communication skills

Communication sk				
Indicator	Evaluation	Level		
0,10-0,45	1	I - low		
0,46-0,55	2	II - below average		
0,56-0,65	3	III - average		
0,66-0,75	4	IV - high		
0,76-1	5	V - very high		

Table 2.

Organizational skills

Indicator	Evaluation	Level
0,20-0,55	1	I - low
0,56-0,65	2	II - below average
0,66-0,70	3	III - average

0,71-0,80	4	IV - high
0,81-1	5	V - very high

### Table 3.

Assessment of the manifestation of communicative and organizational inclinations

Evaluation	Manifestation of communicative and organizational inclinations
1	They are characterized by a <u>low level of manifestation of communicative</u> and organizational inclinations.
2	Communicative and organizational aptitudes are inherent at a <u>below-av- erage level</u> . They do not seek acquaintance and communication, they feel constrained in a new team; they like to spend time alone with themselves, limit their acquaintances; they feel difficulties in identifying contacts with people and when speaking to the public; they are poorly oriented in an unfamiliar situation; they do not defend their opinion, they are grievously angry; manifestations of initiative are extremely reduced, during In many cases, they prefer to avoid making independent decisions.
3	The <u>average level of manifestation of communicative and organizational</u> <u>inclinations</u> is characteristic. They seek contacts with people, do not limit the circle of their acquaintances, defend their opinions, plan their work, but the potential of their inclinations is not highly stable. Communicative and organizational inclinations need to be developed and improved.
4	They belong to a group with a <u>high level of manifestation of communica-</u> <u>tive and organizational inclinations</u> . They do not get lost in a new envi- ronment, quickly find friends, constantly strive to expand their circle of acquaintances, engage in social activities, help loved ones. They show ini- tiative in communication, take part in organizing social events with plea- sure, are able to make an independent decision in a difficult situation. They do all this not under compulsion, but according to their inner aspirations.
5	They have a very high level of manifestation of communication and orga- nizational inclinations. They feel the need for communication and orga- nizational and actively strive for it, quickly navigate difficult situations, behave naturally in a new team, are proactive, prefer to make independent decisions in an important matter or in a difficult situation, defend their opinion and ensure that it is accepted by comrades, can bring animation to an unfamiliar company, they like to organize various games and events. They are persistent in activities that attract them. They themselves are looking for things that would satisfy their need for communication and organizational activities.

# Results

The survey was attended by undergraduate students of nursing from 1st to 4th courses. The number of respondents: n=53, of them 1st year students – 18 (34%),

2nd year students – 10 (19%), 3rd year students – 15 (28%), 4th year students – 10 (19%).

The average indicator of communicative and organizational abilities in general of students from 1st to 4th courses were: organizational skills = 2.5, communication skills = 2.75, which is markedly different from the expected result =5. (Figure 1)



Figure 1.

Soft Skills skills increase depending on the course of study, if the 1st year students have results in CS and OS - below average, then the result of the 1st year study is at the level of CS - high, OS - average. (Table 4, Figure 2)

# Table 4.

Results of communication and organizational skills depending on the year of study

Course	Communication skills	Results	Organizational skills	Results
1	10*0,05=0,5	II - below average	12*0,05=0,6	II - below average
2	11*0,05=0,55	II - below average	13*0,05=0,65	II - below average
3	13*0,05=0,65	III - average	14*0,05=0,7	III - average
4	15*0,05=0,75	IV - high	14*0,05=0,7	III – average



Figure 2. Results of communication and organizational skills depending on the year of study

# Conclusions

The components of soft skills were considered, such as: Communicative and organizational abilities of future bachelors of nursing before conducting research on improving the quality of CBS through participation in project activities.

The results varied depending on the year of study.

1 course communication skills = 0.5 II - below average; organizational skills = 0.6 II - below average;

2 course CS = 0.55 II - below average; OS = 0.65 II - below average;

3 course CS = 0.65 III - average; OS = 0.7 III - average;

4 course CS = 0.75 IV - high; OS = 0.7 III - medium.

The average CS = 2.75; OS = 2.5 is between the indicators below average and average.

Based on the data obtained during the analysis, we recommend: to increase the amount of independent work of the student using project activities in the form of research, coursework and visual presentation works. As a result of public speeches, discussions, defending their opinions, students will gain the ability and experience to think independently, acquire and apply knowledge, carefully consider decisions made, clearly plan their actions, thereby increasing the level of communicative and organizational abilities necessary for the formation of a true leader and leader.

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## 十九世纪末-二十世纪初俄罗斯钢琴学校掌握过程中中国学生普遍能力的形成 FORMATION OF UNIVERSAL COMPETENCIES OF CHINESE STUDENTS IN THE PROCESS OF MASTERING PIANO SCHOOLS IN RUSSIA OF THE LATE XIX - EARLY XX CENTURY

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关键词:钢琴学校、莫斯科、圣彼得堡、关键(通用)能力、描述符、标准、水平、对话、提问、测试、结果。

Abstract. The article is devoted to the consideration of the features of the formation of universal competencies of Chinese students in the process of mastering piano schools in Russia in the late XIX and early XX centuries. The article presents a description of the experimental search work carried out on the basis of the FSBEI HE "Moscow state pedagogical university". The focus was on the methods of empirical knowledge: conversation, questioning, testing, the use of which was explained by the purpose of the ascertaining and verification stages. The article presents the criteria for identifying high, medium and low levels of formation in students of the competencies of systemic thinking (UK-

1) and international cooperation (UK-5), which are adequate to the historical and pedagogical comprehension by Chinese students of Russian pedagogical universities of the methodological works in the field of piano pedagogy by the Rubinstein brothers, T. Leshetitsky, A. Esipova, V.I. Safonov.

*Keywords:* piano schools, Moscow, St. Petersburg, key (universal) competencies, descriptors, criteria, levels, conversation, questioning, testing, results.

The category of "competence" in the pedagogical literature in recent years has gained a generally recognized status, which is naturally due to the close relationship between education and the labor market. Such a connection emphasizes the activity aspect, which in turn explains the appearance of descriptors as a system for evaluating the manifestations (competences) demonstrated by students. These include, in particular, the key ones. But, paradoxically, with the unity of conceptual agreement, the formulation of key competencies suggests the greatest variability in the educational models of different countries. Analyzing various classifications in foreign and Russian educational models, D.A. Ivanov comes to the conclusion that the most general classification contains three large classes of competencies: professional (necessary for a specialist to implement his professional activities); supraprofessional (necessary to work effectively in an organization); key (which include the skills and qualities necessary for each member of society for its successful socialization) [1].

This approach characterizes the implementation of the competency-based model not only in Russia, but also in China. This feature is explained by the unity of the universal (key) competencies defined by the states in accordance with the European project "Identification and selection of key competencies" (DeSeCo). Universal (key) competencies are understood as important in life and serving as the key to the success of society.

However, it was wrong to claim that core competencies exist outside of a professional context. In this, we rely on the studies of E.I. Kazakova and I.Yu. Tarkhanova, who claim that universal competencies are formed "due to their systematic integration into a holistic educational process through content, technologies and environmental factors [2].

In order to confirm this possibility in the musical and pedagogical education of Chinese students of Russian universities, we initiated the study "Formation of universal competencies of Chinese students in the process of mastering piano schools in Russia in the late XIX and early XX centuries".

The Moscow Pedagogical State University served as the basis for conducting experimental and search work. The research work involved Chinese students studying at the Faculty of Musical Arts MSPU in the bachelor's program in the direc-

tion of "Pedagogical Education", profile "Music Education". Experimental search work consisted of three stages: ascertaining; formative; verification.

The purpose of the ascertaining stage of experimental and search work is to identify the initial level of formation of universal competencies of students in the process of mastering piano schools in Russia at the end of the XIX and beginning of the XX centuries. From the list of universal competencies defined by the FSES HE 3++, we considered the brothers Rubinstein, T. Leshetitsky, A. Esipova, V.I. Safonov, the following series of universal competencies: UK-1: readiness for systemic and critical thinking; UK-5: readiness for intercultural interaction.

We used the methods of conversation, questioning and testing. During the conversation, students were asked a number of questions:

1) What famous representatives of the Moscow and St. Petersburg schools of the late XIX and early XX centuries could you name?

2) Do you know the methodological manual "New Formula" by V.I. Safonov?

3) Are you familiar with the piano skill of S.V. Rachmaninov, S.S. Prokofiev?

The Questionnaire asked for a task to comment on A.D. Alekseev about S.S. Prokofiev, as a student of A. Esipova: "In 1915, Prokofiev performed for the first time abroad in Rome. Press about the concert: "No one could better perform the music he composes. Concerto №2 was played with inimitable freedom, and thanks to his personal performance, he was interesting even where he could tire and bore. From 1914 to 1918 – the pianistic art of S. Prokofiev became more and more meaningful. Along with the extreme "ebullency of temperament", critics noted a deeper mastery of the expressive possibilities of performing rhythms, which gave the works an extraordinary "sharpness", "sculptural relief". The pianist's touch became more varied" [3].

Thus, the questions of the conversation and the questionnaire were aimed at identifying the readiness of students to search, critical analysis and synthesis of information, apply a systematic approach to solve the tasks. As indicators of the formation of the universal competence of the Chinese students of the UK-1, we considered the possible planned results developed by the educational and methodological department of the MSPU.

