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DEVELOPMENT OF THE THEORY OF MATHEMATICAL MODELING AND ITS APPLICATION IN EDUCATION AND INDUSTRY

USING OF CAVITATION EFFECTS IN THE ULTRASONIC CLEANING OF ANILOX ROLLS

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One of the key factors in ensuring the quality of flexographic print is the purity of anilox rolls. It is not possible to achieve an acceptable print quality, if anilox cell clogged with dirt, withered paint or varnish. Methods for cleaning anilox rolls usually subdivided into chemical, ultrasonic, laser and inkjet. Each of these methods has its advantages and disadvantages.

Today is actual solution to the problem of creating of new safe technological processes and equipment for cleaning products. Preference is given to detergent compositions based on ecologically safe organic solvents and aqueous solutions of surfactants. The combined effect of ultrasound (US) and aqueous surfactant solutions is the best approach to cleaning anilox rolls. This is due to the high quality of cleaning, replacement of manual labor, exception of flammable and toxic solvents [1]. However, the limiting factor that determines the scale of their usage is the lack of studying the mechanisms of removing contaminants from surfaces moth-eye liquid media of varying composition when exposed to ultrasonic energy fields. Therefore, actual task is to improve the efficiency of cleaning the micro relief surfaces of anilox rolls in liquid detergent environments under the influence of ultrasonic field.

Material and methods. The main role under the influence of ultrasound on the substances and processes in liquids plays cavitation. Depending on the nature of contamination greater or lesser value may have other manifestations, such as microshock exposure microflows, heating. Selecting sound field parameters, physicochemical properties of the washing liquid, its gas content, external factors (pressure, temperature) is possible to control within wide limits cleaning process, optimizing it for the type of contamination and kind of parts to be cleaned.

Results and discussion. Classification of contamination is carried by the three main signs and allows you to define the application of ultrasonic cleaning (see table, [2]): the ability to resist the effects of micro-shock; the bond strength of the membrane contamination from a cleaning surface; the nature of the chemical interaction with the cleaning fluid.

This list of contamination typical for most anilox rolls. Meaning of classification contamination consists in order to determine for which of the characteristics easier to remove them from the surface. Given this feature, is possible to choose the right technology, ultrasonic cleaning (cleaning the environment and sound field parameters).

On the surface of anilox rolls is mainly subject to removal are two main types contamination: lacquer film, paint and dust. The dust mainly mechanically coupled to the ceramic surface and is removed in the washing solution by ultrasonication. To determine the composition contamination is necessary to conduct a spectral analysis of samples propolimerizovannoy ultraviolet ink (figure).

Table – The classification and properties of contamination

<table>
<tr><td colspan="2">Types of contamination</td><td>Properties contamination</td></tr>
<tr><td rowspan="4">Cavitation resistant</td><td>The dust, sludge after printing</td><td>weakly bound to the surface, does not chemically interact with the cleaning fluid</td></tr>
<tr><td>Nonpolar contamination in the form of oils</td><td>firmly connected with the surface to be cleaned, does not chemically interact with the cleaning fluids</td></tr>
<tr><td>Lacquer membranes, paints</td><td>firmly bound to the surface, chemically interacting with the cleaning fluid</td></tr>
<tr><td>Corrosion products, polar contamination in the form of flux residues</td><td>firmly bound to the surface, chemically reacts with the aggressive fluids</td></tr>
<tr><td>U nst ab</td><td>Adipose film, fingerprints</td><td>firmly bound to the surface, chemically react with the cleaning fluid</td></tr>
</table>

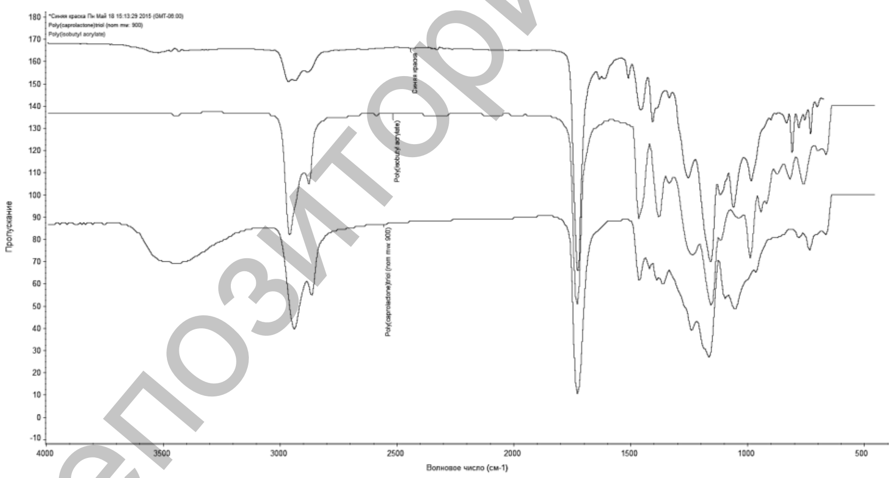

Figure – Comparison of the transmission spectra of the sample

The results of IR spectroscopy showed the similarity of the transmission spectrum of paint with the transmission spectrum of caprolactam and isobutyl. Butyl acrylate – Typical esters which hydrolyze in the presence of acids or alkalis. Moreover, they are easily polymerized under heat, light, initiators, and easily copolymerize, such as acrylic acid, its salts and esters, acrylamides, methacrylates, acrylonitrile.

Based on the obtained spectra were simulated cleaning anilox pollution UV paint. For ultrasonic cleaning it was adopted 30 kHz as this frequency is obtained a combination of shock effects and microflows. The amount of cavitation nuclei at this frequency is equal to tenths of a micrometer, which corresponds approximately to the value of surface roughness rollers.

Analysis of the results shows that the decisive factors influencing the effectiveness of ultrasonic cleaning is-panel-linear effects: Cavitation and microflows. The best cleaning liquid is water with the addition of surfactants. The temperature of the solution, the races should be 50–600S.

Conclusion. The theoretical analysis of the structure of films of different physicochemical nature has allowed to develop a classification of contamination by cavitation resistance and removability of different reactivity liquid medium. This classification can be the basis for the creation of new techniques and the choice of parameters of ultrasonic cleaning of anilox rolls moth-eye surfaces in liquids.

Also, the regularity of the micro flow control in liquids and schemes of processes remove contaminants, vklyuchayuschie successive stages of the impact of water detergents surfactants pH = 12-12.5, the optimal parameters of the cavitation pressure washing temperatury environments, surfactant concentration, ensure effective udalenie contamination with moth-eye surface is cleaned in ultrasonic products.

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USING OF NETWORK'S VISUALIZATION TOOLS IN THE COURSE OF LEARNING MATHEMATICS

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Analysis of experience in the use of modern network technologies in education suggests that the practical experience in this field take precedence over the theoretical ones. School practice shows that the use of new ones learning tools requires further exploration of the problem. Therefore, the purpose of the study is based on the analysis of didactic opportunities and generalization of pedagogical experience with educational Internet technologies to develop a network visualization tools for the study of mathematics and to identify the main directions of their use in the institutions of secondary education.

Material and methods. In the study as a working material used software by using services Web 2.0, implemented methods for studying general scientific nature, pedagogical experiment.

Results and discussion. Currently, there are many online resources to visualize detailed information that can be used in the study of mathematics [1]. For example, network services used for creation of online presentations, ribbons of time, mental maps, infographics.

To create and edit interactive presentation, you can use the service Prezi. Its main advantages are the provision of information in non-linear form, scale frames, groupings and navigation between objects, providing the establishment of causal relationships and determine the order of perception of the material.

While teaching at state educational establishment "Vitebsk Gymnasium № 1" using Prezi service has developed an interactive presentation of the non-linear structure on "Triangle inequality", which contains the statements of the theorems, schematic evidence consequences of theorems, problems and their solutions. All the proofs of theorems are structured so because of the unique capabilities of the service Prezi any time you can go back to the desired geometric facts included in this presentation, as well as an analysis of the evidence. With the use of the service is also designed Prezi presentation "Polygons" for learning school geometry course.

The presentations are prepared clear and informative drawings that are easily scalable. Both presentations contain links to sites with additional information and video tutorials that can be useful to the student self-study material.

The students formed an idea of mathematics not only as an academic subject, but also as a science, should be familiar with the basic facts of the history of its origin and development, its current status, as well as biographies of great mathematicians. You can use the online service that lets you create your own interactive chronological scale – ribbon of time. Ribbon of time "The great mathematician" was developed with the help of the service Dipity, which contains information about many scientists and their achievements in mathematics, since the III century BC and ending with the XXI century AD. This unique learning tool can be used in mathematics lessons or extracurricular activities, since the time the tape is freely available on the Internet.

According to psychologists, one of the handy tools display the process of thinking and structuring the information in visual form are mental maps. Mental map "Polyhedron" was developed with the help of the service MindMeister. This service provides the ability to create multi-level intelligence cards, so the class teacher can gradually examine a mental map, giving the student the structure at various levels. Key elements of the mental maps contain movies on polyhedrons, external links to additional sources of information. In the study of mathematics, this service helps to prepare a lesson synopsis, if necessary, quick and complete overview of topics in order to establish connections between mathematical concepts.

The developed tools are freely available online, so students can view them at any time to study the topic or updating knowledge, as well as any teachers-users of the Internet can use in preparation for the lesson. Since the teacher can give students access to editing, they can participate in their development.

Conclusion. At this stage of the study developed guidelines on the use of services Prezi, Dipity, which are transferred for use in the GUO “Gymnasium №1 Vitebsk”, and are also used by students of the Faculty of Mathematics in the study subjects “Project activity in the information educational environment of the XXI century” and “Services of social interaction in the information educational environment of the XXI century”. Also continues to investigate opportunities for application of Internet technologies for distance learning profile.

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OPTIMIZATION OF THE PROCESS OF REGULATION OF AVIATION SYSTEMS ITEMS SIMULINK LIBRARY AND TOOLBOX-PACKAGES EXPANDED PROGRAM MATLAB

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Optimization of voltage control aircraft synchronous generator was carried out with the help of library items and Simulink Library ToolBox-extension program packages Matlab. The control system is built using a PID controller.

The equation of PID controller in this case is as follows:

$$u(t) = k_p\varepsilon(t) + k_i\int_0^t \varepsilon(t)\,d\tau + k_d\frac{d\varepsilon(t)}{dt}, \qquad (1)$$

where k_{p}, k_i, k_d – is a constant, optimized in the design process. With their help it is possible to ensure comparability of the individual terms of the formula (1). The derivative component in the expression (1) can improve performance regulator, predicting the future behavior of the regulatory process; integrated – designed to eliminate the static error control, since the integral of even small errors can be significant value causes a reaction regulator.

Results and discussion. To optimize the controller parameters and studies of its effectiveness was assembled model of the system voltage regulation in the package Simulink & Matlab (Figure 1); formed the requirements for the transition process in the system; the values of the coefficients of the optimal PID controller; we received response function and to evaluate the quality of the transition process [1, 2].

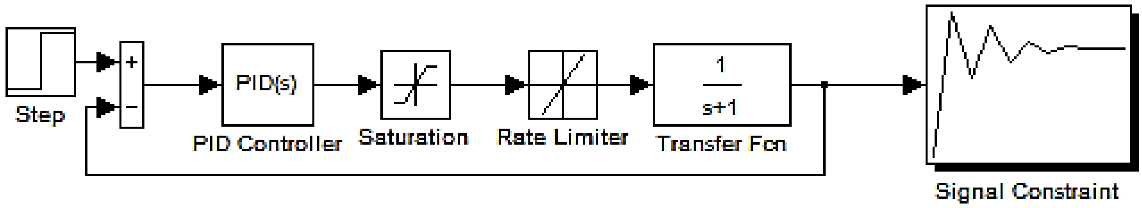

Figure 1 – Window Simulink collected schemes

This diagram (Figure 1) includes: PID Controller – block for setting the coefficients of P, PI, PD and PID controllers (Simulink Extras / Additional Linear / PID Controller); Saturation – the unit that limits the level of the input signal (Simulink / Commonly Used Block / Saturation); Rate Limiter – block limiting value of the derivative of the input signal (Simulink / Discontinuities / Rate Limiter); Transfer Fcn – block to set the transfer function [1,2] (Simulink / Continuous / Transfer Fcn); Step – block to set the input signal step (Simulink / Sources / Step); Sum – summer (Simulink / Commonly Used Block / Sum); Scope – virtual oscilloscope (Simulink / Skins / Scope); Signal Constraint – a block for optimizing the controller parameters and set desired transient (Simulink Response Optimization / Signal Constraint).

Next, using a package Signal Constraint optimizes PID controller, to build a transition function, assessed the quality of the transition process [1, 2]. Before the start of the transition process optimization package Simulink Response Optimization, it was stated, what values should be changed and adjusted.

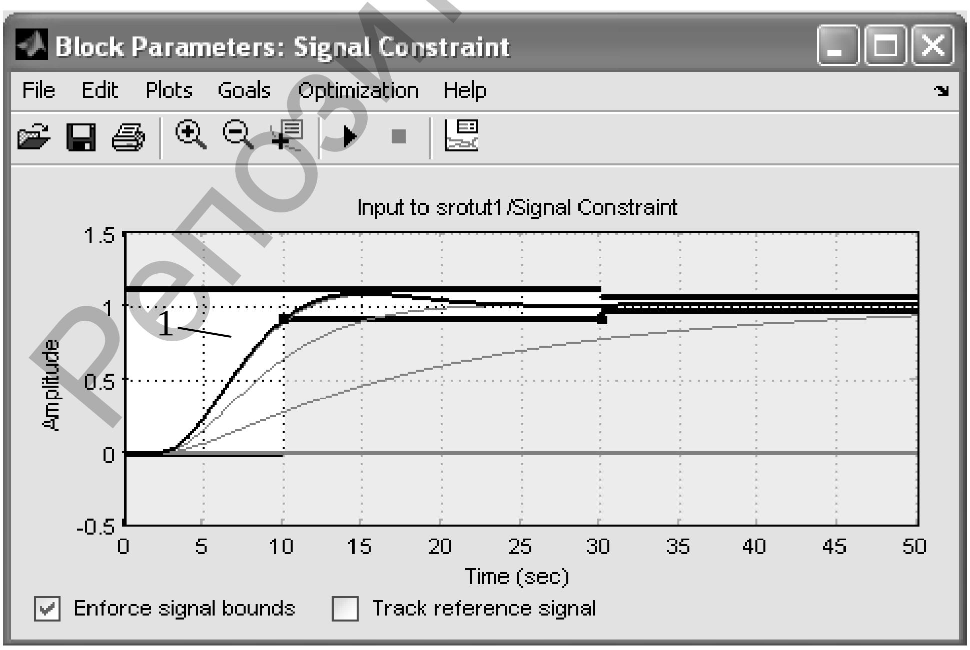

Figure 2 – The results of transition process

After setting the restrictions in the block Signal Constraint (Figure 1) is executed to optimize the transition process: Signal Constraint block automatically converts data about the limitations of the process and configurable variables in the data to solve the optimization problem and calls the Constrain.

The final transition process 1, satisfying the given constraints, is shown in Figure 2. After the optimization of MatLab program displays the following message (Figure 3), which shows the values of the coefficients k_{p}, k_i, k_d different variants of transition and the values of these coefficients for optimum that meet certain conditions, the transition process 1 (Figure 2).

```
                                   max        Directional  First-order
 Iter  S-count         f(x)   constraint   Step-size  derivative  optimality Procedure
   0      1              0      331.8
   1      6              0       41.3        0.0478        0          1   infeasible
   2      9              0      0.2882       0.0725        0          1  Hessian modified
twice;  infeasible
   3     12              0     0.02226       0.0587        0        969  Hessian
modified twice
   4     15              0   0.0001852       0.00536       0        15.8
 Successful termination.
 Found a feasible or optimal solution within the specified tolerances.

 Ki =
 0.1844
```

Figure 3 – The results of modeling optimal control coefficients

Conclusion. The results of these studies indicate the feasibility of using the optimized PID control system voltage in the aviation system for generating an AC voltage. The implementation of an optimized law, such as digital media provides in power supply systems with a generator GT30NZHCH12 in normal operations less time transients up to $(15–22)\cdot 10^{-3}$ s while reducing the deviation voltage transients up to (107–122) V dynamics and virtually eliminating the static error that fully meets the requirements of a modern and promising aircraft power supply systems [1].

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HACKING TECHNIQUES AND PROTECTION OF CREDIT CARDS

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Money is one of the major inventions of mankind. It can only be compared with the invention of writing, electricity and electronic means of communication (World Wide Network). In the modern world cash money is replaced by electronic one. Bank accounts, credit cards and various electronic purses. All these innovations are encouraged to facilitate the use of money (for example you needn't carry cash everywhere) and the most important thing is to make this operation safer.

As in our country online purses are not very popular I would like to speak on the topic of credit cards.

In our country credit cards are used by about 8 million people. The population of our country is about 9 million people (2013). In a year the quantity of the crimes connected with cards makes about 2 thousand a year.

The purpose of this report is to identify the methods of theft of money from credit cards and the development of recommendations on how to use the cards.

Material and methods. During the research there were used article from Internet-forum, statistical documents, science articles and literary sources. To achieve this goal we used next methods: descriptive, statistical, comparative.

Results and discussion. Fraud with payment cards is called carding. Carding (Eng. Carding) – it is a sort of fraud at which the operation with the use of a cash card or its requisites that isn't confirmed with its holder. Requisites of payment cards, as a rule, are taken from the hacked servers of online stores, payment and settlement systems, and also from personal computers. (either directly or through programs of remote access, so-called "Trojans" and "worms").

Kardring can be divided into two types:

1) Skimming;

2) Internet Fraud.

Skimming - theft of card data using a special reading device (skimmer). Attackers copy all the information from the magnetic strip card (holder's name, card number, expiry date of its validity, CVV- and CVC-code) to find out the PIN code you can use the mini-camera, or pads on the keyboard installed on ATMs. You may become a victim of skimming not only taking cash, but paying for purchases in the shopping centers. To copy data waiters, cashiers, employees of hotels use the portable skimmers or devices attached to the terminal.

At present times a new kind of skimming is gaining a popularity – Schimming.

According to the title of this technology "Shim» (shim - a thin lining), instead of the traditional bulky pads on the slot receiver of the plastic cards of

ATM (skimmers) it is used a very thin, flexible board, introduced through this gap into the ATM and virtually invisible. "Shim" sits down with a special card carrier. It means that it is pushed into an ATM crack where the thin "PWM" is connected to the contacts which read out data from the cards then the card carrier is removed. After that everything works like the traditional skimming. When you insert a card into the ATM they read all important data that is used by hackers for the production of duplicate cards and withdrawing money. The only and very important difference from skimming is in the absence of any external signs that there's a "bug" in the ATM. According to the specifications that regulate the size of the slot of a card reader (the thickness of the "shim" must not be more than 0.1 mm as otherwise it will interfere the plastic cards). It is approximately twice thinner than a human hair.

To use the internet-carding the swindler should know:

- Credit card number;
- Expiration date;
- Name of the card holder;
- Address of its accommodation, phone;
- Special code (CVV/CVV2)

You can get the data in several ways:

1) Use of a virus. The Trojan horse can be settled in the computer, expecting carelessly carried out purchase on the Internet.

2) Creation of false online store. In attempt to buy something from you will ask all necessary data.

3) To call allegedly on behalf of bank and in telephone conversation to extort

1) Use of a virus. The Trojan Horse can lodge in the computer, expecting carelessly carried out purchase on the Internet.

2) Creation of false online store. If you try to buy something you have to ask all necessary data.

3) To call allegedly on behalf of a bank and in telephone conversation to elicit everything that is necessary.

4) Buy on the Internet forums database of credit cards. The price for one credit card varies from one dollar to two.

Conclusion. In conclusion, we consider methods for protecting your cards.

-not to pass your card into the wrong hands, ensure that the card is only used for its intended purpose.

- to show vigilance and care when using an ATM, pay attention to the unusual design elements.

- pay attention on a micro-camera at the ATM, which can be mounted in the visor of the ATM.

-minimize the cases of using of bank cards in suspicious places; if it's possible use a bank card in a well-viewed areas.

- try to dial a PIN-code quickly, with the usual movements and using several fingers at once - so it will be more difficult to recognize your movements. for the attackers.

- if the bank has in its services Rapid Alert cardholder of the deactivation (SMS alerts), you may connect it for more quickly respondence to illegal write-off.

-Use credit cards with integrated microchips, if it’s possible.

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MATHEMATICAL MODELING OF SORPTION PROCESSES OCCURRING ON ENTEROSORBENTS OF LATEST GENERATION

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Enterosorption is an efficient method of toxins elimination from the body. Enterosorbents are medications of different structure that bind and remove toxic substances of exogenous and endogenous origin in the gastro-intestinal tract by adsorption, absorption, ion exchange reaction, and chelation. The objective of this research work was the development of a mathematical model that involves kinetic and thermodynamic parameters of adsorption processes that run in model solutions under the effect of enterosorbents of the latest generation: White coal and Polyphepanum.

Material and methods. To study the characteristics of sorption processes on these enterosorbents we investigated:

• adsorption of heavy metals (mercury, lead and nickel),

• adsorption of bio metals (calcium and magnesium).

The adsorption of metal cations was performed from salts solutions with different initial concentrations of ions (0.05; 0.10; 0.15 and 0.20 mol /L). The kinetics of sorption process was studied by sampling at fixed time intervals, followed by analysis of the concentration of cations of nickel, mercury, lead, calcium and magnesium in the selected samples. Concentration of mercury, lead, nickel, calcium and magnesium was determined by complexation titration [1].

The rate of the studied adsorption processes was satisfactorily described by a parabolic equation, resembling in appearance the Freundlich equation [2]:

$$a = k\tau^{\frac{1}{n}}$$

where k is a rate constant depending on the area of an interface surface, α - the adsorption of the substance, mol / g, and τ is time, min.

These kinetic data formed the basis for calculations of the adsorption capacity and selectivity with respect to enterosorbents on study. The adsorption of metal cations from model solutions running at room temperature is satisfactorily described by the Langmuir equation [2]:

$$a = a_{\max} \frac{Kc}{Kc+1}$$

where a_{max} is an adsorption capacity, characterized by a maximum amount of adsorbate consumed by one gram of an adsorbent, mol/g; K is an equilibrium constant of adsorption characterizing an affinity of the adsorbate to a particular sorbent, c is adsorbate concentration, mol/L.

Results and discussion. Studying the dynamics of calcium, magnesium, as well as mercury, cadmium and nickel cations elimination from model solutions allowed us to estimate the adsorption rate, the time to reach the adsorption equilibrium, and the degree of heavy and bio metals extraction. The data presented in Table 1 represent the kinetic laws of heavy metals adsorption.

Table 1 – Kinetic parameters of mercury, cadmium and nickel adsorption on enterosorbents

Enterosorbents	Rate constants of adsorption, $k \times 10^2$, min^{-1}			The equilibrium time of adsorption, min.			The degree of extraction, %		
	Hg	Cd	Ni	Hg	Cd	Ni	Hg	Cd	Ni
White coal	5.12	4.10	2.25	10	15	21	56.8	40.5	13.0
Polyphepanum	3.57	3.81	4.47	13	17	20	33.0	25.0	9.00

They demonstrate that the fastest process of adsorption of heavy metal cations occurs at the white coal. This sorbent corresponds to the maximum rate constants of adsorption (5.12×10^{-2} min^{-1} – mercury adsorption, 4.10×10^{-2} min^{-1} – cadmium adsorption and 2.25×10^{-2} min^{-1} – nickel adsorption), and minimal adsorption equilibrium time (10–20 min.). The rate of mercury, cadmium and nickel cations adsorption on polyphepanum is much less than on white coal. Kinetic parameters of the adsorption of calcium and magnesium on specified enterosorbents are presented in Table 2.

Table 2 – Kinetic parameters of bio metals adsorption on enterosorbents

Enterosorbents	Rate constants of adsorption, $k \times 10^3$, min^{-1}		The equilibrium time of adsorption, min.		The degree of extraction, %	
	Ca	Mg	Ca	Mg	Ca	Mg
White coal	4.61	1.70	10	15	5.6	3.6
Polyphepanum	26.8	53.2	5	2	6.5	8.5

These data proved that calcium and magnesium adsorption rate on the white coal was smaller than that on polyphepanum. This sorption process is characterized by low values of the adsorption rate constants (4.61×10^{-3} – for calcium and 1.70×10^{-3} – for magnesium), large equilibrium time of adsorption (10 and 15 minutes, respectively), as well as a low degree of metals extraction from model solutions (5.6% and 3.6% respectively).

The kinetic data formed the basis for the calculation of the thermodynamic parameters of adsorption processes. The thermodynamic parameters of the process allow estimating the adsorption capacity of enterosorbents and their affinity to each of the adsorbed metals. Table 3 represents the thermodynamic parameters of heavy metals adsorption.

Table 3 – The thermodynamic parameters of the mercury, cadmium and nickel adsorption on enterosorbents

Enterosorbents	Adsorption capacity×10^3, mol/g			Equilibrium adsorption constant ×10^3		
	Mercury	Cadmium	Nickel	Mercury	Cadmium	Nickel
White coal	42.7	17.0	13.7	13.8	12.5	0.63
Polyphepanum	10.9	4.21	1.40	12.5	4.70	0.30

The given data indicate that the cations of mercury, cadmium and nickel are best adsorbed on the surface of the white coal. This enterosorbent exhibits the highest adsorption capacity and the highest affinity for cations of these highly toxic metals. Thus white carbon exhibits the greatest detoxifying ability, compared with polyphepanum. Thermodynamic parameters of the adsorption of calcium and magnesium are given in Table 4.

Table 4 – The thermodynamic parameters of calcium and magnesium adsorption on enterosorbents

Enterosorbents	Adsorption capacity×10^3, mol/g		Equilibrium adsorption constant ×10^3	
	calcium	magnesium	calcium	magnesium
White coal	7.35	2.70	8.06	3.21
Polyphepanum	10.1	66.7	9.45	43.9

These data proved that the adsorption capacity of polyphepanum greatly exceeded the adsorption capacity of white coal (both calcium and magnesium). Polyphepanum affinity to magnesium ions is several times greater than to calcium ions: adsorption equilibrium constant for magnesium is 43.9×10^{-3} and only 9.45×10^{-3} - for calcium. Thus, the negative side effect of enterosorbents associated with binding and excretion of bio metals from the intestine is negligibly low for white coal and doesn't represent a real danger for the patient, while polyphepanum application (especially for a long time) can result in magnesium and especially calcium deficiency.

Conclusions. The developed mathematical model enables to evaluate the enterosorbents' efficiency in heavy metals removing from the intestine, as well as to determine the probability of side effects occurrence associated with the bio metals excretion from the body.

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ON A CHARACTERIZATION OF FITTING CLASSES SATISFYING LOCKETT'S CONJECTURE

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All groups are considered are finite and soluble. The notation used in this paper is standard [1].

Recall, that a class F of groups is called a Fitting class whenever F is closed under taking normal subgroups and products of normal F-subgroups. Given a nonempty Fitting class F, the F-radical of a group G is the greatest normal subgroup G_{F} of G belonging to F.

Operators «*» и «$_*$» were defined by Lockett [2]. Recall that given a nonempty Fitting class F, we denote by F^* the smallest Fitting class including F such that all groups G and H satisfy $(G\times H)_{\mathsf{F}^*} = G_{\mathsf{F}^*} \times H_{\mathsf{F}^*}$. The class F_* is the intersection of all Fitting classes X such that $\mathsf{X}^* = \mathsf{F}^*$ (see [2]). If $\mathsf{F}^* = \mathsf{F}$, then the Fitting class is called a Lockett class.

Interest in the study of the internal structure of Fitting classes and properties of operators «*» и «$_*$» is due to a problem, which was formulated by Lockett (see [2] problem p.135) and is known at present as Lockett's conjecture.

Conjecture (Lockett [2], 1974). *Is it true that* $\mathsf{F} = \mathsf{F}^* \cap \mathsf{X}$ *for every Fitting class* F *where* X *denotes a normal Fitting class?*

A Fitting class F is called normal, if for each group G it's F-radical is F-maximal among the subgroups which lie in G.

In [3] Bryce and Cossey proved that the Lockett's conjecture is true for all Fitting classes F, which are satisfied the condition $\mathsf{F}_* = \mathsf{S}_* \cap \mathsf{F}^*$, where S_* is a minimal normal Fitting class.

It is natural to generalize the concept of the normal Fitting class as follows. Let π be a non-empty set of primes. A Fitting class F is said to be π-normal or normal in a class of all π-groups, if $\mathsf{F} \subseteq \mathsf{S}_\pi$ and for each group $G \in \mathsf{S}_\pi$ it's F-radical is F-maximal among the subgroups which lie in G. If $\pi = P$, where P is a set of all primes, the Fitting class F is normal. It is known, that the intersection of any set of π-normal Fitting classes is π-normal Fitting class [4]. All this leads to a generalized Lockett's conjecture.

Generalized Lockett's conjecture. *Let* F *be a class of* π*-groups. Is it true that* $\mathsf{F} = \mathsf{F}^* \cap \mathsf{X}$ *for every Fitting class* F *where* X *denotes a* π*-normal Fitting class?*

Let P be a set of all primes and $\varnothing \neq \pi \subseteq P$. Fitting class F will be called L_π-class if and only if $\mathsf{F}_* = (\mathsf{S}_\pi)_* \cap \mathsf{F}^*$. Let F be a Fitting class, then

$L(\mathfrak{F})=\{\mathfrak{X} : \mathfrak{X} \text{ } is\, a\ Fitting\ class, \mathfrak{X}^{*}=\mathfrak{F}^{*}\}$ is the Lockett section of Fitting class $\mathfrak{F}$.

The main purpose of this work is to characterize $\mathfrak{L}_{\pi}$-classes in terms of operation of generation of Fitting classes.

Recall, that if $\mathfrak{F}$ and $\mathfrak{H}$ are Fitting classes, then the smallest of Fitting classes containing their union $\mathfrak{F}\cup\mathfrak{H}$ is denoted as $\mathfrak{F}\vee\mathfrak{H}$. Such class is called the generation of Fitting classes $\mathfrak{F}$ and $\mathfrak{H}$.

The description of $\mathfrak{L}_{\pi}$ Fitting classes is due to the following problem.

Problem (Vorob'ev N.T., Grytzuk A. [5, problem 2]).

Characterize non-normal and non-local soluble Fitting classes satisfying Lockett's conjecture.

The solution of the generalized variant of this problem in terms of operation of generation of Fitting classes is the main result of this paper.

We have proved the next theorem.

Theorem 1.

Let $\mathfrak{X}$ and $\mathfrak{F}$ be Fitting classes, P is a set of all primes and $\varnothing\neq\pi\subseteq P$, then the following statements are equivalent.

1) $\mathfrak{F}$ is $\mathfrak{L}_{\pi}$-class.

2) $\mathfrak{F}_{*}=(\mathfrak{S}_{\pi})_{*}\cap\mathfrak{F}^{*}$.

3) If $\mathfrak{X}\in L(\mathfrak{F})$, then $\mathfrak{X}=\mathfrak{F}^{*}\bigcap((\mathfrak{S}_{\pi})_{*}\vee\mathfrak{X})$.

If $\pi=P$, as a corollaries of this theorem we get the results of Bryce and Cossey [3], Cusack [6].

Corollary 2 [3]. *If $\mathfrak{F}$ is a Fitting class such that $\mathfrak{F}_{*}=\mathfrak{S}_{*}\cap\mathfrak{F}^{*}$, then $\mathfrak{F}=\mathfrak{F}^{*}\bigcap\mathfrak{X}$, where $\mathfrak{X}$ is normal Fitting class.*

Corollary 3 [6]. *For each Fitting class $\mathfrak{X}\in L(\mathfrak{F})$ the identity $\mathfrak{X}=\mathfrak{F}^{*}\bigcap(\mathfrak{S}_{*}\vee\mathfrak{X})$ is true if and only if $\mathfrak{F}_{*}=\mathfrak{S}_{*}\cap\mathfrak{F}^{*}$.*

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ECOLOGICAL, BIOLOGICAL AND GEOGRAPHICAL STUDY OF THE RATIONAL USE OF THE RESOURCE POTENTIAL AND ENVIRONMENTAL PROTECTION

KINETICS METHOD TO OXIDATION DEGRADATION OF VITAMIN C IN FRUITS AND VEGETABLES

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Vitamin C (ascorbic acid, antiscorbutic vitamin) is water-soluble vitamin. Vitamin C (ascorbic acid) is one of the most important components of human nutrition. Since its opening the Hungarian scientist Scent-Gregory and up the present day researchers continue to study the physiological role of vitamin C.

The most important property of ascorbic acid is its capacity to be oxidized reversibly to dehydroascorbic acid thereby it is involved in the oxidation-reduction reactions of the cell. No coenzyme form. Daily requirement is 80 mg.