#### Table 1.

Category of universal competencies	Code and name of uni- versal competence	Code and name of the indicator of achievement of universal compe- tence
Systems and critical thinking	UK-1. Able to search, critical analysis and syn- thesis of information, ap-	UK-1.1. Demonstrates knowledge of the features of systemic and criti- cal thinking and readiness for it.
	ply a systematic approach to solve tasks	UK-1.2. Applies logical forms and procedures to reflection on one's own and others' mental activity.
		UK-1.3. Analyzes the source of in- formation from the point of view of the temporal and spatial conditions of its occurrence.
		UK-1.4. Argumentatively forms his own judgment and assessment of information, makes an informed decision.

Based on the indicators, we have defined criteria:

*High level:* the student demonstrates systematic and critical thinking in the analysis of the works of representatives of the St. Petersburg and Moscow piano schools in Russia in the late XIX and early XX centuries; reasonably reveals his own judgment about the presence of common and special in them, shows the ability to reflect on the methodology of teaching to play the instrument N.G. Rubinstein, T. Leshetitsky, A. Esipova, V.I. Safonov, analyzes the works of the considered period of history from the point of view of relevance to modern piano pedagogy.

*Average level:* the student demonstrates partial mastery of systemic and critical thinking in the analysis of the works of representatives of the St. Petersburg and Moscow piano schools in Russia in the late XIX and early XX centuries; with difficulty reveals his own judgment about the presence of general and special in them, partially shows the ability to reflect on the methodology of teaching to play the instrument N.G. Rubinstein, T. Leshetitsky, A. Esipova, V.I. Safonov, finds it difficult to analyze the works of the considered period of history from the point of view of relevance to modern piano pedagogy.

*Low level:* the student does not possess systemic and critical thinking in the analysis of the works of representatives of the St. Petersburg and Moscow piano schools in Russia in the late XIX and early XX centuries; does not reveal his own judgment about the presence of general and special in them, does not show the ability to reflect on the methodology of teaching to play the instrument N.G. Ru-

binstein, T. Leshetitsky, A. Esipova, V.I. Safonov, is not able to analyze the works of the period of history under consideration in terms of relevance to modern piano pedagogy.

The results obtained are presented in Table №2.

Table 2.

Level of formation UK-1	Quantitative indicators	Percentage
High	0 people out of 8	0 %
Average	0 people out of 8	0%%
Short	8 people out of 8	100 %

We positioned the universal competence of UK-5: readiness for intercultural interaction as the ability of Chinese students to master piano schools in Russia in the late XIX and early XX centuries in the context of a cross-cultural approach. To this end, we have developed a test.

Test №1.

1. Nikolai Rubinstein played a big role as a propagandist of Russian music and especially the works of:

A) M.I. Glinka;

B) N.A. Rimsky-Korsakov;

C) P.I. Tchaikovsky.

2. Unlike teachers of old schools, this teacher-musician used new, more rational methods of work. He made me learn difficult places with all sorts of rhythms and various dynamic shades, recommended that you first mentally realize the end result and, only then, achieve its implementation with the instrument. His methodological principles coincide with the views of the best pianists-teachers of our time.:

A) V.I. Safonov;

B) A.B. Goldenweiser;

C) I.K. Igumnov.

3. Which of the representatives of the Russian piano school of the late XIX and early XX centuries owns the following statement: "Have you heard how Italian singers sing in opera? They sing quite freely in rhythm. I call it the way of broad, even exaggerated Italian phrasing. Work on passages in this way. Take a very slow tempo as a basis and try to feel every smallest passage of the passage to the end, as if you were playing a wide slow melody "[4]

A) T. Leshetitsky;

- B) V.I. Safonov;
- C) E.F. Gnesina.

4. Which of the masters of the Russian piano school of the late XIX and early XX centuries offered students five-finger exercises based on moving the first finger within a given position of the hand:



A) T. Leshetitsky;

B) V.I. Safonov;

C) E.F. Gnesina.

5. Which of the teachers of the St. Petersburg piano school of the late XIX and early XX centuries suggested using a hand "spring" to avoid a harsh sound, especially when playing forte chords:

A) T. Leshetitsky;

B) V.I. Safonov;

C) E.F. Gnesina.

The results of the ascertaining stage of experimental and search work are reflected in the table  $N_{2}$  3.

Level of formation UK-5	Quantitative indicators	Percentage
High	0 people out of 8	0 %
Average	2 people out of 8	25%
Short	6 people out of 8	75 %

Table № 3.

Thus, at the ascertaining stage of experimental and search work, indicators of a low level of formation of universal competencies in the process of mastering piano schools of the late XIX and early XX centuries turned out to be prevailing.

At the formative stage, a number of classes were held with students in frontal and individual forms in the form of lectures, seminars, and practical exercises. The results of the verification stage allow us to assert that the mastery of the piano schools of Russia in the late XIX and early XX centuries by Chinese students will be effective provided that students develop readiness for intercultural interaction and systemic thinking based on a comparative analysis of the historical, theoretical and methodological aspects of the activities of representatives of St. Petersburg and Moscow piano schools of the period under review.

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# 教育人性化背景下教育过程的可视化。 学习过程中的视觉转向 VISUALIZATION OF THE EDUCATIONAL PROCESS IN THE CONTEXT OF THE HUMANITARIZATION OF EDUCATION. VISUAL TURN IN THE LEARNING PROCESS

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抽象的。 文章致力于教育过程的可视化,教育过程中的视觉转向。 确定了 教育过程中视觉转向的特征。 在一个艰难的过程中强调和突出——教育的人性 化——教育过程可视化的高度作用。 现在我们已经接近虚拟环境的质量分布, 在这些环境中,没有味道和气味的物体会做出反应并服从我们的命令或手指的触 摸。 这使我们能够谈论在教育环境中发展这些机会的必要性。

关键词:可视化,视觉转向,视觉思维,教育,教育过程,人性化。

**Abstract.** The article is devoted to the visualization of the educational process, the visual turn in the educational process. The features of the visual turn in the educational process are determined. Emphasized and highlighted in a difficult process - the humanitarization of education - the high role of visualization of the educational process. Now we are close to the mass distribution of virtual environments in which objects without taste and smell react and obey our commands or the touch of our fingers. This allows us to talk about the need to develop these opportunities in the educational environment.

*Keywords:* visualization, visual turn, visual thinking, education, educational process, humanitarization.

#### Introduction

Today, education occupies a central place in the system of development of both the individual and society. By education, we mean activities and processes that are different from each other, such as growth and reproduction, socialization, inculturation and learning, both human and professional, similar to each other in certain respects, but not reducible to each other.

In various models of society, education supported by many institutions (from the family to the state and various cultural institutions) includes individuals, social groups, as well as the institutions themselves; it is, therefore, an individual and social activity, both spontaneous and deliberate, which passes through the whole society, activating in it very articulate processes that have a common character, in addition to the pluralism of forms, the dynamism of the structure and the problem-antinomic constitutive aspect. All this emphasizes both the richness and the problematic nature of this phenomenon.

In general, the connotation of complexity, social, historical and theoretical, is inherent in education and at the same time it is necessary to analyze it through many sciences and according to different methodologies in order to capture its deeper and more concrete sides. As regards the subjective or individual side of education, that is, the process that makes each subject a "man" or a subject who has acquired the full characteristics of his species, it should be emphasized that it covers (in dialectical form) at least four moments or processes: biological growth, inculturation, learning, formation. At the same time, objectively, this only emphasizes the desire for the humanitarization of education.

The high role of visualization of the educational process is emphasized and highlighted in this difficult process [3, 4, 5].

The goal is to study the process of visualization of education within the framework of the history of the conceptual philosophical relationship.

Research methodology. The work is based on the principles of historicism and consistency, within the framework of the concept of neo-realism or structural realism. The study and presentation of data within the framework of the study was built on the basis of a problem-chronological approach.

#### Discussion

Today, most educated people owe their unique experience of understanding what a logical-deductive system of thought is to certain visual images.

In the history of science, the crisis of the mimetic approach, the subsequent rejection of visual thinking, and the success of the algebraic approach in geometry influenced the generations of students who went down with Russell to the Second World War, so much so that some of the modern textbooks in mathematics, geometry and logic are still strongly " algebraic." However, it is safe to say that our culture is now undergoing a period of "visual turn" [6]. What led to this transformation?

The factors that have contributed to the reappraisal of visual thinking are numerous, some cultural, others essentially conceptual [1].

If we attempt to make a general analysis, we must first remember that the preservation of knowledge through the press, the success of the scientific revolution, industrial production, mass literacy, the growing complexity of advanced societies, the transformation of the manufacturing society into the information the key problem of the Renaissance is the simple, efficient and rapid management of memory, no longer represented by metaphysical-descriptive knowledge, final and pre-coded in the narrative of models, as in the Middle Ages, or from the personal

memoirs of an ancient orator, but from an extraordinary expansion of encyclopedic knowledge, whose infinite growth is getting faster and faster. Our knowledge set requires organizational, navigational and search tools that are easy to use and intuitive [7].

Secondly, the invention and dissemination in modern times of more and more advanced visual technologies (daguerreotype, photography, cinema, television, computer graphics) contributed to the creation of a cultural environment in which it is becoming more and more common to reflect the constant visualization of the world of things and ideas and, consequently, a diverse the use of images.

However, all this would still be insufficient to justify the modern visual turn in education, if the phenomena just mentioned were not accompanied by equally important conceptual transformations, which we can group into three theses:

1. From mimetic representation to analog visualization

We have seen in what sense Lullism based its development of visual thinking, both in the operational function and later in mnemonics, on a representational relationship between image and source as near and immediate as possible (isomorphism). The mimetic crisis of geometric thinking finally undermines the naively "realistic" basis of visual thinking and, therefore, from the Julian point of view, also its potential operational developments. Even in geometry, the representative cannot always be mistaken for the represented. But the problem of foundations in mathematics, aggravated by the discovery of non-Euclidean geometries, opens the way both to the deepening of set theory in a fundamental sense and to the reform of logic through the most important developments in the theory of relations, functions and quantification.