Biological role:

– hydroxylation of proline and lysine in collagen synthesis;

– hydroxylation of tryptophan to hydroxytryptophan in serotonin synthesis;

– hydroxylation reactions in the syntheses of epinephrine, norepinephrine (adrenal medulla hormones), corticosteroid hormones;

– participates in thyroxin synthesis;

– acts as prooxidant in microsomal oxygenase system;

– stabilizes vitamin E functioning as antioxidant;

– it is required for the absorption of iron and icorporation of plasma iron in ferritin;

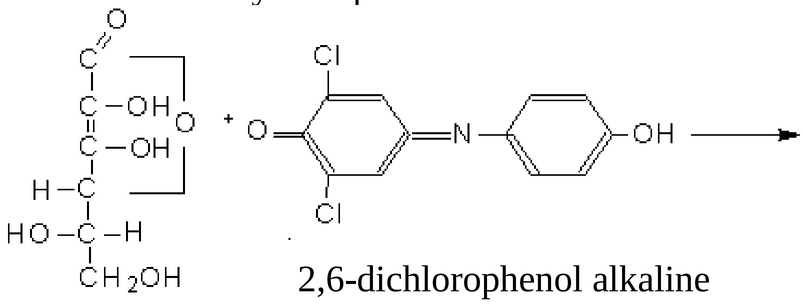
– it is also essential for mobilization of iron from ferritin.

Deficiency. Scurvy: abnormal bone development in infants and children, easy bruising and bleeding due to fragile capillaries, loosening of teeth and swollen gums, easy fracturability of bones, poor wound healing, osteoporosis.

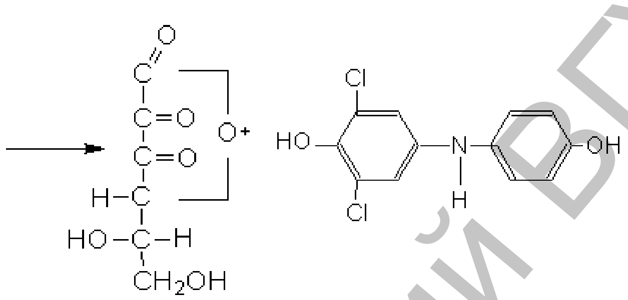
Deficiency of the vitamin in the body of the modern person, not protected from stress either at work or at home, gives an extremely negative effect on health and reduces its life quality. The objective of this study was the seasonal dynamics of vitamin C content in fruits and vegetables.

Material and methods. Quantitative determination of ascorbic acid was performed by the method based on its ability to be oxidized to dehydroascorbic acid. The test solution containing the vitamin and acidified with hydrochloric acid was titrated against of 2,6-dichlorophenol alkaline solution. When vitamin C is completely oxidized the titrated solution acquires a pink color.

Reaction may be represented as:



Ascorbic acid 2,6-dichlorophenol alkaline solution



dehydroascorbic acid Colourless form of 2,6-dichlorophenol alkaline

Results and discussion. You can see kinetics curve of degradation of vitamin C in fruits and vegetables (figure) that come onto the shelves of Belarus Republic during autumn 2014 – spring 2015 period.

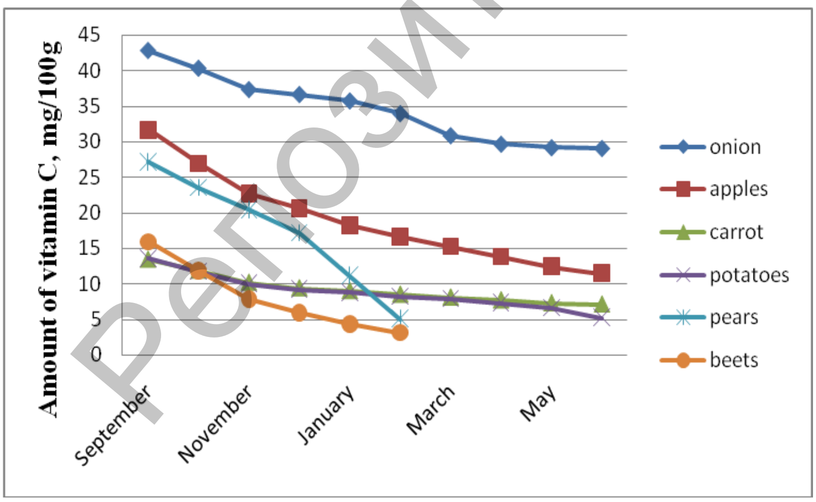


Figure – Kinetics curve of degradation of vitamin C in onion, apples, carrot, potatoes, pear and beets

The research of seasonal oxidative degradation of ascorbic acid made it possible to calculate the rate constants (month^{-1}) and half-life of vitamin C (month) in local fruits and vegetables: apples (0.155 and 4.53), carrot (0.145 and 4.77), potatoes (0.144 and 4.81), and onion 0.120 and 5.77).

The high amount of vitamin C was observed in imported products. The results are given in mg per 100 g of a product: oranges (79.83), tangerines (39.93), grapefruits (53.82), kiwi (89.37), pepper (162.12), pineapple (20.33), lemons (37.57), and lime (32.11).

Conclusions. Studying the dynamics of ascorbic acid oxidative degradation of in the local fruits and vegetables revealed that the body's need for vitamin C in September and October can be completely satisfied by local fruits and vegetables, but beginning from November it is necessary to include imported vegetables and fruits in the diet.

THE ENVIRONMENTAL RISK ASSESSMENT OF THE FUNCTIONING OF POLOTSK SMALL HYDROELECTRIC POWER STATION

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A small hydroelectric power station or small HES is a hydroelectric power station that can generate relatively the paucity of electricity. It is needed only 2 main factors to produce electric energy efficiently: huge slopes of the river and the provision of water for the whole year. Small hydroelectric power stations have a number of advantages that can make this equipment more and more popular. First of all, it should be said that ecological safety of small hydroelectric power station is a measure that has become increasingly important in problems of environmental protection. The water areas where the small hydroelectric power station installed can be used for fisheries activity and as a source of water supply to settlements. In addition, small hydroelectric power stations don’t require large ponds. They can function using the energy of current the small rivers and streams even. One of the most important factors of the economic efficiency of small HES is eternal renewability of hydraulic resources. Small HES don’t require purchasing any fuel. In addition, it is relatively simple technology to generate electricity, while labor costs per unit of capacity on hydroelectric power station is almost 10 times less than in thermoelectric station.

The aim of this work is the selection of qualities for the preliminary assessment of the environmental risk of functioning of the Polotsk small hydroelectric power station.

Material and methods. We used comparative and contrastive method of research.

Results and discussion. Environmental risk is the probability of adverse consequences for environmental of any changes of natural objects and factors. Risk is considered as the probability of occurrence of extreme events in a certain period of time, expressed by quantitative parameters. The man-caused aspect of environmental risk is viewed more often. It is the probability of occurrence of industrial accidents that could cause substantial harm to the environment or human health. Therefore, the main component of all methods of assessment of environmental risk is reception quantitative and qualitative indicators of adverse effects and timely prevention of accidents harm to human health, components of environment, damage to the reputation of the organization that implements the project [1].

The aim of the analysis of environmental risks is the production of management decisions, firstly, minimizing the probability of the existence of environmental threat, secondly, minimizing damage and injury in case of their implementation. The principal difference of environmental risks from technological and other risks is as follows:

1) any territory or industrial facility, where environmental risks could to appear potentially, characterized by a unique combination of natural and anthropogenic components of the environment;

2) consequences of implementation of environmental risks "live" in spatially and temporal coordinates;

3) consequences of implementation of environmental risks occur at all hierarchical levels of the organization environment.

Environmental risk assessment is also carried at the stage of a comprehensive environmental site assessment. At the first stage, it is evaluated possible developments of environmental risks. There are three main methods of environmental risk assessment [2]:

• statistics that based on analysis of the accumulated statistical data on various factors of environmental danger, realized on objects of similar activity or associated with the natural processes that emerged on the territory of this region in the past;

• analytical, that based on the study of cause and effect communication in natural-anthropogenic system of a particular territory, allowing to estimate the probability of the existence of the factor of environmental danger as a complex phenomenon, formed by the combination of the sequence of elementary events with known probabilities of their occurrence;

• expert, that involves an estimation of possible developments of factors the environmental danger by processing the results of surveys of experts.

An expression that can be used to characterize the ecological risk in kind or in value terms has the form [3]:

$$R(x) = \sum_{i=1}^{n} P_i \cdot X_i \,, \tag{1}$$

where *R(x)* – the value of environmental risk; P_i – probability of occurrence of adverse events, the proportion of units; X_i – a consequence of the implementation of the adverse event.

The consequence from the implementation of the adverse event can be defined:

$$X_i = \sum_i C_i \cdot W_i \,, \tag{2}$$

where W_i – the generalized component of the predicted harm for various components of the environment;

C_i – price of i-th component of the harm on the unit of measurement, with consideration of its socio-economic importance.

Provided that the damages from different events are measured on the same scale, namely in terms of value, to determine the value of the average risk instead of expression (1) can be used the following formula

$$R = \sum_{i=1}^{n}\sum_{j=1}^{m} P_j \cdot P_i(j) \cdot X_i, \qquad (3)$$

where P_j – expresses the law of distribution of probabilities of adverse events;

$P_i(j)$ – expresses the laws of distribution of damages upon the occurrence of each such event.

Thus, we need to know, first of all, risks (factors of environmental danger) and methods of assessing damage from their existence for conducting a quantitative assessment of environmental risks. It should be noted that the formula (1-3) determine the amount of average risk, regardless of human activity in relation to the potential existence of a factor of environmental danger. In practice, people take certain measures to prevent the development of environmental risks.

According to the results of our research we identified the main criteria by which the risk of functioning the under construction Polotsk small HES can be determined: external natural and human impacts; constructive and technological factors; physiographic features of the territory; operational factors. The installed capacity of projected small HES will be 21 megawatts, which will be installed 5 hydro-generators. The annual production of electricity will amount 112 million kilowatt-hours, which will allow replacing the volume of natural gas in the equivalent of 28 thousand tons of conditional fuel. The reservoir area will be 2370 hectares, which will enable the implementation of river navigation. As valley of the Western Dvina River is deeply incised into the surface (deep of incision t on average 10-18 m) and the maximum water level will not exceed 8 meters in the waterworks area at creation of the reservoir, so minimum number of forests, agricultural land and buildings will remain in a flood zone. For reducing the amount of environmental risk the functioning of Polotsk small HEP is advisable to provide additional measures for prevention of emergency situations and actions as they occur to ensure the passes of the extreme expense and pressure of water during passage of floods without damaging the structures of the waterworks and excess of flood zone.

Conclusions. One of the main tasks of ecological risk assessment is reducing the adverse effects of HES on the environment. For this the technical solutions has been adopted in project of Polotsk hydroelectric power station, that exclude the possibility of leakage of lubrication from mechanisms into the river, and the formation of spots on the surface of the water, energy-saving drive units with gears has been used in transmissions, that don’t require oil change, the application of chemical compositions has been excluded for deicing of shields. The influence of hydroelectric power station on the environment on the environment can be assessed as positive, taking into account its function of an alternative energy source in relation to the traditional power station that use fossil fuels. The creation of hydroelectric power station can avoid the installation of similar capacity on the traditional power stations, that burn coal, oil or natural gas.

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RATIO BETWEEN BODY MASS INDEX AND FAT CONTENT IN MALE SPORTSMEN OF VITEBSK REGION

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The body mass index (BMI) is used mainly in diagnosing metabolic syndrome (MS). According to Reaven there are five metabolic risk factors such as insulin resistance, obesity, arterial hypertension, hypoalphacholesterolemia and a high triglyceride level. The Experts of NIH of the USA have developed their own criteria (ATP III – «Adult Treatment Panel III», 2001). It is enough to diagnose abdominal type of obesity according to the circumference of waist >88 cm for women and >102 cm for men, the elevated fasting glucose level (>6,1 mmol/L), the increased level of triglycerides (>1,69 mmol/L), decrease in concentration of high-density lipoprotein cholesterol (HDL-C) (<1,29 mmol/L for women and <1,04 mmol/L for men), and the level of arterial pressure >130/85 mm Hg.

According to the given recommendations we can speak about the existence of MS if a patient has 3 or more symptoms mentioned above.

We have previously established that the sportsmen had certain deviations of biochemistry indicators included in MS. It has also been found that for diagnosing MS one may follow an original algorithm. The first phase comprises the selection of people who had overweight according to BMI. However BMI of sportsmen can also indicate their well-developed muscles but not obesity. It is of great importance to trace whether there are will be any changes in biochemical indicators in groups of different ratios between BMI and fat content.

The aim of the research is to find out the ratio between body BMI and fat content in male sportsmen taking as an example representatives of Vitebsk Region.

Material and methods. About 85 male sportsmen have been examined in Vitebsk Sports Medicine Dispensary. The subject of the research comprised 25 biochemical indicators of blood serum (biochemical blood test), 16 morphological indicators of body composition (morphometry), 19 indicators of functional-physical condition of a man during the moderate-intensity physical activity, developed via the system of integrated computer analysis of physical state of "Omega-C" sportsmen. The indices were entered in a computer database and underwent the analyses. All men were divided into two groups of BMI up to 25 kg/m^2 and more than 25 kg/m2. The indicators were statically compared between two groups. During the statistical processing of the data the Excel software package was used.

Results and discussion. Only data with statistical differences are presented in the table below.

The biochemical indicators of blood serum and body morphometry of sportsmen ($\bar{X}\pm S_{\bar{x}}$)

Indicators (Normal Range)	BMI up to 25 (n=69)	BMI more than 25 (n=16)
Age	22,5±0,66	26,1±2,09
BMI	22,9±0,14	27,1±0,47
Bilirubin (2-20 mcmol/L)	18,9±1,4	13,2±1,58
Uric Acid (0,2-0,42 mmol/L)	0,30±0,01	0,36±0,02
Globulin (23-35 g/l)	32±0,54	29,3±1,04
ALT up to 40 Ед/л	21,6±1,20	29,5±3,10
Serum Iron (9,5-30 mmol/L)	16,2±0,64	13,8±0,92
AST/ALT	1,75±0,08	1,1±0,10
Free fat	81,7±0,42	75,7±0,97
Fat mass, 13-23%	18,3±0,41	24,3±0,97
Total weight (reduce to ideal mass) kg	3,6±0,43	13,1±1,65
Free fat mass, kg	1,1±0,24	3,4±0,91
Fat mass kg	6,4±0,36	11,9±1,29

Note. All the results except for age indicator are statistically reliable– $p<0,05$.

The data obtained shows that the BMI of sportsmen from two groups is different. BMI=22,9 refers to the optimal value, BMI=27,1 indicates overweight. In the group of people with elevated BMI fat percentage is higher. It seems that there is a direct relation, however if we compare the body fat classification then optimal value (according to different sources the value is different) comprises 18-26% of fat. 27-30% is defined as overweight. In particular, 18-23% from other sources is indicated as average value. The content of more than 23% experts consider as bad characteristic. It is worth mentioning that both groups of people have fat excess because to reach the ideal body weight they need to get rid of some amounts of fat, what is more, the second group of people need to lose fat two times more than the first group. The ratio between free fat and fat mass in the first group is 4,5; in the second 3,1.

The indicators of functional-physical condition of representatives of two groups were the same. There was a statistical difference in biochemical groups in 5 biochemical indicators from 25. The matter is that sportsmen of different sports, sport achievements have large ranges of deviations from normative index which affects the results of statistical analysis of the database.

The biochemistry distinction is the result in increase in uric acid levels and alanil aminotranspeptides (ALT), decrease in globulin, bilirubin, serum iron content of AST/ALT coefficients; in a group with elevated mass. Despite the fact that the indicators refer to optimal value there are still differences between groups. That is to say, the increase in uric acid levels in the group with elevated BMI is an additional criterion which refers to MS development. The elevated bilirubin and globulin content, a higher AST/ALT index can be a direct consequence of excess body fat in the group where BMI is less than 25.

Conclusion. Thus, it is possible to conclude that group shaping according to BMI doesn't fully coincide the classification of body fat content in sportsmen. The group with optimal value of BMI is characterized by having excess fat mass and even free fat mass which modified such biochemical indicators as bilirubin and AST/ALT index. To use the indicators of fat mass at screening stage of metabolic syndrome the number of study groups should be increased.

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FEATURES OF DEVELOPMENT OF TOURIST BRANCH IN THE MINSK REGION

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The Minsk region has high potential for development of tourist activity. Tourism is branch of the economy possessing considerable benefits for social and economic development and research in this sphere.

The purpose of the real work is to detect the features of tourist branch development in the Minsk region.

Material and methods. During the research there were used normative legal acts, materials of statistical and cartographic publications, Internet sources.

To achieve this goal we used next methods: descriptive, statistical, mathematical, comparative and geographical.

Results and discussion. In 2014 the number of the organizations which were engaged in the Minsk region in providing tourist services increased in comparison with 2013 by 15 units and made 103 which in 2014 served 38 606 tourists on entrance and trip abroad

The average duration of stay of the foreign tourist in 2014 8 days (in 2013 – 5 days). Most of all tourists visited Minsk region from Azerbaijan (9311 people), Russia (9219 people), Lithuania, Germany, Latvia. The region share in all-republican number of tourism organizations makes 8.2% that is an average value among regions.

The important indicator of overall performance of tourism organizations is the volume of inbound and outbound tourist traffic.

So, in 2014 the number of the accepted organized foreign tourists in the Minsk region 9 700 (7.05% of total number accepted), in comparison with 2013 the number of the accepted organized foreign tourists decreased by 1700 people. Sharp increase in number of tourists in the region is connected with holding the World Ice Hockey Championship in the city of Minsk in 2013.

On this indicator Minsk region takes the 4th place, conceding to the city of Minsk, the Brest and Vitebsk areas.

As for trips abroad, in 2014 went abroad 28900 tourists, which is 1,500 more than in 2013. The share of the Minsk region in the outbound tourist flow in 2014 amounted to 3.9%, this indicator is one of the lowest in the country [1].

Accommodation facilities are an important component of the tourism industry. In 2014, there are 111 hotels and other accommodation types, including 57 hotels, 6 resorts, 2 Motel, 2 tourist-hotel complex and 44 other forms of accommodation. The simultaneous capacity of accommodation facilities is 5.1 thousand people. In accordance with the quality of services and the level of material and technical equipment of the international classification of the stars have only three accommodation facilities. The category "three stars" hotel complex has the SNPE (state nature protection establishment) "The national Park "Narochanski", category "two stars" – the hotel "Novoe Polesie" Soligorsk pack housing "Complex", category "one star" hotel "Ales" JSC "Belaruskali" [2].

In 2014 in the hotels and similar accommodation facilities lived 216 483 citizens, which is 6.9% less than in 2013 (2013–232 595), including foreign citizens 4.4% less. The number of Belarusians amounted to 155,000 persons (71.9%), citizens from other States – 60848 persons (28,1%). Among visitors from the countries of CIS, who have used the services of hotels and similar accommodation facilities, was dominated by citizens of Russia and Ukraine (97%) among visitors from abroad – citizens of Germany, Latvia, Lithuania and Poland.

In the course of the year hotels and similar accommodation were uploaded by 42.2%, which is 3.3% less than in 2013. In Puhovichy district

(65,6%), Soligorsk region and Zhodino (approximately 55%). the occupancy rate of accommodation facilities was above than the average load. At the same time in Berezino, Cherven and Kopyl districts the occupancy of hotels and similar accommodation facilities has not reached 19%. However the occupancy of hotels and similar accommodation facilities of the region in comparison with other regions of the country is the highest with a figure of 42%, which decreased in comparison with 2013 year by 4%. The largest number of hotels and similar accommodation in Minsk (21), Borisov (14), Logoysk (9), Myadel (9), Dzerzhinsk (6) regions [3].

Conclusion. The central and capital position of Minsk region on crossing of the main thoroughfares caused formation of the most attractive tourist territory in the country. The most important condition of development of tourism in Minsk region is improvement of the main components of tourist infrastructure and their compliance to the international and European level.

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INDUSTRY ECOLOGY AND ENVIRONMENT POLLUTION MONITORING

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One of the most important ecological problems is the global air pollution. Active and greenhouse gases, dust and soot lead to the falling of acid rains on the surface and the water supply and thus they acidify the soil and the water. In the problem of man-made pollution atmospheric pollution takes a special place. It is caused by three conditions. Firstly gases and air impurities transform solar radiation in consequences of which the temperature is changing. Secondly thanks to transboundary transport contaminants extend at a great distance from the emission points. Thirdly the atmosphere is a source of entry of toxic substances into the human body and it is caused morbidity of population.

Such important ecological indexes as pollutant emissions are used to reveal the level of ingredients' effects received into the air, into the environment and into human health.

The aim of the work is to value atmospheric contaminants from stationary and mobile sources of the Republic of Belarus.

Material and methods are valuing and checking of the environmental conditions, statistical analysis of the ecological monitoring of pollution in Belarusian industrial cities. Was based on statistical data of environmental monitoring.

The main aim of the monitoring of the atmospheric air is to control the quality of the environment, to value, to forecast and to display the tendencies to change the atmospheric condition to prevent from negative situations threatening to human health and the environment.

Results and discussion. According to the data of the national statistical committee of the Republic of Belarus in 2014 the volume of pollutant emissions into the atmospheric air from stationary sources has come to 433,2 thousand tons and has increased in 16,7% in comparison with 2013. It is caused by the increase in the volume of petroleum refining, chemical industry output and by the increase of the share of using of fuel black oil as heating oil and also by stocktaking of pollutant emissions in the agricultural organizations.

In comparison with 2013 the increase in pollutant emissions into the atmospheric air from stationary sources came to 33,3% in Minsk region, 28,2% – in Brest region, 19,8% – in Vitebsk region, 11,7% – in Gomel region, 10,2% – in Grodno region, 8,2% – in Mogilev region and 3,2% – in Minsk [1].

The biggest specific gravity of pollutant emissions from stationary sources in the total volume of emissions still falls at the organization of Vitebsk region (26% – 110 thousand tons), the smallest – at the organization of Brest region (8% – 35 thousand tons) and Minsk (6% – 27 thousand tons). The organization of Gomel region in the total volume of emissions keeps 22% (95 thousand tons), Minsk region – 16% (69 thousand tons), Grodno region – 11% (48 thousand tons) and Mogilev region – 11% (48 thousand tons) (diagram).

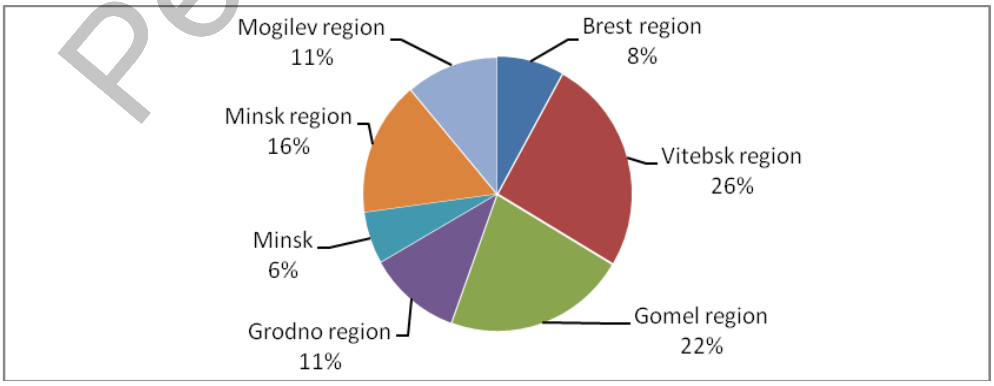

Diagram – Specific gravity of pollutant emissions from stationary sources in Minsk and regions.

Novopolotsk (68 thousand tons), Minsk (27 thousand tons), Grodno (12 thousand tons), Novolukoml (10 thousand tons) and Gomel (9 thousand tons) traditionally head the list of cities with the biggest volumes of air pollutants from stationary sources.

According to the types of economic activity the structure of pollutant emissions from stationary sources is characterized by an increase of specific gravity of economic organizations (from 18% in 2013 to 23% in 2014) and a decrease of specific gravity of organizations of manufacturing industry (from 51% to 58%). Specific gravity of organizations of other types of economic activity has greatly changed in comparison with 2013.

According to the data of the stationary observations over a five-year period (2010 – 2014) a steady tendency to decrease the level of air pollution by carbonic oxide, particulate pollutants (undifferentiated by the structure dust/aerosol), formaldehyde and lead in most cities in the country. In comparison with 2010 the average annual phenol concentration in the atmospheric air of Minsk and Bobruisk has decreased in 20-50%; the average annual ammonia concentration in Mogilev and Rechitsa – in 26-28%, in Minsk – in 64%; the average annual hydrogen sulphide concentration in Polotsk and Novopolotsk – in 31-35%. At the same time the level of nitrogen dioxide air pollution has increased. In the atmospheric air of Gomel, Minsk, Pinsk, Rechitsa and Zhlobin the content of nitrogen dioxide has increased in 11-22%, in the atmospheric air of Brest and Novopolotsk – in 27%, in the atmospheric air of Polotsk – in 66%. For the last 2 years the growth of phenol concentration in the air of Rechitsa, Gomel, Polotsk and Novopolotsk has been traced, the growth of ammonia concentration – in Grodno. In Mogilev the level of hydrogen sulphide air pollution has increased in 1,8 times. The content of volatile organic compound (benzol, acid and toluene) has remained firmly low.

In the Republic of Belarus about 90% of contaminants outgoing from stationary sources are caught and neutralized by cleaners. Thus in 2014 86,1% of contaminants including 98,5% of solid and 30,1% of gaseous and liquid pollutants were caught and neutralized over the republic.

In 2012 from the angle of regions the rate of catching and neutralizing of contaminants outgoing from stationary emission point were distributed as follows: in Minsk region – 95%, Mogilev region – 93%, Grodno region – 86%, Brest region – 81%, Gomel region – 71%, in Minsk – 68% and in Vitebsk region – 68%.

Conclusion. The volume of pollutant emissions from the main trades has decreased thanks to the industrial sector (in particular power industry), where the reduction of the sulfur dioxide emissions has taken place. The maximum volume of the carbonic oxide from mobile sources in Minsk and Minsk region and the minimum – in Mogilev region.

Thus in the Republic of Belarus the stabilization of the suspended materials concentration has been observed where the average dust concentrations had been below the ambient air standard. The sulfur oxide air pollution has remained not high during the last 5 years. The carbonic oxide air pollution has remained at a level (0,3-0,5). Its content is above this level in Mogilev. In Vitebsk the level of tetravalent nitrogen oxide has increased in 2,5 times.

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INDICATORS DEFINED BY HISTOCHEMICAL METHODS IN THE STUDY OF TISSUE OF PULMONARY MOLLUSKS

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To determine the performance histological research methods is strictly necessary lifetime localization desired chemical compound, it is possible while maintaining the structure of tissues and cells in a state close to that which exists in a living organism. Using a variety of methods of modern histochemistry can be gauged not only about the particularity of the chemical reactions of various tissue structures, but also to determine the nature and rate of metabolism in tissues and cells. Each method should be highly sensitive and specific [1].

One of the most promising sites for histochemical studies are aquatic and terrestrial mollusks. Among all the mollusks most convenient objects for ecological, toxicological and histochemical studies are a great truncatula (*Lymnaea stagnalis*) and the coil horn (*Planorbarius corneus*).

Purpose of the study – to select the key indicators defined by histochemical methods of lung tissue of mollusks to determine the effect of heavy metals on living organism.

Material and methods. For the study of indicators defined by hystochemical methods were selelected pulmonary mollusks – *Planorbarius corneus* and *Lymnaea stagnalis*, collected in october in the pond near the village of Liadi, Dubrovno district, Vitebsk region. Respiratory pigments hemolymph from *Lymnaea stagnali* – hemocyanin. According to the chemical nature – a copper-containing protein. In *Planorbarius corneus* – hemoglobin.

Experiment was conducted in three series. In the first series we were involved *Planorbarius corneus*. Mollusks were randomized into 4 groups.

Snails first three groups were exposed to copper sulphate: group 1 – $CuSO_4$ 0,01 mg/l, group 2 – $CuSO_4$ 0,1 mg/l, group 3 – $CuSO_4$ 1 mg /l. Animals in the control group were in the tank with running water. In the second series was used *Lymnaea stagnalis*. Snails distributed similar groups *Planorbarius corneus*. In the third series used *Planorbarius corneus*. Shellfish partitioned into 4 groups. Snails first three groups were exposed to ferrous sulfate: group 1 – $FeSO_4$ 0,3mg /l, group 2 – $FeSO_4$ 3 mg/l, group 3 – $FeSO_4$ 5 mg/l. Animals in the control group were in the tank with running water. *Lymnaea stagnalis* and *Planorbarius corneus* during the experiment were placed in containers with the same volume. The stocking density of shellfish 3 copies/l. Water temperature – 20–22°C. The control groups contained in the supernatant of shellfish within a day with tap water. To carry out the replacement of 1/3 of it is volume. A solution of each metal sample was prepared by dissolving the salt in tap water. The exposure lasted for two days. Every day used was replaced with freshly prepared solutions. Lighting changed the natural course of the day and night. Shellfish feed on the leaves of dandelion. At the end of the exposure of each specimen was removed from the incubation medium, and the taking of the material was carried out – the hemolymph and hepatopancreas.

Results and discussion. From Table, it is necessary that the most frequently defined by histochemical methods of research performance in the lung tissues of molluscs are to determine the enzymes Berta's method; Karnofsky's and Rute's method in Kugler's modification; a method for identifying dehydrogenase; method of determining the peroxidase.

Table – Indicators defined by histochemical methods in the study of tissue of pulmonary mollusks

Methods for determination of enzymes	**Methods for determination of the permanent components of the cell**	**Methods of the effects of environmental factors**
1. Bert's method for detection in tissue choline atsetiltransferase. 2. Karnofsky's and Rute's method in Kugler's modification sections for the detection of acetylcholinesterase. 3. The method of detection of dehydrogenases is based on the property of tetrazolium salts to recover, turning into insoluble formazan crystals dark blue. 4. The method of determining peroxidase is based on the incubation of slices peroxide and 3,3'-diaminoazobenzidinom to form insoluble brown precipitate.	1. To determine the lipids is used Leeson's staining sections method. 2. For the detection of nucleic acids in sections are using staining gallocyanin. 3. The method of periodic acid-Schiff to identify neutral polysaccharides. 4. To detect acid mucopolysaccharides is using alcian blue staining. 5. Sakaguchi's method in Serra's modification to identify arginine.	1. For the determination of lead in the mollusk's tissue sections were fixed in acidified solution chromate to give yellow crystals of lead chromate. 2. Lambardo's method for detection in tissue mercury. The method is based on a translation of mercury salts in the sulfide compound. The localization of mercury is determined by the black precipitate. 3. Timm's method for detection in tissue heavy metals by silver sulfide. 4. Brunk's and Sheeld's method for detection in tissue heavy metals by silver sulfide.

To determine the main components of cells: Leeson's method for staining sections; staining sections gallocyanin; method of periodic acid-Schiff; alcian blue staining; Sakaguchi's method in Serra's modification. To determine the effect of environmental factors, for the determination of lead in the tissue fixing sections in the acidified solution chromate; Lambardo's method for the determination of mercury [2].

Conclusion. The basis of histochemical methods of research is the connection of the principles and methods of chemical analysis with principles and methods of morphological study of cells and tissues used in cytology and histology. With this provides a significant advantage in the study of the morphological and functional fabrics, since the identification of chemicals can be attributed to a specific tissue or cell structure.

With the use of modern histochemistry methods can guage about the features of the functioning of various tissue and cell structures, to determine the nature and rate of metabolic processes in cells and tissues.

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CONTENTS OF PHOTOSYNTHETIC PIGMENTS IN TISSUES OF EARLY-FLOWERING PLANTS

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The essential components of photosynthetic systems are the pigments that are the primary photoreceptors in photosynthesis. Pigments absorb light energy due to the presence in their molecule chromophore groups. All pigments of photosynthetic organisms are usually divided into three groups: chlorophylls and fikobelinproteidy – pigments of tetrapyrrole nature and carotenoids [1]. The purpose is to determine the content of photosynthetic pigments in the tissues of early-flowering plants, depending on the type of plant, the type of site and population.

Material and methods. The objects of research are early-flowering plants spring primroses (Primulaofficinalis), onion chives (Бllium schoenoprбsum) and onions bearish (Alliumursinum L.). Samples of the plants were selected from populations growing in the conditions of the

Botanical Garden of VSU named PM Masherova forest d. Kratsevichi Borisov district and forestry Vitebsk.

Determination of photosynthetic pigments was carried out early-flowering plant in the generative organs early-flowering plants natural, introdutsionnyh and introdutsionno-cultivated populations. The pigments extracted from fresh material. The optical density of the solution was measured spectrophotometrically at three wavelengths: 440, 649, 665 against them acetone 99.5% [2]. The mathematical processing of the results was performed by parametric and non-parametric statistics with the helf of a statistical software package MicrosoftExcel 2003, STATISTICA 6.0.

Results and discussion. The content of photosynthetic pigments in leaves of early-flowering plant populations are presented in Table. Statistically significant differences in chlorophyll content site according to the populations of site has not been detected.

When comparing data on chlorophyll concentration between bear bow as a representative of natural and introduced populitsy, onions and chives, domesticated plant species, a statistically significant difference. The concentration of chlorophyll in the bear bow of the three collection points higher than those figures at the bow chives 2–2.3 times. The content of carotenoids vary slightly from the habitat.

The content of carotenoids in primrose spring more in the 2.5–2.7 times in comparison with the bear bow. When correlating the results with domesticated plants onion chives found a statistically significant decrease in the content of carotenoids in 2,3–2,5 times in comparison with onions and bear an average of 6.6 times compared to the primrose.