Thus, also thanks to topology and graph theory, theoretical foundations are gradually being created, which were previously lacking in science for the serious and fruitful use of visual representations [8]. The image becomes possible to construct into an interpretive model, rather than an exact or even indistinguishable (in the Leibnizian sense of the term, implying identity) representation of what is to be visualized. He addresses his referent through conditional codes that are as intuitive as possible, but at the same time lose their uniqueness. There are more visual models of the same conceptual content, which now have to be judged as more or less adequate based on the epistemological purpose for which they are designed, and not just true or false in a mimetic sense [2].

In general, for example, the map of the Moscow metro is not intended to accurately represent isomorphic distances or the real configuration of railway lines, but only the relationships between them and, above all, the various intersections, in order to provide users with a simple tool to optimize their movements in the "underground city". The transition from the mimetic use to the analogous use of visual-rhetorical thinking makes it possible in mathematics to re-evaluate images in the communicative function, here it is enough to mention the exploitation of the Cartesian axes in the visual function in the context of projections, statistics is a phenomenon, the same as statistical graphics, which developed fully only in early nineteenth century, with the work of Charles Joseph Minard (1781-1870) and William Playfair (1759-1823) - or to the graphic models that are gradually being developed to intuitively represent both non-Euclidean and higher-dimensional geometry. At the same time, this passage also underlies the development of that fundamental concept of space, understood as a system of relations between entities, constructed as a collection of properties, which would play a central role in philosophy, especially since Wittgenstein.

2. From communication to design function

In the transition from a mimetic and isomorphic relation to an analogous and interpretive relation, visual thinking is freed from its metaphysical burden in order to acquire an exclusively epistemic meaning, but the removal from the purely mimetic function, and therefore from the isomorphic ideal, is not of exceptional importance. Generate a movement of visual thought towards an analog model: this also lays the operational foundations for an extraordinary assessment of visualization in a constructive direction. The industrial revolution and mass society have made the relationship between design and product the focus of human activity, in which visual modeling is becoming increasingly important [5]. Architects and engineers not only visualize before construction, but also start an idea with visual images.

"Vision" can no longer be equivalent to "faith" in the sense of naive realism, but it is increasingly becoming one of the essential conditions for building, so much so that the design phase can now take precedence over the moment of implementation. In addition to the world of knowledge, the second kind of human creation is overwhelmingly combined with visual thinking, which becomes both an interface for organizing, accessing and processing information, and an essential tool for any design process.

3. From mnemonics to interaction

The success of visual thinking in the managerial function is determined not only by the degree of significance of the image, but also by the degree of interactivity that the image makes available for manipulating visual information [3]. The revolutionary contribution made by the evolution of information technology lies precisely in the fact that it has become possible to interact with information due to its digitization and graphical representation.

In the second half of the twentieth century, the visual interface has become an indispensable tool not only for structuring information and orienting among them, but also for their arbitrary transformation and modeling. Two areas of human creativity - the graphic modeling of possible objects or situations and the creation and

visual management of information - meet today on the computer screen, giving life to new forms of synergy.

Renaissance visual mnemonics became a bridge from Lullian diagrams to Windows products, helping over time to reorient visual-operational thinking from the world of things (magic) to the world of data (information technology).

The reappraisal of visual thinking, and hence the emergence of modern visual culture, are the macroscopic phenomena within which the evolution of the relationship between algebraic and morphological approaches in the history of modern science must be placed.

#### Conclusion

What has been said so far about the evolutionary path realized by visual thinking helps us resolve the seeming paradox that a highly analytical, algebraic, combinatorial and binary tool such as a computer has now become virtually synonymous with images, windows, icons, virtual reality. All this generates intuitive graphics and visual presentation. It also helps us to appreciate the efforts that educators have already made to use visual thinking even more widely in course design, in very different directions, and not just for the logic and philosophy of science.

Television has been the main tool for influencing the assessment of visual thinking in a communicative function. In modern times, the essence of a visual act is not reduced to a subject-object relationship, but appears as a subject-subject relationship. This has been made possible by the computer, which has revolutionized the way we manipulate images through interactivity. Television is a medium that manages its documents in a visual but essentially diachronic way, while the computer achieves the perfect union of visualization and synchronous spatial distribution of information.

If today we manage our knowledge through intensive visual thinking in an operational sense, we owe it to this purely digital technology, as shown by the example of Mercedes Benz. That seer R. Lull was looking for a language that would be identified with things, and a procedure that would allow them to be manipulated in an almost "magical" way. Now we are close to the mass distribution of virtual environments in which objects without taste and smell react and obey our commands or the touch of our fingers. This allows us to talk about the need to develop these opportunities in the educational environment.

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#### 教师创新活动的心理障碍

# PSYCHOLOGICAL BARRIERS IN INNOVATIVE ACTIVITY OF TEACHERS

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注解。 这篇文章专门讨论了教师创新活动的心理准备问题。 本文对教师实施创新的心理准备水平进行了分析,找出了阻碍创新的原因和主要情况。 讨论了 作为创新活动先决条件的有意识的自我调节活动的各个方面。 提出了优化教师 创新活动的建议。

关键词:教师创新活动 创新活动准备 活动自我调节

Annotation. The article is devoted to the problem of psychological readiness of teachers to innovative activity. This article presents an analysis of the level of psychological readiness of teachers to implement innovations, identifies the causes and the main circumstances preventing it. Aspects of conscious self-regulation of activity as a prerequisite for innovative activity are discussed. Recommendations are given for optimizing the innovative activity of teachers.

*Keywords*: innovative activity of the teacher, readiness for innovative activity, self-regulation of activity.

In today's rapidly changing world, innovations are introduced in all spheres of human activity, which directs people to the constant development and mastering of new activities [2]. The education system is also undergoing a complex process of modernization. "The requirements for students' skills have changed, since it is necessary not only to read, write and count, but also to be able to organize data resources, cooperate fruitfully, collect, evaluate and use information" [4, 108]. However, the digital era requires not only new skills from students of educational institutions, but also a different approach to the organization of the training itself,

where the teacher's readiness for new ways of teaching plays an important role [10].

The teacher's readiness for innovation should be considered as his creative attitude to his activity, the peculiarity of which is multiple uncertainty and the need to realize the goals of education [1; 8]. Naturally, this implies the implementation already during professional training the creation of situations that provide sense-making activity, students in other words mastering possible options for positioning them as teachers, the readiness of personal and professionally oriented connection to solve problems of interaction between the teacher and the student in the process of joint solution of educational problems.

In this connection, the relevance of research on the problem of psychological readiness for innovation and the factors preventing it from teachers themselves increases in order to increase activity in solving problems of implementing innovations in the education system.

The purpose of the study: to identify the features of readiness for innovation among teachers of educational institutions and barriers to innovation activity.

Research Methods. The diagnostic tools were the methodology "Assessment of the teacher's readiness to participate in innovative activities" (V.A. Slastenin) [9], the questionnaire "Barriers preventing the development of innovations" (T.V. Chirkova); Questionnaire "Style of self-regulation of behavior SSPM" (V.I. Morosanova) [3].

The study involved 80 teachers of general education institutions aged 22 to 30 years.

At the beginning of the study, we analyzed the barriers of innovative activity among teachers. As a result, for 72% of teachers, the most significant factor in the lack of desire to use new technologies is a large workload; 64% indicate a lack of material incentives; 52% are convinced that only traditional technology can teach effectively; 42% indicate the lack of assistance in the development of innovations from the administration and 24% of teachers indicate other personal reasons.

Thus, based on the data of the analysis of barriers to innovative activity of teachers, the most common factors are heavy loads, lack of financial incentives and beliefs in the merits of traditional ways of teaching and upbringing.

Further, the level of readiness for innovative activity among teachers was revealed according to the methodology "Assessment of the teacher's readiness to participate in innovative activity". The analysis revealed that 22% of teachers have a high level of readiness for innovative activity and innovative style of thinking, characterized by openness to the perception of new, the desire for self-development. 45% of teachers have an average level of innovation readiness and a moderate attitude to the implementation of pedagogical innovations. And 32% of teachers show a low level of readiness for changes in the content and technologies of teaching and upbringing. Meanwhile, as the experience of the general

unpredictable transition to distance learning has shown, the innovative activity of teachers will make it possible to solve the tasks of teaching and upbringing quite effectively in intensively changing conditions.

Teachers who are not interested in achievements and self-improvement may experience stress in such dramatically changing situations and will be ineffective.

Next, we divided the sample, depending on the level of innovation activity, into low and high, the dropout of teachers with an average level, and studied their features of self-regulation of behavior. According to A.K.Osnitsky, conscious self-regulation of activity is an integral characteristic that determines readiness for innovative activity (see Table 4) [5].

#### Table 1.

ID Readiness Levels	General level of self-regulation	Plan- ning	Mod- eling	Program- ming	Flexi- bility	Independ- ence
High M <sub>x1</sub>	42	7,4	7,2	7,6	8,1	7,8
Low M <sub>x2</sub>	29	6,2	3,9	6,5	4,9	4,6
U <sub>эмп</sub>	189**	452	234*	458	251*	263*

The severity of indicators of self-regulation of the behavior of teachers with high and low levels of readiness for innovation (in cf. b.)