Table – Contents of photosynthetic pigments in plants samples mg/g fresh weight populations early-flowering plants (M ± m)

Vegetable object	Gathering place		
	Botanical Garden (Vitebsk)	Forestry (Borisov district)	Forestry (Vitebsk region)
The content of chlorophyll in plant samples mg / g fresh weight of natural, introdutsionnyh and introdutsionnyh-domesticated populations			
Bear onions (leaves)	0,55±0,010	0,50±0,012	0,49±0,011
Primrose spring (leaves)	0,63±0,009	0,59±0,010	0,57±0,013
Bow Schnitt (leaves)	0,21±0,005$^{1-3}$	0,25±0,004$^{1-3}$	0,23±0,03$^{1-3}$
The content of carotenoids in plant samples mg / g fresh weight of natural, introdutsionnyh and introdutsionnyh-domesticated populations			
Bear onions (leaves)	0,29±0,014	0,33±0,011	0,35±0,016
Primrose spring (leaves)	0,87±0,012$^{1-3}$	0,90±0,010$^{1-3}$	0,92±0,012$^{1-3}$
Bow Schnitt (leaves)	0,13±0,0021-3	0,11±0,0021-3	0,14±0,0031-3

Note - 1 P <0.05 compared with the bearish onions (Botanical Garden); 2P <0.05 vs. bear onions (Borisov forestry); 3P <0.05 vs. bear onions (Vitebsk forestry).

Conclusion. The studies of the photosynthetic apparatus of early-flowering plants have shown that the contents of an index do not differ in different places growing, but differ in different populations rasteniy.U Primula had greater content of defined compounds in the leaves in 1,6-3 times compared with bear onions in all areas of the collection of plants. Research and introdutsionyh introdutsionnyh-cultivated populations bear onion chives and onion showed that bear bow had greater content-defined compounds in 2,6-3 times compared with onion chives.

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THE COMPLEXES OF GROUND BEETLES (COLEOPTERA, CARABIDAE) OF VITEBSK WATER SYSTEM

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Within the city limits of Vitebsk is flowing one of the most full-flowing rivers of Belarus – the Western Dvina. Its left tributaries within the territory of the city are Vitba and Luchesa. And if Luchesa occurs only in the south-western outskirts of Vitebsk, the Dvina and Vitba pass through the central part of the city. Under the conditions of the city, riverine ecosystems of these rivers have undergone significant human-induced changes. As a result, along the banks of the Dvina river and in particular Vitba a very specific ecosystems were formed. The construction of the hydroelectric power station on the Western Dvina may slightly change the level of the river, which will entail and the changes in surrounding ecosystems. Beetles of Carabidae family can be the indicators of human pressure level. The purpose of this study was to identify species composition and ecological features of Carabidae on the banks of W.Dvina and Vitba rivers in the city of Vitebsk. The problems to solve were:

- to highlight the species composition of ground beetles on the river banks of Zapadnaya Dvina and Vitba in the city of Vitebsk;
- to describe the main environmental features of identified representatives of the family of Carabidae.

Material and methods. For catching Coleoptera Barber soil traps with 9% acetic acid were used. Setting and checking the traps was carried out in the period from 01.08.2014 to 09.29.2014. In total along rivers Zapadnaya Dvina and Vitba within the city of Vitebsk 4 biotope were studied, in the each of them 10 soil traps ware put. Biotope number 1 is located above the confluence with the mainstream of the Western Dvina River Vitba and habitat number 2 is located below, anthropogenic load in both biotopes is nearly the same. Riverbanks of Vitba in recent years undergone significant change due to the construction of its shores recreation areas. Therefore, to compare the communities of ground beetles was chosen one with the greatest anthropogenically modificated area (biotope number 3) The lesser level of human pressure is in biotope № 4. To measure the biodiversity in the studied biotopes, as well as to assess the disturbance of carabidae complexes index of Shannon – Weaver (H) and Simpson index (C) were used.

Results and discussion. In this study, conducted in the period from 08.01.2014 on 09.29.2014, it was and processed 80 Barber soil traps in 4 biotopes along rivers Zapadnaya Dvina and Vitba. During the study 127 specimens of Carabidae, presented byeighteen species were caught. The largest number of Carabidae were caught in the third biotope (50), the smallest number – in the first biotope (20).

In the first and in the second biotope Carabidae of the genus *Poecilus* dominated. The prevalence of this genus in the most of the studied biotopes can be explained by the fact that the genus Poecilus very common in Europe, and although it is not strictly confined to the high humidity, often selects biotopes with a wide range of forage and riverbanks are rather suitable for it.

The third kind of biotope *Nebria rufescens* dominated. This species live under rocks, pebbles and so on. It's typical habitats are the edges of upland streams and rivers, which explains their residence on the banks of the River Vitba, but in other biotopes the given species is not identified, can be explained by sufficient remaining xerophytic other biotopes.

Genus *Agonum* is also well represented, particularly in the fourth biotope. This genus of Carabidae are generally throughout the life cycle is associated with water, so often found on the banks of rivers and lakes.

In all four biocenosis lowest Simpson index and only biotope number four (0.877551) is close to 1 (maximum concentration). Thus, in all biotopes, species are evenly distributed, especially in the biotope number two with an index equal to 0.131.

As for the index of Shannon – Weaver, here other values. In the first, the second and the fourth Carabidae communities index ranges from 1.79 to 1.97, and the third community located on the banks of the River Vitba in the center of the recreation area, the index is close to four (3.79). This indicates that in this biocenosis there are significant disturbances caused by anthropogenic influence.

Conclusion. Thus, we can conclude that almost all the biocenoses have a significant anthropogenic impact, which is reflected in the comparative poverty and disturbance of the species composition Carabidae. On the other hand, the greatest number of species Carabidae were caught in the most modified human biotope, which indicates the ability of Carabidae survive in very different conditions of life. The studied the communities are characterized by the high levels of Simpson index and low levels of Shannon – Weaver. An exception is the Community №4, where H' = 3.79.

EFFECTS OF VARIOUS FACTORS ON ZIMAZNUYU ACTIVITI OF SACCHAROMYCES CEREVISIAE WHEN CULTURED

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Yeast – celled eukaryotic organisms at the biochemical level similar to other eukaryotic cells. The yeast cells in a nutrient medium provides a mechanism by which it continuously recreates intracellular compounds from simple molecules. The main role in the management of biochemical processes performed by enzymes, different in function and localized in cell structures [1]. Aim of this work to investigate the influence of various factors on the impact of the zimaznuyu activity yeast Saccharomyces cerevisiae in their cultivation.

Material and methods. Object of research – *Saccharomyces cerevisiae* in a dry and compressed form.). Zimaznaya activity is expressed in minutes, during which 1 g of compressed yeast in 4–5% solution of saccharose forms at 30°C, 20 ml of carbon dioxide [2]. For the cultivation of the yeast *Saccharomyces cerevisiae* used culturing method on solid medium. Impact factors: saccharose, antibiotic, oak silkworm pupae extract (OSPE). In the petri dish placed 5 ml of nutrient agar medium RM and additional influencing factors individually and simultaneously - antibiotics (cefazolin, C = 100 ug / ml), 100 ul OSPE (1: 100), 1 ml of 2% sucrose. After solidification of the culture medium on it sown with 1 ml of dry or compressed yeast living in a dilution of 1: 100. Petridishes are placed in an incubator for 24 hours at 32 ^{0}C over night culture of yeast is washed from the culture medium 10 ml of 0.9% solution of NaCl. Model to study the effects OSPE, sucrose and antibiotics on growth and development of yeast: group 1 –1ml dry yeast (1: 100) + 1 ml of saccharose (2%); group 2 – 1ml dry yeast (1:100) + 1 ml saccharose (2%) + antibiotic (100 ug /l); group 3 – 1ml dry yeast (1:100) + antibiotic (100 ug / l); group 4 – 1ml dry yeast (1:100) + antibiotic (100 ug /l) + 1 ml saccharose (2%) + 100 ul OSPE (1:10); group 5 – 1 ml of dried yeast (1:100) + 1 ml saccharose (2%) + 100 ul OSPE (1:10); group 6 – 1ml dry yeast (1:100) + 100 ul OSPE (1:10); group 7 – 1 ml live Pressed yeast (1:100) + 1 ml saccharose (2%); group 8 – 1 ml of live compressed yeast (1:100) + 1 ml saccharose (2%) + antibiotic (100 ug /l); group 9 – 1 ml of live compressed yeast (1:100) + antibiotic (100 ug /l); group 10 – 1 ml of live compressed yeast (1:100) + antibiotic (100 ug /l) + 1 ml saccharose (2%) + 100 ul OSPE (1:10); group 11 – 1 ml of live compressed yeast (1:100) + 1 ml saccharose (2%) + 100 ul OSPE (1:10); group 12 – 1 ml of live compressed yeast (1:100) + 100 ul OSPE (1:10Mathematical treatment of the results was performed by parametric and nonparametric statistics using the statistical software package Microsoft Excel 2003, STATISTICA 6.0.

Results and discussion. Zimaznaya activity in the yeast cells under the influence of saccharose and antibiotics in their culturing are shown in Table.

Table – Zimaznaya Activity (min) of yeast cells under the influence of other factors on their cultivation *(M±m)*

Group	Type and breeding yeast	
	1ml dry yeast (1: 100)	1ml dry yeast (1: 100)
Control	$33\pm2,1$	$34\pm1,8$
1 ml saccharose (2%)	$21\pm1,1^{1,3}$	$23\pm1,4^{1,3}$
antibiotic (100 ug / l)	$34\pm2,3^{4}$	$36\pm2,1^{4}$
100 ul OSPE (1:10).	$23\pm1,4^{1,3}$	$22\pm1,2^{1,3}$
1 ml saccharose (2%) + antibiotic (100 ug /l)	$24\pm1,3^{1,3}$	$21\pm1,1^{1,3}$
1 ml saccharose (2%) + 100 ul OSPE (1:10)	$20\pm1,2^{1-4}$	$24\pm1,3^{1-4}$
antibiotic (100 ug /l) + 1 ml saccharose (2%) + 100 ul OSPE (1:10)	$15\pm1,1^{1-4}$	$17\pm1,1^{1-4}$

Note – ^{1}P <0,05 compared to control; ^{2}P <0,05 compared with the group of agar + saccharose; ^{3}P <0,05 compared with the group of agar + antibiotic; ^{4}P <0,05 compared with the group of agar + OSPE.

As seen from the results in Table, zimaznaya activity in yeast cells the most statistically significantly changed by the addition of the following additional factors to the culture medium compared to controls (100%): saccharose - has decreased by 63% for the dry yeast and 67% of live yeast; antibiotic - increased 3% dry yeast, and 6% to live yeast; saccharose and an antibiotic - was reduced by 37% for dried yeast.

The most important change in the content zimaznoy activity groups: 1) containing an antibiotic (antibiotic timing agar + - 100%): + saccharose antibiotic-reduction of 61% to live yeast; antibiotic + saccharose + OSPE - decreased by 45% for the dry yeast and 54% for live yeast; 2) containing saccharose (RM agar plus sucrose - 100%): saccharose + OSPE - decreased by 36% for the dry yeast and 42% for live yeast.

Conclusion. Thus, the baker's yeast (*Saccharomyces cerevisiae*) can easily assimilate sugars, as are Saccharomyces, and hence, it leads to a higher enzymatic activity. Antibiotic when introduced into a culture medium and culturing had no statistically significant effect on the enzymatic system of baker's yeast *Saccharomyces cerevisiae*.

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THE COMPLEXES OF GROUND BEETLES (COLEOPTERA, CARABIDAE) OF GORODOK TOWN URBASENOSIS

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The biotopes of towns and cities are sharply different from natural ones and not all animal species can adopt to these new environment. The specific composition of different urban ecosystems depends on the level of antropogenic pressure and ways of its use by humans. The soil, relief, water resourses, microclimate, vegetation are different in various urban ecosystems have different features. This results on creation of different animal complexes with mosaic structure. Ground beetles can be a model group to highlight the adaptation of invertebrates to these conditions.

The aim of the study: to highlight the structure of ground beetles complexes of Gorodok town.

The tasks:

- to highlight the species composition of ground beetles of Gorodok town;
- to describe the main environmental features of identified representatives of the family of Carabidae.

Material and methods. For catching Coleoptera Barber soil traps with 9% acetic acid were used. Setting and checking the traps was carried out in the period from 01.08.2014 to 01.11.14. In total within town of Gorodok 8 biosenosis were studied, in the each of them 10 soil traps ware put. During the study 206 specimens of Carabidae, presented by 27 species were caught. Biosenosis №1 is presented by the field. Biosenosis №2 is located on cottage area. Biosenosis №3 is presented by multistory building area. Biosenosis №4 is located near the factory. Biosenosis №5 is located on the hill on the bank of Gorojanka river. Biosenosis №6 is presented by the bank of Gorojanka river. Biosenosis №7 is presented by the railway hill. Biosenosis № 8 is located in the mixed forest near the town. To measure the biodiversity in the studied biotopes, as well as to assess the disturbance of carabidae complexes index of Shannon - Weaver (H) and Simpson index (C) were used.

Results and discussion. In the result of the study in Gorodok town 206 specimens of ground beetles of 27 species were found. Maximal number of species (10) was found in the cottage area; 9 species were found on the hill and in the forest; 8 species were found on the field, 6 species were found on the railway hill and near the factory. Least of all species (2) of ground beetles, were found in multistory building area. Ground beetles were not found on the bank of the river.

Maximal amount of specimens (80) were caught on the field. Least of all specimens of ground beetles (5) were found in multistory building area. This difference can be explained by the different amount of human pressure.

Maximum level of Shannon – Weaver index (2,054) and low levels of Simpson index (0,17) is typical for cottage area. Reverse situation is highlighted in multistory building area (H'= 0,5, C= 0,68). In other studied localities the indexes vary between these borders. The cottage area are the most convenient for ground beetles in Gorodok.

Each studied complex of ground beetles has its own specific composition only a few species were caught in all localities. Such species as *Carabus cancellatus*, *Poecilus cupreus*, *Pterostichus melanarius* are the most widely spread through studied complexes. The difference in the specific composition are caused by the differences in the environment conditions in the studied areas.

Conclusion. In the result of the study in Gorodok town 206 specimens of ground beetles of 27 species were found. Maximal amount of specimens were caught in biosenosis №1 (field). Least of all specimens of ground beetles were found in biosenosis №3 (multistory building area). The cottage area are the most convenient for ground beetles in Gorodok.

ELECTRONIC GLOSSARY ON THE MORPHOLOGY OF PLANTS FOR STUDENTSOF THE PHARMACEUTICAL FACULTY: TYPES AND KINDS OF FRUIT

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In today's world,facilities of computer technologies led to the appearance of new methods and forms of education and their fast adoption into educational process. Computer training allows students to master the course material quicker. It also improves the quality of student's learning. The material is presented in a highly structured and understandable form and can easily be memorized. We present electronic glossary on the morphology of plants (section: types and kinds of fruit) for first-year, second-year and third-year native students and foreign students of the pharmaceutical faculty, because it includes terms and definitions in Russian and English. This glossary will be necessary for students in the study of taxonomy of vascular plants, morphology of Angiosperms, pharmacognosy.

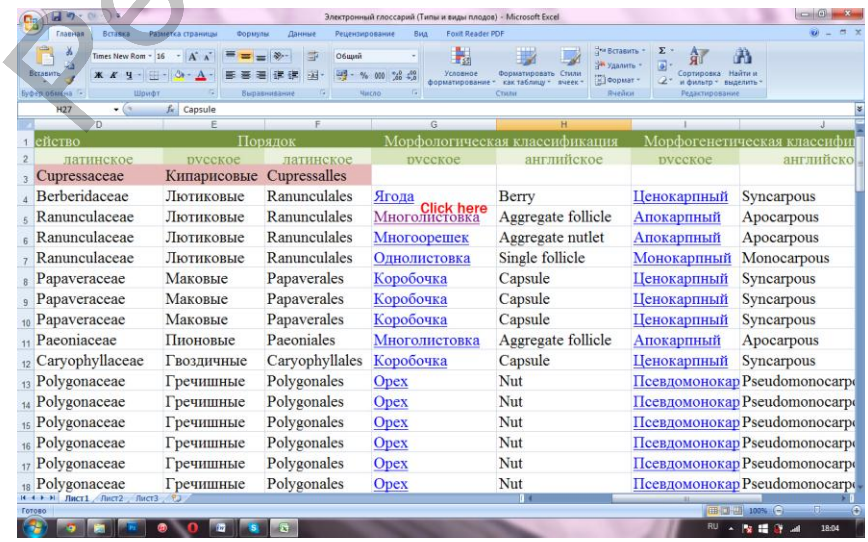
The determination of types and kinds of fruit gives visual and at the same time valuable information, that allows the plant to be attributed to a particular genus or species. The determination of various types and kinds of fruit represent a certain difficulty for the first-year students. This glossary was created exactly for the better understanding and quicker material learning. The advantage of this electronic manual is convenience and ease of use.

To create an easy-to-use electronic glossary on morphology of plants (section: types and kinds of fruit) for students on the basis of the Excel program using the latest computer, cloud technologies.

To create an illustrated Excel data bank. To select the necessary terms and definitions for the correct classification of types and kinds of fruit, using proper literature. To work out this information and to make it understandable.To add the resulting classification into the «cloud», to enable access to the glossary at any time and in any location for students using PCs, smart phones, tablets, etc.

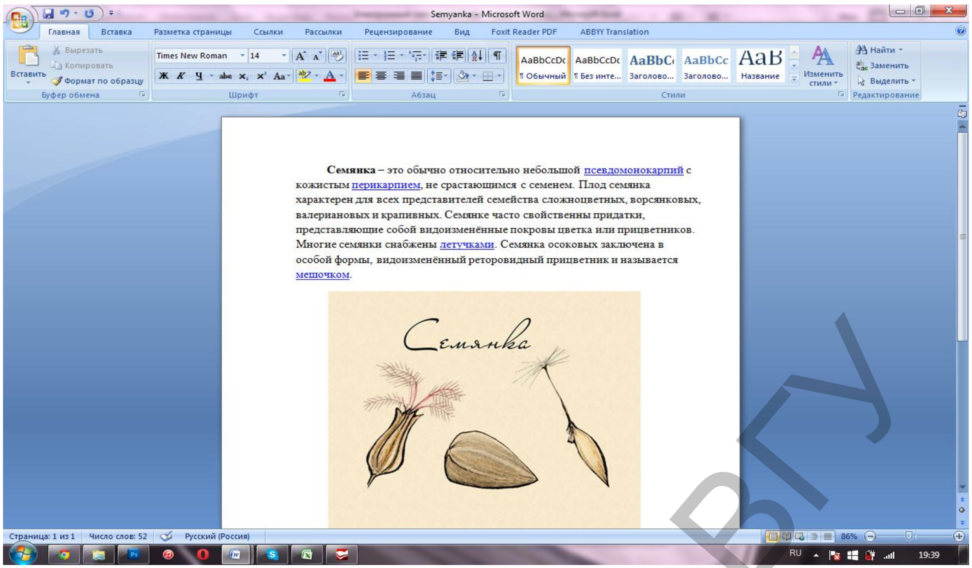
Material and methods.A list of herbarium plants for taking tests on practical skills on pharmaceutical botany (section "Plant systematics"), including 130 species of plants, is used as basis for the creation of the data bank in Excel program. Definitions of terms relating to the section, "Types and kinds of fruit", are taken from the textbook "Botany" Yakovlev G.P., Chelombitko V.A. [1]

Results and discussion. The data bank is created in the Excel program. It systematically lists 130 species of plants in the main table, where the names of taxa (order, family, genus and species) are given in Russian and Latin languages in separate columns. To view photos of the fruit, special links are created after opening in which respective images appear. To clarify the terms used in the description of various types and kinds of fruit in the table, within the Excel program, special hyperlinks are created, which after opening the information about the term appears. To open a hyperlink in the Excel table, just click on the information that interests you (the word, combination of words or image). This will open the Word document, which contains detailed information on the term that interests you, as well as a link to the literature source.

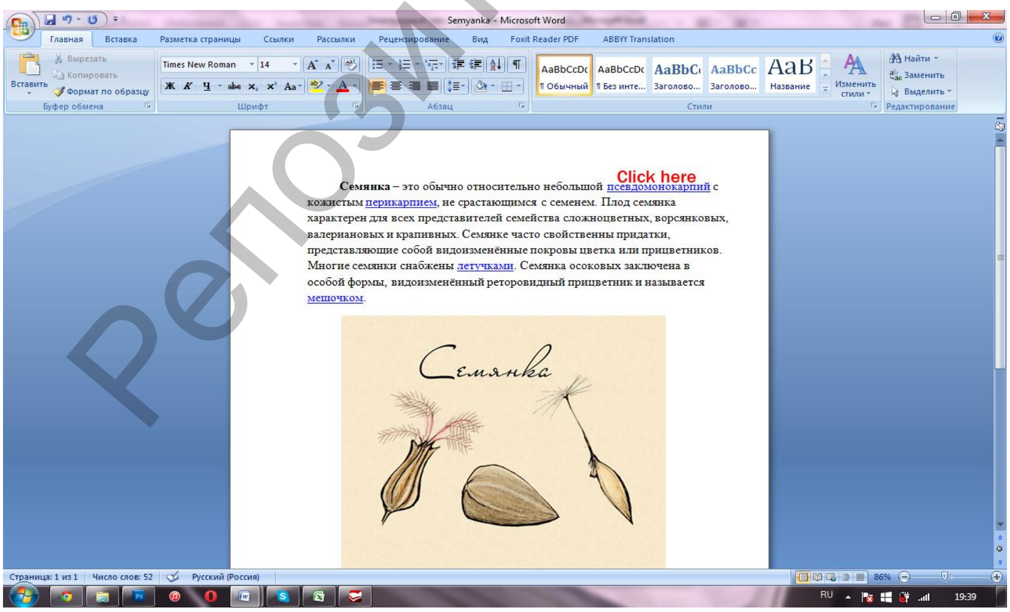


ейство	Порядок		Морфологическая классификация		Морфогенетическая классифи	
латинское	русское	латинское	русское	английское	русское	английско
Cupressaceae	Кипарисовые	Cupressalles				
Berberidaceae	Лютиковые	Ranunculales	Ягода	Berry	Ценокарпный	Syncarpous
Ranunculaceae	Лютиковые	Ranunculales	Многолистовка	Aggregate follicle	Апокарпный	Apocarpous
Ranunculaceae	Лютиковые	Ranunculales	Многоорешек	Aggregate nutlet	Апокарпный	Apocarpous
Ranunculaceae	Лютиковые	Ranunculales	Однолистовка	Single follicle	Монокарпный	Monocarpous
Papaveraceae	Маковые	Papaverales	Коробочка	Capsule	Ценокарпный	Syncarpous
Papaveraceae	Маковые	Papaverales	Коробочка	Capsule	Ценокарпный	Syncarpous
Papaveraceae	Маковые	Papaverales	Коробочка	Capsule	Ценокарпный	Syncarpous
Paeoniaceae	Пионовые	Paeoniales	Многолистовка	Aggregate follicle	Апокарпный	Apocarpous
Caryophyllaceae	Гвоздичные	Caryophyllales	Коробочка	Capsule	Ценокарпный	Syncarpous
Polygonaceae	Гречишные	Polygonales	Орех	Nut	Псевдомонокар	Pseudomonocarp
Polygonaceae	Гречишные	Polygonales	Орех	Nut	Псевдомонокар	Pseudomonocarp
Polygonaceae	Гречишные	Polygonales	Орех	Nut	Псевдомонокар	Pseudomonocarp
Polygonaceae	Гречишные	Polygonales	Орех	Nut	Псевдомонокар	Pseudomonocarp
Polygonaceae	Гречишные	Polygonales	Орех	Nut	Псевдомонокар	Pseudomonocarp
Polygonaceae	Гречишные	Polygonales	Орех	Nut	Псевдомонокар	Pseudomonocarp

This will open a Word document with an explanation of a term and clear image of the material:



It should be noted that each Word document also contains cross-hyperlinks, which makes the information complete and clear. To open a hyperlink in the view mode of Word, you should hold down the Ctrl key on the keyboard and click on the term that interests you. This will open a new document with the information you need. Such "transitions" can be done as many times as is needed until the required information is complete and understood.



The glossary is quite simple to use. To set the type and kind of fruit and the required medicinal plant, for examplecornflower, it is necessary to find in the list the name of the species (Centaureacyanus L.). Then go to the same line in the column "Type of fruit". To find out what type of a fruit it is, you should click on the link "achene". This opens a new Word document. It contains a definition of this term and the image of the fruit, as well as the literature source of the information.

On the other hand, if necessary, you can select any species which have fruit achene by a filter: Arnica montana L., Helichrysumarenarium L., Centaureacyanus L., Inulahelenium L., Rhaponticumcarthamoides, Tussilagofarfara L., Calendula officinalis, TaraxacumofficinaleWigg., Tanacetumvulgare L., Artemisia absinthium L., Matricariachamomilla L., Gnaphaliumuliginosum L., Achilleamillefolium L., Bidenstripartita L., Echinacea purpurea.

Conclusions. The proposed electronic glossary on morphology of plants (section: types and kinds of fruit), based on Excel data bank, is the most easy to use, aimed at improving study bysimplifying the material on pharmaceutical botany for both day-time students and correspondence course students of thepharmaceutical faculty.

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TOURIST INDUSTRY VITEBSK REGION

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Modern tourism is forming the latter formed hard-structured sector of economic activity – tourism industry. It directly or indirectly affects a hundred lives Rhone regions of different ranks, and has significant potential and opportunities for improving the social characteristics of the society. Even in such relatively large to the country as the Republic of Belarus, there are spatial features of the functioning of tourism associated with the presence of specific tourist and recreational resources, the ease of use, the activity and effectiveness of their development.

Purpose of the study: to reveal the peculiarities of the tourism industry of the Vitebsk region.

Material and methods. The study is based on materials of scientific and educational literature, data, statistical data of the National Statistics Committee of Belarus, the National Agency for Tourism, who were treated with the use of literary, comparative, analytical, mathematical and statistical methods.

Results and discussion. The tourist industry of the Vitebsk-region in recent years is developing quite actively. The tourist flow is increasing. In the nearly one hundred tourist organizations, many of which are engaged in the organization of tourism. Potential areas for the development of the tourist industry is big enough. Brands Vitebsk are Repin, Chagall, Malevich. His new tourist dominant – a museum of military equipment, a large Victory square, pedestrian zed street, and others. Varied and interesting tourist festival life of the region (about 14 annual festivals). The region is the oldest city in the country – Polotsk, which attracts large number of tourists. But the region is not enough native Belarus, authentic recreation. For the Vitebsk region is characterized by a slight, but steady growth in increasing the number of tourists and tourism revenue.

In 2013, tourist activities in the area carried out 104 tourism businesses. According to this indicator, Vitebsk region ranks 3rd in the country. During 2013 Vitebsk region was attended by 18 855 people, only the Republic of Belarus was visited by 136,8 thousand. People. Revenues of the Republic of Belarus of tourist activities for 2013 amounted to 138,5 million Br. rub., profits from tourism in Vitebsk region – 28, 6 million Br. rub. Thus, the share of the Vitebsk oblast – 20,6% of the total profit of the country in this sector [1].

In the area in 2013 registered 82 different accommodation facilities, from 4* hotels to rooms for visitors. Share Vitebsk region in the general fund of the national placement of 17% [1]. The most common means of accommodation – hotels and hotel complexes – 51 units. Only six of these categorical: 1 – 4*, 4 – 3*, 1 – 2* [1]. The main hotel pool area is concentrated in the city of Vitebsk, in the heart of the development of tourism in Vitebsk region, as well as in the cities of Polotsk and Novopolotsk. The level of service in the area of accommodation facilities calls for further improving the quality. It is necessary to work towards the optimization of the price and quality of services provided.

Vitebsk region occupies 2nd place (after the Minsk region) among other regions of the country in the number of rural tourism entities. As of 01.01.2014g. Vitebsk region registered 449 agroekousadeb. Due to the development of hunting tourism in the Vitebsk region, widespread such unique accommodation facilities for tourists as a hunting lodge. Here there are 152 hunting lodge, with a total seating capacity of 440 rooms that can take tourists in 1081. All lodges are located in the picturesque landscapes, unspoiled nature and diverse flora and fauna. Rest in lodges is promising for the Vitebsk region, and it is attracting more and more tourists [1, 2].

In the Vitebsk region there are 8 resorts in Ushachi, Le pelskom, Dokshitsy and Vitebsk regions, as well as in Novopolotsk [3]. Infrastructure supply in the Vitebsk region is relatively well developed, and is represented by various objects, from restaurants to small cafés and cafeterias.

In the Vitebsk region, there are 1764 different catering facilities with the total number of seats – 96 240. In total, the country has 12029 catering facilities, this indicator Vitebsk region ranks 3rd [1, 3]. The developed system of public power in general to satisfy the requests of tourists.

Transport infrastructure Vitebsk region received its development thanks to its advantageous geographical position: on its territory are the main transport routes linking big cities such as Moscow, St. Petersburg, Riga, Vilnius, Warsaw and Kiev. The territory is included in two European transport corridors (Berlin-Warsaw-Minsk-Moscow) through the city of Orsha and (Helsinki – Vitebsk – Gomel – Kiev – Plovdiv). In this connection, a significant role played by roadside service. On 01.01.2014, in the Vitebsk region operated 175 roadside service [1, 3] equipped rest areas, parking with pergolas, gas station with a mini-shops, small cafes, shops. In the modern development of transit tourism and the role of large roadside service such a large number of objects on the territory of Vitebsk region is not enough.

Various infrastructure facilities throughout Viteb-Region. Here there are 1347 cultural institutions, including 2 theaters located in the city of Vitebsk Regional Philharmonic, and in Vitebsk [16], 4158 of fitness and sports facilities [1].

For the bathing-beach holiday is equipped with 356 seating areas. Landscaped area of lakes and other water bodies with changing rooms, gazebos, picnic areas, small forms (swings, benches, tables), making outdoor recreation comfortable and civilized [4].

Conclusion. Vitebsk region is characterized by generally fairly high level of development of the tourist sector and is one of the leading places in the country in this activity, along with the city of Minsk and Brest regions. Vitebsk region has promising opportunities for increasing tourist flow as resource potential and economic opportunities are not yet used to the full.

The most promising type of tourism, ensuring sustainable development and this type of activity, and the region as a whole, is eco-tourism, submitted as part of the territory of rural tourism.

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JUSTIFICATION FOR ACHIEVEMENTS TOURISM STABLE REGION BELARUS

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Sustainable development – a political goal and the basis of many environmental programs and activities at the international, regional, national and local levels. All sectors of the economy should take some responsibility for the environment. The tourist industry should also strive for self-protection of nature and culture as the foundation of their business. Controls, responsible for tourism issues, and customers are responsible for the achievement of this goal. Ensure a stable and sustainable development of the tourism industry in the region of any rank, including Belarus as a whole and in its individual regions, an essential condition for achieving social and economic prosperity.

Objective: to justify the need and ways to achieve sustainability of the tourist regions of Belarus.

Material and methods. The study used statistical data of the National Agency for Tourism, the National Statistics Committee of Belarus, materials of scientific and educational literature. For data processing applied literature, comparative, analytical and mathematical methods.

Results and discussion. The concept of sustainable development has been formulated as a means of overcoming the main modern civilization ecological threat of overpopulation, with expenditure of irreplaceable natural resources and pollution of the environment [1].

It is recognized that tourism, like every kind of economic activity, should be developed on controlled, integrated and sustainable manner, applying the principles of sound and effective planning. Through this approach, the economic impact of tourism does not cause serious environmental and social problems and adverse effects. The tourist development of the territory based on the concept of sustainable development is crucial, because it is associated with the development of tourism attractions and activities relating to the natural environment, historical heritage and cultural patterns of co-respective regions. If these resources will deteriorate or break down, the region will not be able to attract tourists and tourism will not be successful and effective.

Sustainable tourism development must meet the needs of today's on the tourists and host regions while protecting and enhancing opportunities for the future (UNWTO). Management of all resources must be exercised so that, providing economic, social and aesthetic needs, while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems [2].

Tourist activity necessarily lead to a change in the ambient ronment. Like any other kind of economic activity, tourism cannot develop without interacting with the environment. Science-based management and planning of tourism development will help reduce its negative impact and increase positive.

The need for sustainable development of tourism every year becomes more and more noticeable as more and more obvious negative aspects of the influence of tourism and the positive effects are not as high as they were before.

In tourism sustainability principles were formulated by UNWTO and the World Council of Travel and Tourism (WTTC). They amount to environmental, cultural, economic stability and instability for local communities [3].

Walking to a greater extent than other sectors of the economy depends on environmental cleanliness of the environment, as an increasing number of potential tourists supports the "green travel". In this regard, over the past decade in world tourism has acquired a special role ecotourism.

Ecotourism – one of the successful examples of the implementation of the principles of sustainable development in tourism. Ecological tourism (ecotourism, green tourism) – a form of sustainable tourism, focusing on visits to relatively untouched natural areas anthropogenic impact [4]. Ecotourism is usually based on the resources of valuable and unique landscape, on the basis of which created and continues to form a network of protected areas.