**Note**: \*- p≤0,05; \*\*-p≤0,01.

As can be seen from the table, teachers with a low level of readiness for ID are statistically significantly  $p \le 0.01$  different from teachers with high levels of readiness for innovation in terms of the indicator "general level of self-regulation of behavior". In addition, teachers with a low level of readiness for innovation activity have lower values of individual components of self-regulation: flexibility, independence and modeling. That is, the general ability to consciously plan and regulate one's behavior has not been formed, and difficulties often arise in determining the goal and program of actions adequate to the current situation.

In this connection, the administration of educational institutions can be recommended to review the workload of teachers, introduce a system of material and non-material incentives for teachers for innovative activity. We can recommend to teachers the development of self-regulation of activity as an internal purposeful activity of a person, which is a prerequisite for the success of mastering new types of activities.

Thus, "the process of preparing a teacher for innovative activity should be associated with the creation of an innovative educational environment focused on the continuous search for the content and methods of teaching, on the formation of innovative consciousness and the model of activity of a modern teacher." [7, 47].

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# 基洛夫地区德裔社区言语行为的性别特征 GENDER FEATURES OF SPEECH BEHAVIOR OF THE GERMAN ETHNIC COMMUNITY OF THE KIROV REGION

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抽象的。这篇文章致力于研究居住在基洛夫地区的俄罗斯德国人的演讲中的 性别差异。这项研究的相关性是由于岛屿方言学的社会语言学意义与德国民族社 区言语行为的研究相关,该行为与主要民族地块隔离存在。该研究的新颖之处在 于它是在性别研究的背景下进行的,这补充了影响上述地区俄罗斯德国人言语行 为的社会人口因素。

本文以老年组第一亚组(6 名女性和 5 名男性)的 11 名受访者的分析故事为 例,讨论性别对基洛夫地区老一代俄裔德国人语言能力的影响70 至 95 岁),主 题为"在基洛夫地区驱逐伏尔加和乌克兰德国人"。采用直接观察、语音录音和定 性方法(男性和女性语音的内容和功能分析)进行研究。

通过对独白的分析,发现每个性别群体的言语都具有其语言和语言外特征。在 男女说话的语言特点中,首先要提到的是语法结构上的差异。至于语言外的特征, 包括特定性别群体的言语特征、沟通方式的心理差异,以及男女在进行对话时所 追求的目标。

本文将对参与研究男性和女性言语特征的研究人员感兴趣。

关键词:德国民族社区、性别差异、语言和外语特征。

Abstract. The article is devoted to the study of gender differences in the speech of Russian Germans living in the territory of the Kirov region. The relevance of this study is due to the sociolinguistic significance of island dialectology associated with the study of the German ethnic community speech behavior, which exists in isolation from the main ethnic massif. The novelty of the study lies in the fact that it was carried out in the context of gender studies, which complement socio-demographic factors affecting the speech behavior of Russian Germans in the above-mentioned region.

This article discusses the impact of gender on the linguistic competence of the older generation of Russian Germans in the Kirov region on the example of the analyzed stories of eleven respondents, Russian Germans of the first subgroup

of the older age group (6 women and 5 men aged 70 to 95 years) on the topic "Deportation of Volga and Ukraine Germans in the Kirov region". Methods of direct observation, audio speech recording, and also qualitative methods (a content and functional analysis of male and female speech) were adopted to carry out the study.

As a result of the analysis of monologues, it was found out that the speech of each gender group is characterized by its linguistic and extra-linguistic features. Among the linguistic characteristics of men's and women's speech, it is necessary to mention, first of all, differences in the grammatical structure. As for extralinguistic features, these include psychological differences in speech characteristic of a particular gender group, communication style, as well as the goal that men and women pursue when entering into a conversation.

This article will be of interest to researchers involved in studying the characteristics of male and female speech.

*Keywords:* German ethnic community, gender differences, linguistic and extralinguistic features.

# 1. Introduction

Due to the recent increased interest in the linguistic situation of Russian Germans, the focus of this article is on the linguistic consciousness and cultural identity of the speakers of German island dialects. A particular importance to continue research in this area is explained by the fact that many unexplored dialects have already been lost or are in the process of extinction due to the continued emigration of ethnic Germans.

The relevance and novelty of such studies in the Kirov region is determined by the general linguistic, historical-linguistic, sociolinguistic significance of island dialectology associated with the study of the speech behavior of Russian Germans, with the study of the peculiarities of the development and functioning of their dialects in foreign language environments, that is, in the situation of individual ethnic language groups existence in isolation from the main ethnic massif.

# 2. Research Methodology

The aim of this work is to study gender differences in the speech of Russian Germans living in the Kirov region. Our gender observations, firstly, supplement the factors of a socio-demographic nature that affect the speech behavior of Russian Germans in the region in question, and secondly, they correlate with general gender studies conducted by domestic scholars <sup>[1, 2, 3]</sup>. Methods of direct observation, audio speech recording, a content and functional analysis of male and female speech were adopted to carry out the study.

# 3. Research Results

# **3.1.** On the issue of gender influence as one of the extralinguistic factors of speech behavior

The problem of "gender and language" has acquired special relevance in recent decades, and the gender aspect of research in Russian linguistics undeniably makes a significant contribution to the comprehension of discourse linguocultural features.

The use of the concept of "gender" as a term of humanitarian knowledge is designed to distinguish between "social gender" and biological sex<sup>[2]</sup> and allows you to conceptually speak about the language in terms of a dynamic sociocultural construct that accumulates ideas about masculinity and femininity that are characteristic of a particular society in a certain period of time.

Following A.V. Kirilina, the concept of gender is used in this work as "an element of the modern scientific model of man, reflecting the sociocultural aspects of gender, fixed by the language"<sup>[1]</sup>, taking into account its linguistic and cultural specificity, which affects the dynamics of language and gender interaction, which in turn also creates a certain cultural context defined by the parameters of masculinity and femininity in different discourses.

One of the features of gender studies is their applied nature, and, as A.V. Kirilina points out, the gender aspect in linguistics is characterized by the fact that practically any field of linguistics (issues of reference, cognition, morphology, grammar, syntax, lexicology and phraseology, semantics and pragmatics, text linguistics, etc.) can be considered from the point of view of reflection in them gender relations<sup>[4]</sup>. As a common knowledge, we emphasize the fact that differences in male and female speech can be manifested at all levels of the language, affecting its internal diversity and the appearance of language variants due to gender-related and social-cultural norms.

# **3.2.** The gender aspect in the speech of Russian Germans in the Kirov region

This paper examines the impact of gender on the linguistic competence of the older generation of Russian Germans in the Kirov region using the analyzed stories of eleven respondents, Russian Germans of the first subgroup of the older age group (6 women and 5 men aged 70 to 95 years) on the topic "Deportation of Volga and Ukraine Germans in the Kirov region". Hypothetically, it can be assumed that the gender factor should be reflected in the language practice of this linguocultural community of individuals who identify themselves with a particular social group and, accordingly, have a common understanding of the world and common views, fueled by the same social institutions throughout a person's life. Today it is generally recognized that such parameters of social identity as race, class, ethnicity, as well as profession, status, age, etc., have a significant impact on gender identity, as well as on symbolic images of femininity and masculinity in culture and society, and therefore gender features should be considered in combination with status, social group, level of education, situational context, etc., as well as taking into account the changing situation in society.

It should be noted that in our case, older men and women are bilingual. This was facilitated by their great social activity – work in the "labor army". At the same time, this age group has retained its native dialects, which they use in every-day life.

Based on the fact that there are no absolute markers of male and female speech, the notions of "typical", "very typical", "not typical", "not very typical" are used in this work when analyzing the speech behavior of German bilinguals.

The analysis has put forward a number of male and female speech features of the older generation of Russian Germans in the Kirov region, due to gender influence as a result of building masculinity and femininity in a specific socio-cultural context.

First of all, when studying linguistic material, it should be noted that female representatives speak their native German dialect much better than male respondents. Women, as a rule, easily make contact by entering into conversation, and, as many scholars note<sup>[1]</sup>, communication itself is important for women. Men are much more serious than women regarding both the speech partner and the topic of conversation. Women, in turn, are able to quickly adapt to different conditions of communication and communicate freely, while men are more constrained in choosing a language option and are skeptical of partners involved in a communicative act.

According to our study, the statements of women are often accompanied by all sorts of emotions: crying, sighing, etc.

Nu, iç bən hiə ən də šuəl gəgangə. Ha:p siəbn khlasə gəent, hiə əndr šuəl, dn wa:r...

[Nun, ich bin hier in die Schule gegangen. Habe sieben Klassen geendigt, hier in der Schule, dann war...

*wir tsva*ə ... *tsva*ə ... ən dən Wald gəgangə. Ondrə arvaət wa:r khaənə. Nu... wir zwei ... zwei ... in den Wald gegangen. Andre Arbeit war keine. Also...

*ən... Kolxos hat gəarvaət dr bruədr, ən də švestr. Nu, ən ... ən volt. Es wa:rə aox tsvaə...* 

In Kolchos hat gearbeitet der Bruder, und die Schwester. Also, im... im Wald. Es waren auch zwei...

bara:kn ən dort habn klept də mennr alaənəç ən də fraon alaənəç...

Baracken und dort haben gelebt die Männer allein, und die Frauen allein] [Memories of childhood in the settlement of Chernigovsky, the Kirov region]<sup>i</sup> At the same time, the male-informant tells his events calmly, without pronounced emotional means:

Iç kã: mer ol(ə)s fərstelə . Es kã:m frla:s «Eviction of Volga Germans».

[Ich kann mir alles vorstellen. Es kam der Erlas "Wysselenije nemzew Powolshja".

Decree issued on eviction. Well, it was written there ... due to the fact that ... Ukas wyschel o wysselenii. Nu tam bylo napissano...w swjasi s tem, chto...

*thousands found touzẽ, touzẽ, ſpįonəʿ, dįvęrsantəʿ...* obnarusheny tychi tausende, tausende Spionen, Diversanten...

*əntouzênoinhundrəinonfęrtsəç vir zen ən krasnojarsk gəkã:m.* eintausendneunhunderteinundvierzig wir sind in Krasnojarsk eingekommen...

on əntouzēnoinhundrtsvəionfertsəç vir zen ən kirof herkā:m...

am eintausendneunhundertzweiundvierzig wir sind in Kirov hierhergekommen.

Hiər vurdə vir bəvaxt, dort vo:r də kəmendatur, vir mus ge:n on zeç apmelda

Hier wurden wir bewacht, dort war die Kommandantur, wir müssen gehen und sich abmelden].

As many researchers note<sup>[5]</sup>, women often in the course of their utterance switch to a topic unrelated to this situation: for example, the female informant talking about the labor army and the fate of their loved ones, suddenly begins a story about how they lived in Ukraine, how they baked biscuits:

Iç va:r nur mit mainƏ mama, dr fa:dr va:r gesetst. ...An dr Ukraine habn vi:r...

[Ich war nur mit meiner Mama, der Vater war (fest)gesetzt... In der Ukraine haben wir...

niçt so к 'bakn vi: jetst. Vi:r bokn ku:xen,pre:niki...

nicht so gebacken wie jetzt. Wir buken Kuchen, Präniki...]

However, it is worth emphasizing that the woman does not lose her line of conversation, and later returns to the story of deportation. A quick transition from one topic to another is not typical for men.

If a women's story consists of impressions of what they've seen, numerous details, then men build their stories on the basis of facts, without emotional evaluations. Men's speech is more informative, they often refer to dates, names of decrees, laws. Women's speech uses more proper names (names of villages, surnames, etc.) in comparison with men's speeches. Also a typical feature of female speech is repetition and a greater number of pronouns and adjectives:

Iç khan mər oləs frštelə, oləs frstelə. Draəondraəsək ja:rə sən sleçtə, šve:rə ja:rə....

[Ich kann mir alles vorstellen, alles vorstellen. Dreiunddreißige Jahre sind schlechte, schwere Jahre...]

The speech of each gender group, according to O.E. Lomova is characterized by its linguistic and extralinguistic features<sup>[6]</sup>. Among the linguistic characteristics of the speech of men and women, it is advisable to name, first of all, differences in the grammatical composition (see Table 1).

Table 1.

Linguistic features of speech behavior	Men's speech	Women's speech
1. The prevalence of the 1st person singular	+	-
2. The prevalence of the 1st person plural	-	+
3. A large number of proper names (names of villages, surnames, etc.)	-	+
4. The prevalence of nouns, verbs in speech	+	-
5. The predominance of adjectives, pronouns	-	+
6. A large number of repetitions	-	+

Linguistic features of men's and women's speech behavior in respondents' stories on the subject "Memories of the Germans' eviction to the Kirov region"

Extralinguistic features include psychological differences in speech, which are characteristic of a particular gender group, communication style, as well as the goal that men and women pursue when entering into a conversation (see Table 2).

# Table 2.

Extralinguistic features of male and female speech behavior in respondents' stories on the topic "Memories of the Volga Germans' eviction to the Kirov region"

Speech segments	men	women
Messages about facts, events, phenomena	very typical	typical
References to laws, documents	typical	not typical
Assessment of persons, events, phenomena	not typical	typical
Possibility of a consistent narrative	very typical	not typical
Possibility of talking about family and friends	not typical	very typical

Switch from one topic to another	not typical	very typical
References to the remarks of relatives, friends	not typical	very typical
Self-centeredness	typical	not typical
Expressing feelings, emotions	not typical	very typical

As a comparative analysis of the speech behavior of bilingual Germans shows, an important feature of male speech behavior is a consistent presentation of events, facts and phenomena, references to laws and documents. For men, an emotional narrative, an assessment of individuals, events and phenomena, diversion to stories about relatives and friends, and also references to remarks from relatives and friends are not typical, they talk more about themselves and, as a rule, talk about what is connected with them.

For female speech behavior, an emotional message about facts and phenomena with a personal assessment of individuals and events is typical. Women often include a description of personal feelings, their own life experiences in the conversation. They are characterized by a discussion of typical female occupations, such as cooking, raising children, talking about relatives. In addition, women often turn to quotes from relatives and friends.

# Summary

Thus, as a result of the analysis of monologues, it was revealed that a characteristic difference in male and female communication is the ability of women to quickly switch from one topic to another. Men are self-oriented in conversation, it is more difficult for them to monitor the environment, therefore, unlike women, they cannot talk with two interlocutors at the same time. Women in conversation are not so focused on themselves, they do not strive for leadership, so it is easier for them to switch from priority to parity roles. The man is more immersed in the course of his thoughts and it is more difficult for him to interrupt the conversation. The speech of women often divert from the topic of the conversation, for example, this may be a remark about what is going on at the moment around the interlocutors.

However, such differences cannot be considered indispensable characteristics of the speech of all women or all men; it would be more correct to call them certain gender characteristics of male and female speech.

It should be noted that a large role in speech behavior is played by the social context, as well as the psychological and physiological characteristics of men and women. According to N.I. Formanovskaya, "perception, way of thinking and speech are closely interconnected and differ in men and women. As a result, the same situations are described by them differently, since different accents are placed at the same time"<sup>[7]</sup>. Taking into account all these factors helps to make the explanation of gender differences in speech behavior more objective.

The analysis showed the influence of gender on the linguistic and cultural status of the bilingual Germans of the Kirov region. This influence, like all linguistic phenomena, is constantly undergoing a modification caused by numerous extralinguistic factors that determine the gender specificity of speech.

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### 短语单位在民族心理表征中的作用(论"家"、"字"的概念) THE ROLE OF PHRASEOLOGICAL UNITS IN THE REPRESENTATION OF THE NATIONAL MENTALITY (ON THE CONCEPTS OF "HOME", "CHARACTER")

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注解。 俄语 俄语 本文讨论了外国学生在俄语作为外语课程中使用短语单元 来识别和比较印度和俄罗斯民族心态的关键特征的重要性。 目前,不同文化的和 平互动变得尤为重要。 短语学作为一门科学领域,提供了一个广泛的研究和比较 国家世界观的领域,因为短语单元本身就是一种"文化代码"。 本文讨论了2个基 本概念:"家"、"民族性格"。 这些概念的选择并非偶然,而是基于俄罗斯和印 度民族的主要生活价值观。

关键词:心态、用语单位、文化、概念。

Annotation. Russian Russian The article discusses the importance of the use of phraseological units by foreign students in classes on Russian as a foreign language to identify and compare the key features of the Indian and Russian national mentality. Currently, the peaceful interaction of different cultures is becoming particularly relevant. Phraseology as a scientific field provides an extensive field of study and comparison of the worldview of nations, since the phraseological unit itself is a kind of "culture code". This article discusses 2 basic concepts: "home", "national character". The choice of these concepts is not accidental and is based on the main life values of the Russian and Indian nation.

Keywords: mentality, phraseological units, culture, concept.

# The purpose of the study

The aim of the study is to study the peculiarities of the worldview of people of different nationalities on the material of phraseological units used by Indians, in comparison with the Russian national mentality, as well as the British mentality, since the British version of the English language is an "intermediary" in communication between teachers and researchers with students from India.

### **Research methods**

In the course of the study, more than 100 phraseological units with the meaning "house" and "character" were analyzed by the continuous sampling method. Based on the collected phraseological units, conclusions are drawn about the similarity and difference in the worldview of representatives of various national cultures (Russian, Indian and British), for which a descriptive method was used.

The implementation of this goal involves solving a number of the following **tasks**:

1) to identify the main phraseological units used in India and in Russia;

2) consider the key features of national thinking and attitude to family, home, national traditions;

3) analyze the attitude of Indians and Russian people to work and self-development on the material of phraseological units;

4) compare the features of the Indian and Russian national mentality based on the concepts of "home", "national character".

Along with the main methods, a comparative research method was also used in the analysis of phraseological units of different languages.

#### The results of the study

Russian Russian and English phraseological units have been studied, and it has been found that the attitude to the concept of "home" is largely similar in Russian and Indian national culture, which is confirmed by the analysis of phraseological units, while the concept of "character" has a number of different national characteristics.

For Indians, as for Russian people, the following traits are characteristic: nepotism, community, collectivism, mutual assistance, economy.

# Hindi: Ek hai taali ke chatte-batte

Birds of the same feather flock together. This means that if two or more people have the same characteristics, such as character, behavior, manners, etc., they will always be found with each other.

# Compare in Russian: Рыбак рыбака видит издалека. Свой своего ищет. Hindi: Jal main rehkar magar se bair tik nhi

One should not be at enmity with the one who gave shelter. This proverb simply means that it is not worth going against someone who is stronger and more powerful than us.

A striking feature is the desire for development, obtaining new knowledge, acquiring skills. Fundamental, in-depth knowledge in any field is encouraged.

# Hindi: Nim-Hakim hatra-i-jaan

Half the doctor is life-threatening. The most famous of all Hindi proverbs, it means that having a little knowledge is a dangerous thing. If you give the wrong advice, it may even lead to the death of people.