One of the forms of ecotourism is a farm tourism. Thanks to the rich natural and water resources, ecologically clean area, tolerance of the rural population, to preserve the traditions of the rural way of life and historical and cultural heritage The Republic of Belarus is attractive for environmental tourists from different foreign countries. Belarus has a chance to become the country's agro-tourism for their citizens and for citizens of other states [5]. The well-preserved natural landscapes of the plain type in the country can be used in several ways:

1) for the production of eco-educational services for European researchers and students, who appreciate the full-scale training methods;

2) for lovers of wild vacation surrounded by unspoiled nature. It is usually people over age category.

Conclusion. Using ecotourism resources, Belarus can improve its position in the international market of tourist services and increase the flow of foreign tourists. In this case, ecotourism – developed alternative forms of tourism in the world (the bathing-beach, ski). Its attractiveness in our country is ensured by high safety nature. Achieving sustainability of the tourist regions of Belarus is possible only through creating and maintaining a balance between the interests of local people, tourists and the environment.

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THE IMPACT OF ENVIRONMENTAL FACTORS ON THE CONDITION OF THE RESPIRATORY SYSTEM IN THE POPULATION OF RURAL AREAS (ON THE EXAMPLE OF CITY SETTLEMENT SVATKI MINSK REGION)

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In system of mutual relations of the person with environment more and more actual there is an estimation of health of the population. The state of health of the person depends on numerous factors, among them – an environment, economic activities type, a way of life, level of culture and sanitary-and-hygienic skills, health services, presence of natural preconditions, the illnesses, harmful substances of a technogenic origin [1–5].

Now the number of diseases of bodies of breath not only in cities, but also in a countryside has increased.

Through breath bodies various substances, a dust, microorganisms can get into an organism together with air, they can cause various diseases [3–5].

Definition of a functional condition of respiratory system is important at rendering pulmonological the help and working out of the technological scheme for treatment and rehabilitation of the population with illnesses of bodies of breath. Modern functional methods are necessary for an estimation of separate syndromes of infringement of function of external breath (respiratory function). They allow to define such characteristics of respiratory function, as bronchial conductivity, эластические properties, диффузионная ability and respiratory muscular function [2–5].

Research of function of external breath is important as for definition of type of infringements of function of external breath, statement of the diagnosis and for monitoring of passableness of respiratory ways [4, 5].

Goal - to study the influence of ecological factors of environment on the state of the respiratory system in the population of rural areas.

Material and methods. Descriptive, comparative, statistical, spirometry, pneumotachometry.

The study was conducted among the population living in rural areas (on the example of city settlement Svatki Minsk region). In the experimental group underwent spirometric studies, including the study of respiratory function. To study the functional condition of the respiratory system used by domestic multipurpose automated lung-tester «MAC – 1» (Republic of Belarus), which was determined 15 volumes and capacities: VC (vital capacity of lungs (l)), IRV Police Department (reserve volume of breath (l)), ERV (expiratory reserve volume (l)), TV (Vt) (respiratory volume (l)), V (MV) (minute volume of breath (l)), F (frequency of breath), respiratory function (respiratory function), FVC (forced vital capacity of lungs (l)), FEV1 (forced expiratory volume in the first second (l)), IT (index (test) Tiffno (%)), FEV1/FVC (the ratio FEV1 to FVC (%)), PEF (peak (maximum) volume speed of an exhalation at test performance FVC), MEF25 (maximum volume speed at an exhalation of 25% FVC), MEF 50 (maximum volume speed at an exhalation of 50% FVC), MEF 75 (maximum volume speed at an exhalation of 75% of FVC), FEF25-75 (MMEF) (the volume speed of the forced exhalation averaged for the certain period of measurement – from 25 to 75% FVC) [4–6].

Results and discussion. The resident city settlement Svatki all indicators of lung function, in addition TV (Vt) (respiratory volume), significantly change compared with control.

The maximum volume of air which can be exhaled after a quiet exhalation at maximum экспираторном effort (0,78±0,03) decreases in 1,9 times in comparison with norm (1,5). The average index of reserve volume of an exhalation (ERV) less than normal values. The maximum volume of air which could be inhaled after a quiet breath at maximum inspiratory effort (1,67±0,04) more low in 1 time in comparison with norm (1,7), however corresponded to normal values.

VC (vital capacity of lungs) at the surveyed has made 3,04±0,05 l, and norm – 3,66 l. In surveyed group of value of the maximum volume of air which can be inhaled after the maximum exhalation are not beyond the normal. Decrease VC can practically underlie all diseases of lungs, and between its normal amount and full working capacity of lungs by no means it is impossible to put an equal-sign. Moderate decrease in size VC, basically, at the expense of reduction ERV, found out by us, is observed at bronchial obstruction. Decrease VC is frequent is caused insufficient расправлением lungs in the absence of primary pulmonary disease.

The ratio of FEV1/FVC in the examined population (70,44±0,06%) 8% lower than the norm (78,16%). Indicator Tiffno (FEV1 / VC) index was reduced in all groups of patients (71,52±0,78%) 1,1% compared to the norm (80,7%). Analysis of the results showed that FVC in the examined group amounted to 3,07±0,06 l, and the norm – 3,53 l, the FVC significantly increased by 5%. The FVC maneuver is the functional load, aimed at the detection of changes in mechanical properties of the device ventilation. Although a certain influence on the values of the indicators can provide the flexibility of the chest and weakness of the respiratory muscles, the main pathophysiological mechanism leading to slowing of forced expiration is the deterioration of the airway.

Relation FEV1/FVC at the surveyed population (70,44±0,06%) on 8% more low than norm (78,16%). An indicator of index Tiffno (IT = FEV1/VC) are lowered in surveyed group (71,52±0,78%) on 1,1% in comparison with norm (80,7%). The analysis of the received results has shown, that FVC in surveyed group has made 3,07±0,06 l, and norm – 3,53 l. Indicator FVC has authentically increased by 5%. Maneuver FVC is the functional loading directed on revealing of changes of mechanical properties of the device of ventilation. Though the pliability of a thorax and weakness of respiratory muscles can render certain influence on values of indicators, to the basic патофизиологическим the mechanism leading to delay of the forced exhalation, is deterioration of passableness of respiratory ways.

Conclusions. Indicators of function of external breath at the countryside population correspond to norm or slightly leave for its side-altars (ERV decreases by 1,9 times compared to the norm; IRV below norm in 1 time; the ratio of FEV1/FVC of 8% below normal).

In work influence on a functional condition of respiratory system of ecological factors operating in rural settlement on an example of settlement of city type Svatky of the Minsk area of Belarus is considered.

Value of the basic indicators of function of external breath at agricultural population the norm slightly fall outside the limits or correspond to it.

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ION CONTENT OF HYDRARGYRUM IN SOILS WITH DIFFERENT ANTHROPOGENIC LOAD

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Heavy metals are priority pollutants. Heavy metals are actively involved in the biological processes, they are part of many enzymes, exert toxic effects on soil biota, changing the size and composition of microflora and enzyme activity of soil [1]. Hydrargyrum – heavy metal, featuring highly toxic to all life forms.

Hydrargyrum it is volatile at room temperature, with increasing temperature increases the rate of evaporation, increasing the degree of adverse effects on the environment and living organisms [1]. The purpose of the work – determination of hydrargyrum ions in soils with different anthropogenic load.

Material and methods. Object of study – soil. Subject of study – the concentration of hydrargyrum ions (Hg^{2+}) in the soil with different anthropogenic load (near the enterprise, from the lively places with high concentration of exhaust gases out of the park, near the highway, next to the pond, near the railway). Methods for determination of mercury based on the interaction of a test sample of 500 ml of soil with 50 ml of solution of ammonium thiocyanate, 50 ml $FeCl_3$ and 2.5 ml of distilled water. Depending on the concentration of mercury appears red staining of varying intensity [2]. Extremely allowable concentration of hydrargyrum ions in the soil of 2.1 mg/ kg. The mathematical processing of the results conducted by the method parametric and non-parametric statistics using a statistical software package Microsoft Excel 2003, STATISTICA 6.0.

Results and discussion. In the study of the concentration of mercury ions were obtained as follows (Table).

Table – The concentration of hydrargyrum ions (mg/kg soil) *(M±m)*

№	Soil and place of harvest	Contents of ions of mercury
1.	District a factory "Vityaz" (n=9)	0,025 ± 0,002 [6]
2.	District shopping center (n=9)	0,031 ± 0,003 [1,6]
3.	Park named after Frunze (n=9)	0,021 ± 0,001 [1,2,6]
4.	Near the driveway on the street Frunze (n=9)	0,030 ± 0,002 [1,3,6]
5.	The coastal area of Dvina (n=9)	0,024 ± 0,001 [2,4,6]
6.	Close to the railway (n=9)	0,029 ± 0,002 [1,3,5,6]

Note –[1]P< 0,05 compared with the group 1; [2]P< 0,05 compared with the group 2; [3]P< 0,05 compared with the group 3; [4]P< 0,05 compared with the group 4; [5]P< 0,05 compared with the group 5; [6]P< 0,05 compared to the maximum allowable concentration.

Statistically significant results were obtained when comparing the first group of soils (district a factory "Vityaz") with groups of 2–6; the second group of the soils (district shopping center) with group 3–6; the third groups of soil (park named after Frunze) with groups of 4–6; the fourth groups of soils (near the roadway on the street Frunze), with groups of 5–6; the fifth group of soils (near the railway) with a group of 6, 1 to 6groups of soils with values of maximum allowable concentrations. As seen from Table 1 the largest concentration of metal recorded near the roadway on Frunze Street in the district of the shopping center. The lowest concentration - the park named after Frunze. The average concentration at the soil near the railway, coastal Dvina and in the area of the plant "Vityaz".

Important statistical differences between the groups of maximum permissible concentrations 1–6 were established when we analyzed the findings and literary sources related to the concentration of mercury ions. Changes in the concentrations of mercury ions associated with space with the places, where samples of soil were taken. Place 6 – near the railroad – has such indicators because there are many exhaust gases there, in the coastal zone of the Dvina – place 5 – has such indicators because the products of the metal were on the riverside for so long. In addition, concentration measurements associated with space near the roadway at Prospect Frunze, in the district shopping center and in the park named Frunze. In this way, it was found with increasing distance from the roadway metal content decreases. Based on the research results and the concentration of mercury ions in comparison with the maximum permissible concentrations metals in the soil, it can be concluded that the content of mercuric ions in-group1 – 6 is very low compared with those maximum permissible concentrations.

Conclusion. Thus, the study of mobile forms of metals in the soil showed that the total content of mercury ions depends on the location of selection of the soil and the soil type. Metal ions accumulate differently in each of the selected places. Based on the results of studies, we can say, that the concentration of iron ions in comparing with the extremely allowable concentration in the soil is very low.

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BIOCHEMICAL PARAMETERS OF THE FUNCTIONAL STATE OF THE LIVER IN ADOLESCENT ATHLETES

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Over the last decade children aged 7–11are increasingly involved to regular sporting activities.

At the age of 11–16 athletic skills are increased specifically up to the qualification «Master of Sports». It involves intensive regime of training and competition. Simultaneously, at this age in the body of athletes complex biological processes take place: the transition to the teenage state, the formation of sexual maturity, the increasing complexity of metabolism and its regulation. It's necessary to note that an increased physical exertion is carried out not only on the muscular system, but on the liver as well. Rates of liver parameters are directly dependent on age and gender. The main biochemical parameters of liver function are bilirubin, urea, cholesterol, albumin, activity of alanine aminotransferase (ALT), aspartate aminotransferase (AST), alkaline phosphatase and others. The objective of the research is to analyze the age dynamics of the liver biochemical parameters in adolescent athletes.

Material and methods. While conducting the research 352 athletes aged 11 to 18 were under observation. All male athletes were examined in Vitebsk Regional Sports Medicine Clinic. The subject of the study was 13 biochemical parameters of blood serum, which were add to the spreadsheet and treated using Microsoft Exel. Two groups of athletes (first group aged 11–15 and a second group aged 15–18) were formed. Digital material is processed using a parametric variation statistics by Student. Data for the «control» group were borrowed from the handbook [1].

Results and discussion. Obtained results are shown in the table.

According to the data in the table, glucose concentrations among athletes aged 11–14 in serum is reduced compared to the «control» and total database. At the age group 15–18 the level of glucose is normalized. In all groups of examined athletes the level of urea, total protein, albumin, cholesterol and in serum LDL is reduced and the level of bilirubin and alkaline phosphatase activity is increased. The revealed changes in these parameters may indicate the relative failure of functional hepatocytes during the systematic physical activity among children and adolescents. In blood serum of athletes aged 11–14 triglycerides, ALT and AST are reduced. In athletes aged 15–18 10 of 13 examined parameters reach either «control» values or seek for them. However, cholesterol level in the serum of athletes is not normal, and is stored in the lower limit of normal values. This is an unfavorable sign, since reduced levels of circulating cholesterol indicates a lack of energy and plastic provision of the athlets' bodies. In addition, the lower level of cholesterol in blood is associated with the states of the central nervous system that are not suitable for achieving good results in a competition process.

Table – **Biochemical parameters of blood serum study groups, men ($\bar{X}\pm S_{\bar{x}}$)**

Biochemical parameters (normal range)	Control	Total base	Aged 11-14	Aged 15-18
Glucose (3,5-6,2 mmol/l)	4,68±0,04	4,68±0,03	4,54±0,06[1]	4,73±0,04[3]
Urea (1,7-8,3mmol/l)	5,26±0,12	4,80±0,06[1]	4,39±0,12[1,2]	4,93±0,07[1,3]
Total bilirubin (2-20mmol/l)	8,59±0,18	15,32±0,42[1]	14,07±0,62[1]	15,72±0,52[1,3]
Total protein (60-83 g/l)	73,0±0,44	71,4±0,27[1]	70,09±0,48[1,2]	71,9±0,32[1,3]
Albumin (38-51 g/l)	44,6±0,27	41,5±0,21[1]	40,12±0,43[1,2]	41,95±0,23[1,3]
Total cholesterol (3,6-5,2 mmol/l)	4,32±0,04	3,9±0,04[1]	4,17±0,09[2]	3,86±0,05[1,3]
α- cholesterol (HDL) (1,1-2 mmol/l)	1,31±0,02	1,32±0,02	1,31±0,04	1,33±0,03
Atherogenic index (2-3 units.)	2,44±0,05	2,12±0,06[1]	2,28±0,11	2,07±0,07[1]
Triglycerides (0-2,2 mmol/l)	0,95±0,02	0,86±0,02[1]	0,76±0,04[1,2]	0,89±0,03[3]
LDL (3,27-3,86 mmol/l)	2,70±0,04	2,20±0,05[1]	2,48±0,10[1,2]	2,10±0,05[1,3]
ALT (up to 40 U/l)	24,4±0,70	22,17±0,67[1]	18,35±0,83[1,2]	23,38±0,83[3]
AST (up to 40 U/l)	35,0±0,76	34,4±1,21	32,12±0,99[1]	35,12±1,57
Alkaline phosphatase (80-306 U/l)	274,5±10,00	401,4±15,86[1]	626,61±39,19[1,2]	321,49±12,87[1,2,3]

Note: the significant difference ($P < 0,05$) when compared with group[1] - "Control";[2] - "Total base";[3] - "11–14 years."

Conclusion. The obtained results indicate that athletes aged 11-14 show signs of deficiency metabolism, which can affect the course of normal ontogenesis. The data about reduced level of cholesterol is a matter of concern, since cholesterol is an essential component of cell membranes and building blocks for steroid hormones. Consequently, in the period of intense growth and puberty special measures are needed to maintain the exchange of cholesterol at the level required for growth and development as well as for increased energy expenditure during systematic athletic training.

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LOAD PARAMETERS OF WELLNESS WALKING IN THE INITIAL STAGE OF TRAINING FOR THE SECOND BRANCH PUPILS OF THE AUXILIARY SCHOOL

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We conducted a multidisciplinary analysis of the effectiveness of various forms of physical education, providing correctional and developing directions of the pedagogical process, and it allows us to consider Wellness Walkingas an effective form of motor activity and increasing the functionality of the body, improving health and correction of motor development of children with serious mental disabilities.

Currently, the mass practice of recreational and therapeutic physical training uses a number of Wellness Walking programs for people of different age and physical condition.

At the same time, as shown by the analysis of the literature in special education (particularly in sports and recreation activities of auxiliary schools) Wellness Walking has not yet found its sufficient use as a specially-organized form of study. Of course, one reason for this is the lack of guidance and development of its practical implementation with pupils with intellectual disabilities, especially adapted to such a difficult category as children of the second branch (with moderate and severe mental retardation).