In Russian and Indian culture, as in British culture, caution and prudence are encouraged when dealing with new people, phenomena and situations.

Hindi: Har chamakne wali chiz sona nahi hoti

This proverb in Hindi means that perhaps a beautiful thing has an attractive character, but this thing may not have any real qualities.

Compare in Russian: *Не всё то золото, что блестит.* Compare in English: *Everything that glitters is not gold.* Hindi: *Jaisa desh vaisa bhes* 

The proverb shows that a person must shape himself or adapt changes in accordance with the environment in which you live.

Compare in English: When you're in Rome, do as the Romans do.

In the phraseological units of all three languages, greed is vividly condemned. Hindi: *Lalach buri bala hai* 

If you become greedy, there will come a day when your lives will be destroyed before you even realize it. Simply put, greed leads to ruin.

Compare in English: Greed is the root of all evil.

Compare in Russian: От жадного человека зимой снега не дождёшься (не допросишься).

In Indian and British culture, personal responsibility for the result of work is encouraged.

# Hindi: Apna haat jagannath

It means doing your job yourself. The proverb says that a person should believe in his own hard work and not depend on other people.

Compare in English: If you want the job to be done well, do it yourself.

The Russian national mentality is characterized by some distraction, hope for "maybe" in relation to the result of the action.

**AGOCE** *будем живы, авось и помрём.*. The proverb reflects the uncertainty of life itself, of tomorrow, when the result may or may not be achieved due to some circumstances beyond the control of the subject.

It is interesting to note that the Indian national mentality is closer to the Russian than the British one, since it allows for the presence of some "higher" principle that can affect the result of work. At the same time, the main thing is to be positive about the outcome of the case.

# Ohli main sir diya musal se kya darna

What to be afraid of from a blow to the head with a pestle. If you have started a job or task, don't worry about the result. Be positive and do your job effectively.

It should be noted that in English, namely British, culture, the culture of the intermediary language, the concept of "home" is presented differently from both Russian and Indian national mentality, which is explained by the peculiar way of thinking of the British, which is vividly reflected in phraseological units:
1. *The hedge between the trees keeps friendship green* – the proverb means that friends should not contact each other too closely, trust all secrets.

2. *Love me, love my dog* – means the proverb that if one person loves another or is close friends with him, he should show, if not love, then at least tolerance to those who surround a loved one, even if it is a dog.

3. *My house is my fortress* - the proverb implies an attitude to a person's place of residence as a castle or fortress, where only "own" people are allowed.

For the Russian and Indian national mentality, the characters are much more open in communication, hospitality.

### Хоть и не богат, а гостям рад.

*3a пустой стол гостей не сажают.* Proverbs warn that a guest should be treated like a king, that is, be sure to feed, drink, even if the owner of the house has financial problems, and he cannot afford to set a chic table.

In conclusion of our research, we will quote the words from the book "India. Unity in diversity":

Although culture includes traditions, practices and knowledge systems, it is nevertheless a dynamic entity. Societies remain alive and functioning as long as they are able to adapt to changing circumstances and change aspects of their culture accordingly (4, p. 9).

## Conclusion

In the modern world, the issue of peaceful interaction of people of different cultures, as well as worldviews and ways of thinking is relevant, which provides both students and teachers, researchers, a huge field of activity for finding common ground of the worldview of nations.

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## 俄语和阿迪格语用语的稳定组合 STABLE COMBINATIONS IN THE PHRASEOLOGICAL PICTURE OF THE RUSSIAN AND ADYGHE LANGUAGES

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抽象的。对不同语言水平的比较性质的研究变得越来越重要。本文致力于对 俄语和阿迪格语世界用语图景中稳定组合的比较描述。比较任何语言的措辞水平, 尤其是那些具有不同结构的语言,是有希望和有趣的,但总是很困难。为确定比较 俄语和阿迪格语稳定单位的主要方式而进行的材料分析使我们能够确定四种比较 方式,并证实在比较语言的世界用语图景中,等价稳定组合 更大程度上被发现。

关键词:语言,世界语言图景,世界用语图景,用语,用语单位,比较,类型学,稳定组合,等价,结构,语义。

Abstract. Studies of the comparative nature of different levels of language are becoming more and more relevant. This article is devoted to the comparative description of stable combinations in the phraseological picture of the world of Russian and Adyghe. Comparing the phraseological level of any languages, especially those with different structures, is promising and interesting, but always difficult. The analysis of the material carried out in order to establish the main ways of comparing stable units of the Russian and Adyghe languages allowed us to identify four ways of comparison and confirmed that in the phraseological picture of the world of the compared languages, equivalent stable combinations are found to a greater extent.

**Keywords:** language, linguistic picture of the world, phraseological picture of the world, phraseology, phraseological unit, comparison, typology, stable combination, equivalent, structure, semantics.

The study of linguistic phenomena at a comparative level has been and remains the most important topical problem of modern linguistics and has become increasingly important in recent decades. This is confirmed by numerous studies that appear in linguistics and confirm the relevance of this problem. Comparative description of unrelated languages, in particular the great attention shown to it, is due to the ability to establish what is common between the compared levels of unrelated languages, to identify and bring into the system the specific features of the structure of various languages, to develop a universal theory of comparison of language units.

The study of linguistic phenomena at the level of comparison has a significant and significant advantage over other methods. It is a comparative analysis that helps to see those features of a linguistic phenomenon that, without comparison, could go unnoticed. S.D. Ushinsky once wrote that comparison "... is the basis of all understanding and all thinking. We learn everything in the world only through comparison" [4, p.436].

In the linguistic picture of the world of any language, the phraseological layer is traditionally based on units of other levels of the language and is built on them. The most important feature of the phraseological system stems from the structural secondary, derivativeness of the phraseological system - in the phraseology of each language, to a greater or lesser extent, all the main characteristics of other language levels are reflected. This feature largely characterizes the specifics of the phraseological layer in each particular language.

The phraseological picture of the world of any language has a pronounced national character, which is reflected in the structure, composition of the components, figurativeness and semantics of phraseological units (hereinafter PU). Phraseological units embody the spirit, the psychology of the people - the native speaker, which leaves an imprint on the semantic, content side of the unit, which is based on images, sometimes associated with purely national realities, history, culture, traditions.

The phraseological picture of the world of the Russian language is quite fully covered, developed in detail both from the point of view of semantics and from the point of view of their structure. It was this base that became the basis for studying the phraseological structure of the Adyghe language and makes it possible to compare the phraseological pictures of the Russian and Adyghe languages. The phraseological picture of the world of the Adyghe language testifies to the figurative thinking of the people - the bearer of this language. Stable combinations, reflecting the national flavor, enrich the language with figurative means. In Adyghe linguistics, interest in the phraseological level, caused by theoretical and practical aspects, has intensified only in recent decades. The theory of phraseology is more specifically presented in the monographic work of Kardanov B.M. "Phraseology of the Kabardian language", in various scientific articles by Tharkakho Yu.A., devoted to various aspects of the phraseological structure of the Adyghe language, in dissertation research that have appeared in recent years. However, many problems of the theory of phraseology of the Adyghe linguistics still remain open, cause serious controversy and require in-depth research.

Comparison in the field of phraseology is always promising, interesting, but very difficult. This is confirmed by the very nature of phraseology, the different nature of the phraseological picture of the world of the compared languages, the unevenness of its development, the different degree of development of this layer in the compared languages. The complexity of the object of comparison is also due to the fact that many problems associated with this level of language remain controversial and contradictory to this day.

In the theory of linguistics, two ways of comparing phraseological material have been established. The first way is to identify ways to convey the meanings of the PU of the Russian language by means of another language. The second is the identification of structural identity and differences in the identified correlates. In linguistics, there has not yet been a unified classification of the types of PU relationships in Russian and other languages. Bystrova E.A., taking into account the coincidence (non-coincidence) of semantics, internal form, structure of Russian phraseological units and a number of national languages, identifies the following types of relationships: phraseological units that completely coincide in semantics, internal form, composition, lexico-semantic compatibility; phraseological units that coincide in structure, internal form, but differ in semantics; phraseological units that coincide in semantics, stylistic coloring, however, to a certain extent, differ in internal form; phraseological units that differ in internal form, but are the same or close in meaning; Russian phraseological units that do not have equivalents; false equivalents (similar in component composition, figurative basis, having homonymous free phrases, but used in different meanings [2, p. 16].

A comparative analysis of Russian and Adyghe phraseological units made it possible to identify, along with discrepancies, similar phenomena in the semantics, form and functioning of PU. According to the degree of functional and semantic correlation of Russian and Adyghe phraseological units, it was possible to determine four types of correlations PU - equivalents in the compared languages. Our observations and comparative analysis of the factual material extracted from the phraseological dictionaries of the compared languages using the continuous sampling method made it possible to identify the following types of PU relationships in the Russian and Adyghe languages [1,6]:

-full semantic correspondence of Russian and Adyghe PU (full equivalents): сердце не стареет – гур жъы хъурэп(lit.:the heart does not get old); задирать нос – пэр дэгъэзыен(lit.:turn up your nose); -their incomplete correspondences (analogues): держать язык за зубами -ужэ пІыгьын(lit.: hold your mouth);денег куры не клюют – и1эм ыч1э ыш1эжьрэп(lit.: does not know the limit of property (wealth));

-the absence of corresponding phraseological equivalents in the Adyghe language: наше вам с кисточкой, белыми нитками шито, барашек в бумажке, Альфа и омега;

-lack of corresponding phraseological equivalents in Russian: кукуум игьыбээ къырещы(lit.: cuckoos crying brings out, sings), гупшыси псалъэ, зыплъыхьи mlыc (lit.:after thinking, speak, after looking around, sit down), осэпсым къуашъор щыфын - (lit.: to guide a boat on the dew)[5,c.8].

Equivalence is understood as a unit of speech capable of performing the same function as another speech unit; analogy - assimilation caused by the influence of new elements of the language, forming a more productive and widespread model [1, p.45,522].

In the Adyghe language there are full equivalents of the PU of the Russian language. However, the possibilities of translating stable combinations for the purposes of semantization are limited, since there are not so many cases of coincidence in semantics, structure, and figurativeness. At the same time, if it is difficult to semantize a more stable combination using the means of the Russian language, then it is advisable to do this by translating into the native language: *близок локоть*, *да не укусишь – Іэнтэгъур благъэ, ау уецэкъэжьын плъэкІырэп (lit.: the elbow is close, but you won't bite it); cepdue не стареет –: гур жъы хъурэп (lit.: the heart doesn't get old*. When perceiving Russian phraseology, a parallel with the full Adyghe equivalent arises spontaneously in the mind. This is facilitated by knowledge of the meaning of the components of Russian phraseological units that have full correspondence in the Adyghe language: *выйти из воды сухим –псым гъушъэу къыхэкІыжыын; на вес золота –дышъэ кІэн ыуас*.

Comparison of stable combinations of the Russian and Adyghe languages in terms of their semantics and structure helps to identify, in addition to similarities, differences associated with the morphological features of the Adyghe language in comparison with Russian. The equivalents include PUs that are semantically identical, but differ in the order of the components: *npabag pyka – Iэ эkbaőzby*(lit.: *hand right*); *c поднятой головой – ышъхьэ Іэтыгъэу* (lit.: *head up*) [5, p.10]. These are stable units consisting of a combination of a noun and an adjective. In Russian phraseological units, the adjective is traditionally prepositive in relation to nouns, in Adyghe it is postpositive. The different order of components in Adyghe and adjective in combination with a noun usually stands for it, i.e. takes a postposition.

Semantically close stable units of two languages in many cases differ in their

internal form. In them, it is impossible not to notice the difference in the images underlying these comparisons:  $\partial yua \ He \ Ae Bergeum - exp \ \phi a \kappa lop on$ . Imagery in the stable unit soul is not created on the basis of the noun  $\partial yua$ , but in the Adyghe phraseological unit  $exp \ \phi a \kappa lop on$  (lit.:heart does not go to it) figurativeness arises on the basis of the verb  $\phi a \kappa lop on$  (does not go). In general, the content of the stable combination is preserved, but the figurativeness of the Russian phraseological unit is lost in the Adyghe equivalent [5, p.10].

The discrepancy between the internal form of semantically equivalent stable combinations is explained by the reflection of the specific features of the figurative thinking of each people. This is manifested in the fact that some stable units of the Russian language can be translated into several Adyghe ones. For example, the meaning of the phraseological unit *сложа руки* can be conveyed in the Adyghe language n13 зэтедзагьзу ущысын(lit.:hands folded to sit) and n1um1y зэтедзагьзу ущысын (lit.: with two arms crossed to sit).

The group of full equivalents, as our observations show, is quite large and diverse in semantics, structure, and grammatical characteristics. The presence of such units, which coincide in both languages in terms of semantics, structure, stylistic characteristics, and compatibility, makes it possible to distinguish the following structural types of equivalent PUs built according to various schemes: verb + noun: *мутить воду – псыр гъэутхьон(гъэуш1оркъын);* verb + verb: *ни дать ни взять – хэпхыни хэплъхьани и1эп;* adjective + adjective: *и хромой, и слепой – нэшъуи льащи;* noun + adjective: *райская жизнь – джэнэт щыІакІ;* units that include numerals: *сто раз сказать – шъэрэ епІон;* verb + adverb: *далеко зайти – чыжьащэу хэхьан*.

As you can see, the group of full equivalents is quite large and diverse in terms of semantics, structure, and grammatical characteristics. The features of stable units of this group of the Adyghe language attract the attention of researchers and deserve a separate in-depth scientific study.

Thus, in the phraseological picture of the world of the Russian and Adyghe languages, elements that are common to both languages, on the one hand, and, on the other hand, nationally distinctive, specific to each language separately, appear and act. The comparison of unrelated languages has, in addition to revealing the properties of their equivalence, similarity and non-equivalence, a very important positive side. When compared, all the universal, specific phenomena of the compared language levels are most clearly manifested. It is these features of the language, the special characteristic features of the language level that are left unattended by traditional grammar, that are revealed when approaching the language being studied from a different position of the language system and are the starting point for a comparative description of languages of different systems.

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## 国际收养研究的理论和方法论 THEORETICAL AND METHODOLOGICAL APPROACHES TO THE STUDY OF INTERNATIONAL ADOPTION

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抽象的。作者分析了 P. Berger 和 T. Luckmann 版本中的建构主义方法,将 其作为分析国际收养作为构建社会亲属关系的过程的最相关的理论模型。它被解 释为一种特殊类型的家庭,尤其是亲子关系,其形成过程要么不涉及传统的生物 学机制(内部或国际收养),要么通过第三方的参与来调节其作用(代孕,捐赠遗 传物质)。作者还着眼于社会学知识的多范式性质以及系统方法在研究政治和社 会领域的相互作用方面的有效性。

关键词:亲属关系,科学知识的对象,建构主义方法,结构主义,客观主义和主观主义方法,结构化理论,二分法,社会历史实践,现实的社会建构,社会和人道主义知识。

Abstract. The author analyzes the constructivist approach in the version of P. Berger and T. Luckmann as the most relevant theoretical model for the analysis of international adoption as a process of constructing social kinship. It is interpreted as a special type of family and, above all, parent-child relationships, in the formation of which traditional biological mechanisms are either not involved (internal or international adoption), or their role is mediated by the participation of third parties (surrogate motherhood, donation of genetic material). The author also looks at the polyparadigmatic nature of sociological knowledge and the effectiveness of a systematic approach in studying the interaction of political and social spheres.

**Keywords:** kinship, an object of scientific knowledge, constructivist approach, structuralism, objectivist and subjectivist approaches, the structuration theory, a dichotomy, socio-historical practice, the social construction of reality, social and humanitarian knowledge.

Adoption as a social practice is a combination of many factors; this is a com-

plex phenomenon, the difficulty of its analyzing lies in the need to find an appropriate integrative methodology. The application of a critical analysis of a number of theoretical approaches in sociological knowledge aims to show the dualism of social life as dialectic of the objective and the subjective, as well as their common methodological basis: the activity of people is aimed at creating and constructing a society. The discrepancy in the concepts of the activist and constructivist approaches is found in the field of the concepts of purpose-meaning. The author argues the effectiveness of the constructivist approach in the version put forward by P. Berger and T. Luckmann<sup>i</sup> in studying the phenomenon of adoption.

The concept of adoption is based on the knowledge available to an ordinary person and has a specific historical character. The institutionalization of adoption takes place within a particular symbolic universe. The transformation of the institution of adoption and the adjustments to its meaning as an everyday practice are dictated by a different determination of reality, a modification of the symbolic universe. For example, in pre-revolutionary Russia, an illegitimate child had absolutely no rights and was not protected by law, but under the Soviet rule, i.e. in the conditions of a different reality, a child became a full-fledged citizen. The constructivist approach makes it possible to answer two questions: what is happening and what lies behind it in the analysis of the phenomenon of adoption? In a sociological analysis of the phenomenon of adoption, it is necessary to note the difference between kinship based on descent and kinship based on property, i.e. which has become such as a result of marriage. Previously, only anthropologists noted the difference between biological and social kinship. But in the study of the institution of adoption, one cannot do without considering this difference. Biological relationship is a universal constant, a natural characteristic. Social kinship will cease if the parents abandon the child, lose their parental rights, or if the child refuses to live in the family or runs away from home thus abandoning his parents. However, the biological relationship remains unchanged. Marriage is a consolidation of social kinship, which is annulled as a result of divorce. But if children appear in a marriage, such relations between spouses are already biological kinship, mediated by the presence of common children. Thus, social kinship is transformed into biological. That is why the family is a remarkable phenomenon of intertwining biological and social kinship. The childless family remains a form of social kinship. In the case of adoption, it acquires a new status - it becomes a family with children, thereby expanding the existing form of social kinship. In this context, adoption should be viewed as a social action aimed at creating social kinship<sup>ii</sup>.

<sup>&</sup>lt;sup>1</sup>Berger, P., Luckmann, T. Social Construction of Reality. Treatise on the sociology of knowledge / P. Berger, T. Luckmann. - M.: Medium, 1995. - 323 p.

<sup>&</sup>lt;sup>ii</sup>Pak G.S., Khodyreva E.B., Adoption as the construction of social kinship: theoretical approaches // Bulletin of the Perm National Research Polytechnic University No. 1. - Perm: Publishing House of the Perm National Research Polytechnic University, 2017. - P. 63-75

# Scientific research of the SCO countries: synergy and integration

The complexity of the sociological study of the phenomenon of adoption is explained by the fact that, as an object of scientific knowledge, adoption is an ambiguous, multidimensional phenomenon. Its problems are connected with the sociology of the family, with the study of the world of childhood, with the legal regulation of adoption by the state. It is necessary to analyze the principles of organization and activities of social services involved in this process. In the context of globalization and the established practice of intercountry adoption, it is important to take into account the relationship between the states participating in this process. In today's rapidly changing world, the nature of the configuration of interstate relations is constantly transforming. Any political event, or an event that is considered as such, can destroy the formed, long-standing relations between states. An example is the so-called "Dima Yakovlev's law"iii. The only thing that raises the question is the connection between the adoption of children by Americans and the observance of the rights and freedoms of citizens of the Russian Federation. This law affected both a large number of Russian orphans awaiting adoption in the United States, many of whom have complex medical diagnoses, on the one hand, and several hundred American families whose adoption cases have already been initiated. As can be seen from this example, even if we limit ourselves exclusively to the list of subjects involved in the adoption process, we will see such levels of interaction as individual interaction (personal interaction); adoptive parents and social workers; legal regulation of relations between potential parents and adoptees. In the case of international adoption, the synergy of interstate activities is added. The definition of levels and subjects of interaction is just an expedient abstraction that needs to be specified. In this case, the researcher is faced with the need to find an adequate methodology. For the study of individual-personal interaction, ethnomethodology, symbolic attractionism, and the sociology of everyday life are the most suitable.

The effectiveness of a systematic approach in studying the interaction of political and social spheres is supported by a long-term scientific tradition. In the practice of international adoption, we should talk about the interaction of different systems. It is necessary to revise the theoretical and methodological arsenal of all sociological knowledge in order to find a cumulative methodology. Here we are forced to solve the most important problem of sociology as a science. The simplest way out is to realize the polyparadigmatic nature of sociological knowledge. P. Monson in his work "The Boat in the Alleys of the Park"<sup>iv</sup> proceeds from the recognition of three paradigms of sociological knowledge - objectivist, subjec-

<sup>&</sup>lt;sup>iii</sup>On measures to influence persons involved in violations of fundamental human rights and freedoms, rights and freedoms of citizens of the Russian Federation: [Federal Law of December 28, 2012 No. 272-FZ] [Electronic resource] // Non-commercial Internet version of KommersantPlus. - Access mode: http://www.consultant.ru/document/cons\_doc\_LAW\_139994/

<sup>&</sup>lt;sup>iv</sup>Monson, P. A boat in the alleys of the park: an introduction to sociology / P. Monson., [transl. from Swedish]. - M.: The whole world, 1994. - 96 p.

tivist and activist, which are based on a different theoretical and epistemological interest: to explain, understand or change.

When conducting a sociological analysis of the phenomenon of adoption, it is necessary to simultaneously explain, understand, and change. Scientific knowledge of social processes involves both a description of what is happening and the identification of the main characteristics and meanings of what is happening, and, of course, the sociologist seeks to propose practical measures to improve social reality. However, in real sociological research we are faced with two combinations of epistemological interests: to explain and suggest a promising direction for social change; consider and put forward practical recommendations for improving social practices. Thus, the activist paradigm is presented as a common goal or direction of research in both the objectivist and subjectivist approaches.

The main task of sociological knowledge is the need to choose a theoretical approach that would make it possible to reveal the dialectic of the objective and the subjective. Both in the history of sociological science and in modern theoretical sociology, we see different ways of solving the problem. In the Marxist tradition, it is defined as the problem of the correlation of objective conditions and the subjective factor, objectified and natural human activity. The concept of class struggle in Marxism rightly occupies a central place both ideologically and theoretically. The class struggle is precisely the driving force that objectifies the subjective and destroys the objective. For the French sociologist P. Bourdieu<sup>v</sup>, this problem takes the form of an antinomy between objective structural necessity and individual goal-setting actions. The French sociologist finds a way out in the synthesis of structuralism and constructivist approaches. It represents the concept of double structuring of social reality. Society is structured both by objective social relations and by the actors' ideas about these relations. It is from this that he proposed the concepts of field and habitus. The dialectical synthesis of structures and habituses is carried out in practice. P. Bourdieu in his work tried to bypass the inevitable choice between subjectivism and objectivism. However, he made his choice when he emphasizes the primacy of objective structuring in relation to the subjective structuring of social reality. The logic of P. Bourdieu largely reproduces the logic of the supporters of Marxismvi.

The next, no less well-known way to solve the problem of the correlation between the objective and the subjective is the theory of structuring by E. Giddens. The structuration theory consists in understanding human behavior as a social action based on the structural components of institutions and societies. The main

<sup>&</sup>lt;sup>v</sup>Bourdieu, P. Beginnings /P. Bourdieu, [transl. from Fr. N.A. Shmatko]. - M.: Socio-Logos, 1994. - 288 p.

<sup>&</sup>lt;sup>vi</sup> Socioanalysis by Pierre Bourdieu/Almanac of the Russian-French Center for Sociology and Philosophy of the Institute of Sociology of the Russian Academy of Sciences. – M.: Institute of Experimental Sociology, 2001. – 288 p.

difference between nature and society as objects of knowledge lies in the fact that nature is not the result of human activity, but society is masterfully constructed by human individuals. "Each member of society is a practicing social theorist: in carrying out any kind of social interaction, he usually refers to his knowledge and theories, and it is the use of these practical resources that is the condition for the implementation of interaction in general."<sup>vii</sup> The British sociologist is confident that his theory of structuration is capable of bridging the gap between structure and action. E. Giddens talks about the duality of the structure, which is revealed through the analysis of strategic behavior and institutional analysis. He draws an analogy between the duality of structure and F. Sausure's<sup>viii</sup> understanding of language: language is a product of collective activity, and speech is always the result of its individual reproduction.

In the considered theories of P. Bourdieu and E. Giddens, created with the aim of overcoming the initial dualism of public life, there is a common foundation. Social reality is proposed as a process of its construction by individual social practices. The constructivist approach is widespread in modern social and humanitarian knowledge. The study of the issue of human construction, the theoretical prerequisites for the construction of social reality, the analysis of the subjects and practices of social construction of human reality are devoted to the work of modern scientists, which explain, analyze and explore the actual problems of the formation of civil society in Russia from the standpoint of a constructivist approach<sup>ix</sup>.

The activity approach that prevailed for a long time in social and humanitarian knowledge is gradually giving way to a constructivist one. The essence of the activity approach can be expressed in the words of K. Marx: "History is nothing but the activity of a person pursuing his goals". The formulation of the modern vision of social reality is clearly given by Yu.M. Reznik: "The semantic content of human existence is the initial subject of the philosophy of constructing a person"xi. The revealed difference is a dichotomy: the goal is the meaning. The goal is formed in the course of a specific socio-historical practice, and the meaning

vii Giddens, A. New rules of sociological method/A. Giddens. - London, 1976. - 196 p.

<sup>viii</sup> Saussure, F. A course in general linguistics / F. Saussure. Edited by Sh. Bally and A. Sechet; Tr. from French A. Sukhotina. De Mauro T. Biographical and critical notes on F. de Saussure; Notes // Per. from French S.V. Chistyakova. Edited by M.E. Rut. - Ekaterinburg: Ural Publishing House, 1999. - 432 p. ISBN 5-7525-0689-1

<sup>ix</sup>Questions of social theory: scientific almanac. — Volume VII. Issue 1-2 2013-2014. – Man as a subject of construction / Institute of Philosophy RAS, [ed. Yu.M. Reznik and M.V. Tlostanova]. - M.: From the Independent Institute of Civil Society, 2015. – 288 p.

<sup>x</sup>Marx K., Engels F. The Holy Family, or Critique of Critical Criticism. Against Bruno Bauer and company / K. Marx, F. Engels - coll. cit., ed. 2, vol. 2. - M.: Politizdat, 1955. - 879 p.

<sup>xi</sup>Reznik, Yu.M. Philosophy of human construction: a phenomenological approach. / Yu.M. Reznik. – Questions of social theory: Scientific almanac. Volume VII. Issue 1-2 2013-2014. – Man as a subject of construction / Institute of Philosophy RAS, [ed. Yu.M. Reznik and M.V. Tlostanova]. – M.: From the Independent Institute of Civil Society, 2015. – 288 p.

is the result of cognitive activity. A synonym for the constructivist approach in sociology is the sociology of knowledge. The course of reflection in the sociology of knowledge is provided by the assertion of social facts as things in E Durkheim and the analysis of the object of knowledge, as in M. Weber, by which he understood the totality of the subjective meanings of human actions. "The sociology of knowledge deals with the analysis of the social construction of reality," emphasize the authors of the work "The Social Construction of Reality" P. Berger and T. Luckmann<sup>xii</sup>. Within the framework of the constructivist approach in sociology, the emphasis is not on meaning as such, but on human knowledge, which brings the semantic order of everyday life into the life of each individual. Supporters of the constructivist approach see the task of sociology as a science in its ability to answer the questions "What is happening?" and "What lies behind this?" proposed by N. Luhmann. He understands that with such a formulation of the question it is problematic to maintain the unity of discipline, but it is nevertheless possible. "To find unity through difference, to find unity as the unity of difference - this seems like a paradoxical theoretical program, but that is exactly how it is intended"xiii.

xiiBerger, P., Luckmann, T. Social Construction of Reality. Treatise on the sociology of knowledge / P. Berger, T. Luckmann. - M.: Medium, 1995. - 323 p.

xiiiLuhmann, N. "What's going on?" and "What is behind these?" Two Sociologies and Theories of Society: Theoretical Sociology. Anthology in 2 parts / N. Luhmann; [tr. from English, French, German, It.]; comp. and general ed. S.P. Bankovsky. - M.: Book house "University", 2002. Part 2. – 432 p.

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