The purpose of the work was to determine the optimal parameters of load (volume and intensity) of Wellness Walking in the initial stage of training to pupils of the second branch of the auxiliary school.

Material and methods. The study involved pupils of 8-10 years (1–2 classes), the second branch of the auxiliary school № 26, Vitebsk (n = 6).

Methods: analysis of the publications of the organism's reaction to children's physical activity (walking, jogging), monitoring the degree of fatigue on grounds of the visual symptoms, current and operational control of the heart rate using a portable heart rate monitor Polar RS800.

We investigated the reaction of the heart rate of children during and after the walk (walking) of varying duration and speed of movement along the permanent route (track around the educational building of the school). The pupils were accompanied by an adult (researcher) in an arbitrary, conventional for them pace. At the end of a walk we fixed the time of continuous walking and the length of the distance traveled, and the average speed was calculated.

To limit excessive heart rate using Polar RS800 (in the form of watches and waistband), we provided continuous (every 30 seconds) monitoring of the state of the pulse of a pupil while walking, sound signals were promptly warning of an increase in heart rate up to a certain restrictive level. Maximum heart rate is limited by 130 beats per minute, the heart rate above the restrictive level goes beyond the loads and doesn't have healing effect. On hearing the warning signals the researcher lowered the rate of movement of the pupil, and the walk could be completely stopped if there was no reduction in heart rate magnitude, if there were increasing visual signs of fatigue or if the pupil didn’t want to continue walking.

The data have been studied and analyzed to determine the optimal parameters of walk (duration, speed, time) and the reaction of the children organism (heart rate, activity, mood) to its different load.

Results and discussion. Analysis of the continuous registration of heart rate showed that the duration of the walk in a natural for a person pace over 8–9 minutes (for this time the pupils usually overcome 440 meters of the route) contributes to a noticeable increase in heart rate, coming to values exceeding 130 beats per minute.

Also in 8–9 minutes of continuous walk children usually start to show signs of different changes of mood and desire to continue walking, distraction, whims, etc. A similar reaction is quite consistent with the detected average duration of continuous play activity of children, which amounted to 7 [1].

Observations of the cardiovascular system (CVS) at repetition of continuous walking (8–9 – minutes and same length – 440 m) on the next day, showed that some children had higher initial heart rate and the total index. Also, some pupils after overcoming the first half of the distance (220 m) and up to the end of a 440-meter route showed a higher heart rate and increasing of the individual values of the heart rate above the restrictive level. This may indicate a more expressed degree of stress on the cardiovascular system due to insufficient recovery of the body (primarily neuro-muscular system) after a similar exercise on the previous day (the stress was expressed enough for the level of the functional state of psychomotor, that have the pupils) [2].

Children who had a continuous walk over 13.5–14 minutes (or a distance of 880 m), after a day of rest with repeated observation also recorded a higher pulse and increasing of heart rate above the level of healing effect (more than 125–130 beats / min) after overcoming the first half of the distance (220 m).

Conclusion. The observations of the external signs of fatigue, the study of the reaction of the cardiovascular system of children during and after the regimented walk allowed to determine the optimal parameters of exercise walking (time, distance, speed), which correspond to the potential of functional status and physical fitness of primary school pupils of the second branch of the auxiliary school.

The optimal parameters for the launching of the recreational walk with primary school pupils (8–10 years) of the second branch of the auxiliary school are the following:

- duration of continuous walk up to 440 m;
- the total time of continuous Wellness Walking up to 10 and a half minutes (individually);
- the average speed of movement – 2,4–3,6 km / h (individually);
- the average time passing a distance 100–110 m 2 to 3.5 minutes;
- maximum heart rate during Wellness Walking does not exceed the value of 120–130 beats / min;
- the number of lessons per week – 2 times.

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PROTEIN AND URIC ACID CONTENT IN THE HEMOLYMPH OF LYMNAEA STAGNALIS UNDER COPPER SULFATE AND HYPERTHERMIA

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At the present time it is becoming increasingly important research on the impact of various environmental factors on living organisms and the adaptation to these factors. Status of freshwater ecosystems is estimated using many components of makrozoobenthos including gastropods. The high density of natural populations, lifestyle characteristics (relatively low mobility, catering mainly sedimentary detritus and periphyton) and ease of use allow the collection of specimens of gastropods in the practice of both passive and active biomonitoring [1, 2]. Pulmonary large freshwater clams *L. stagnalis* and *P. corneus* are a test organism for pharmacodynamic and bio-ecological studies. Most often, these animals are used for environmental testing of pollution of natural and artificial water bodies, the actions of various physical (temperature, ionizing radiation, ultraviolet radiation, and others.), chemical (free-radical processes) and biological (bacterial infections, parasitizing larvae of trematodes) factors [3, 4, 5].

Effects of copper on development, reproduction and survival of shellfish adequately studied [6, 7, 8]. The quantitative determination of heavy metals in the body of aquatic organisms to evaluate changes in the state integrated hydroecosystems for a sufficiently long period of time. The temperature of the environment is one of the major abiotic factors affecting the inhabitants of the biosphere. Today proved its effect on the exchange rate, growth rate, rate of embryonic and post-embryonic development. Effects of high temperature they may be, for example, in the shallow water on a hot day or anthropogenic influence, when the pond is used to cool any industrial projects [9].

The aim of this study is to investigate the effect of copper sulfate and temperature on the total protein content in the hemolymph of L.Stagnalis.

Material and methods. We used *L.stagnalis* in the amount of 68 copies. Molluscs were collected in the lake near Dubrovno, Vitebsk region in September and October of 2014–2015. Before the experiment acclimatization molluscs in heated tanks with settled tap water for 48 hours, the density of molluscs planting was 3 specimens, water temperature was 20–22ºC. Then copper sulfate at concentrations of 0.01, 0.1 and 1 mg/l was added to water or animals kept at 35°C for 10 hours. The total protein content in the hemolymph was determined by biuret test, uric acid by enzymatic method using standard reagents of "Analysis X" company. Results are presented as $M \pm \sigma$. The significance of differences was assessed by Student t-test.

Results and discussion. Hemolymph is the major component of the internal environment of the molluscs. It consists of plasma (98–99%) and formed elements (1–2%) amebocyte (prohemocytes, microgranulocytes, eosinophilic and basophilic granulocytes). The cytoplasm and plasma amebocyte of molluscs contained consists of water (78–80%) and a number of organic substances (proteins, polypeptides, amino acids, carbohydrates, lipids, vitamins) and minerals (salt) origin (20–22%) [10].

The total protein in the hemolymph of *L. stagnalis* in the control group was 0.75 ± 0.198 g/l. Concentration of copper sulfate 0.01 mg/l did not affect on the protein content, total protein did not differ from the control and was 0.64 ± 0.175 g/l. Copper sulfate in a concentration of 0.1 mg/l caused a reduction of total protein concentration at 51% ($p < 0.05$) and its concentration was 0.37 ± 0.245 g/l. Increasing the concentration of copper sulfate increased the toxic effect of the salt concentration: the total protein in the hemolymph decreased by 61% ($p < 0.05$) and amounted to 0.29 ± 0.67 g/l. Reducing of the total protein concentration may be associated with a depression of its synthesis as a result of toxic effects, or enhancement of its degradation. When exposed to a temperature of 35°C tended to elevation of the total protein content in the hemolymph of *L. stagnalis*, but these changes were not statistically significant (control 1.31±0.591 g/l, 35°C – 1,82±1,632 g/l). All used copper sulfate concentration of uric acid cause an increase in the hemolymph: in the control group the concentration of uric acid was 44.4±7.47 μmol/l, at copper sulfhate concentration 0.01 mg/l – 139± 19.42 μmol/l ($p < 0.05$), 0.1 mg/l – 168 ± 28.07 μmol/l ($p <0{,}05$), 1 mg/l – 186±12,04 μmol/l. Increase of uric acid proves not only to strengthen the catabolism of nucleic acids, but also activation non-enzymal antioxidant system as uric acid and its salts act as scavengers of reactive oxygen species.

Conclusion. Thus, copper sulphate at a concentration of 0.01-1 mg/l causes a decrease the concentration of total protein and evaluation of uric acid in the hemolymph of *L. stagnalis*. Concentration of total protein in the hemolymph of L.stagnalis at 35°C did mot different from the control.

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ELECTRONIC DATABASE OF LYCOPODIOPHYTA, EQUISETOPHYTA AND POLYPODIOPHYTA PRESENTED IN THE HERBARIUMS OF VSU NAMED AFTER P.M. MASHEROV

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In the present electronic databases which allow to systematize and keep precisely data on the herbatium samples are created around the world. These databases allows to exchange data with other establishments. In Central Botanical garden of the national academyS NAN of Belarus the the groundwork based on the electronic Microsoft Office Access database was maintained. The analysis of sporous plants collection in gives information about occurrence, ecological preference and the changes of rare species distribution.

The aim – to systematize data on variety of representatives of Departments Lycopodiophyta, Equisetophyta and Polypodiophyta in the Belarusian Poozerye and to create the electronic Microsoft Office Access database the of samples stores in the herbarium of the departments.

Material and methods. Work begins with the main window of the "Herbarium of Vitebsk State University of P. M. Masherov" database. The following information is provided in this window: taxonomical structure (families, year, types, intraspecific names), number of sheets of each species and form, genus, family, number of sheets on departments and classes, the list of all collection, the list of families, the locality of collecting samples, date of collecting. The information is entered on the base of labels the gerbarium sheets. In the beginning data on collectors – a surname and initials collected and defined a plant are given. Serial number is assigned to each sample. The field in which the name of a plant is given, contains the list which included all representatives of flora of Belarus. It is necessary to choose the Latin name of the species if the entered species is absent in the opening list, it needs to be entered with easy operations. The district of collecting needs to be chosen from the presented list of in the field "district ". In the field "Place of Collecting" is information from a label is entered.

Results and discussion. The first systematized data on sporous plants in the Belarusian Poozerye, are given in the academic publication "Flora of BSSR" (1949) [1]. In the book for Belarusian Poozerye 5 types of club mosses, the 5th type of horsetails and the 13th type of ferns it were specified. 6 types of club mosses, 6 types of horsetails and 10 types of ferns were specified in later edition of "Determinant of Plants of Belarus" (1967) [2]. In "Determinant of the higher plants of Belarus" (1999) [3] gives 6 types of club mosses, 7 types of horsetails and 13 types of ferns. L.M. Merzhvinsky (2000) [4] for flora of Belarusian Poozerya gives 7 types of club mosses, 7 types of horsetails and 15 types of ferns. I.I. Shimko and M. A. Dzhus (2011) [4], having generalized all last gerbarium collecting in the Belarusian Poozerye added 1 more type of club mosses to the list.

We analysed and entered in an electronic database information of all herbarium samples of of sporous plants representatives collected in a herbarium of department of botany of VSU of P. M. Masherov before 01.09.2015.

Conclusion. The herbarium of VSU named after P. M. Masherov as of 01.09.2015 is presented by 8 species of Lycopodiophyta, 7 species of Equisetophyta and 15 species of Polypodiophyta that makes 87,5% of data of this divisions specified in Determinant (1999) for Belarusian Poozerya. In the herbarium 319 samples of Departments Lycopodiophyta, Equisetophyta and Polypodiophyta arecstored. The samples of protected species are: 1 sample of *Lycopodiella inundata* L, 5 samples of *Equisetum variegatum* Schleich. Ex F. Weber et D. Mohr, 1 sample of *Osmunda regalis* L. (collecting from the Brest region) and 4 samples of *Polypodium vulgare* L. These species are included in the Red List of Republic of Belarus [6]. It is necessary to fill up the database with other taxonomical groups presented in herbarium of department of botany.

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HISTORICAL DYNAMICS AND SPIRITUAL CULTURE OF THE SOCIETY: REGIONAL AND GLOBAL CONTEXTS

THE MAIN TRENDS OF USE OF ETHNIC MOTIVES IN FASHION DESIGN

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The ethnic style is a breakthrough of the previous century. The history of its origin is very interesting. It is based on contrasts. As it is known, fashion for mini dresses, skirts, shorts was explosively promoted at that time. But popular youth subculture hippie didn't like that fashion trends. So hippies borrowed some fashion elements from traditional styles of India, Nepal, Central America, Bali and Morocco. Ethnic trend in fashion design was formed as a special style in 1970's. It has different developments in practice now [1].

The applicability of the research is associated with particular popularity and progress of ethnic style in modern design as it is a display of national identity.

The aim is to analyze the main trends of use of ethnic motifs in fashion design in space of modern fashion in condition of globalization of culture.

Material and methods. The research is based on materials of fashion collections that use elements of ethnic motives made by world-known fashion house. During the research we use chronological, comparative and relative methods of the research.

Results and discussion. World famous art designers interpret ethnic theme in different ways.

For example, French couturier Jean Paul Gaultier combines ethnic, retro and modern fabric. At 1990th he created collections «Rabby-shic» (ongskirtes clothes, vests, loose shirt) and «Tatoo». The last rendered great effect at fashion of young people and it was based on African and South-Asian clothes. There are tatoo pictures, reminding bancnotes and grafity motives on clothes. Silver jewelery in ethnic style and piersing was popular at 90-th.These ideas also belonged to Gaultier.

Pecularities of Russian national fit have been advocated by Russian designer Vyacheslav Zaycev for many years. Tunic, caftan, sleeveless jackets are prototype in his collections («Russian series» 1965–1968 y.y.; «Millenium of christinization of Russia»1987–1988 y.y.) Russian folk costume had an impact on deigner's creative work, that is why unique and inimitable author's hand is found at all Zaycev collection.

Oscar dela Renta and Pollini followed African manner. They used such traditional African stuff as ivory, pearles, wood. The distinctive features of this trend are: bright geometric prints and animalistic, light fabrics and easy styles.

Antonio Berardi was inspired by Chinese culture. He created fabrics decorated with traditional Chinese embroidery. Fashion house Gucci combined simplicity of light costumes and traditional prints with dragons and floral patterns.

Colorful beads, Indian ornaments are notable for Emilio Pucci, Stella M'Cartney collections. Famous designer Kenzo relates to ethnic style of North America with special reverence. His collections are made in rich colors and decorated with all sorts of patterns and stripes [2].

It is significant that hippie style became one of the main parts of ethnic trend. Wecanseemodernviewonthisissue in collections of such fashion houses as Roberto Cavalli, D&G, Dries Van Noten, Marni, Michael Kors, Etro, Emilio Pucci, Balmai.

Conclusion. Analysis of fashion trends over the last few decades leads to the conclusion that the appeal to folklore and ethnography is one of the most productive origins of new forms and images in modern clothing. In general sense ethnic trends are topical now as a way to express traditions. It is especially important today in condition of globalization.

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INFLUENCE OF MASS MEDIA ON PUBLIC OPINION FORMATION DURING THE HOLDING OF ELECTION INTO LOCAL COMMITTEE OF DEPUTIES

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In modern political systems elections are the indispensable condition and the element democracy. The basis government authority should be popular will, that resides in the periodical and genuine elections.

An Election is a formal decision-making process by which a population chooses an individual to hold public office.

Elections represent the process that is regulated by the rules in accordance with which people nominate candidates from their area for performing some social functions for management of any organization of state voluntary association (etc.)

Aim – study the influence of mass media on public opinion formation during the holding of election into local committee of deputies

Material and methods. Research materials is the elections in local committee of deputies and factors that influence on the descriptive-analytical method.

Results and discussion. There are national presidential and parliamentary elections, elections in municipal administrations, in the Legislative Assemblies of states or analogous administrative-territorial entity and also the elections of some local authority, for example, judges, juries, sheriffs.

The citizens participate in national administration only due to the election process, forming legislative, executive and judicial organs. Population admit authority that is elected by themselves trust it. Thus with the help of elections representatives organs of authority are formed, that carry out policy for the sake of citizens interests, who elected them.

In accordance with the Republic of Belarus Constitution local government is realized by the citizens due to local committee of deputies. The System of local committee of deputies in the Republic of Belarus consists of three territorial levels: regional, basic and primary includes regional, civic, district, rural Committees.

Regional, Minsk civic Committee of deputies are included in regional territorial level.

Civic (cities of regional submissions), district committees of deputies are included in the basic-territorial level.

It is determined by the Republic of Belarus Constitution, that the local Committees of deputies are elected by the local citizen of certain administrative-territorial entities for a term of four years.

Elections are free and are held on basis of universal, equal and direct and electoral right by secret vote.

During the elections to the Council of Deputies of the 27th convocation of Vitebsk region the university electoral district №56 was chosen as the object of study with the purpose of the reveal of electoral preferences.

During the research there was determined that the real political values are formed less intensive than democratic among people. More than the half of the residents of the electoral district are not interested in politics, and the overwhelming majority doesn't want to take part in any political actions, except for the voting in elections. Besides, many orient poorly in the existing political parties and social movements in the Republic of Belarus and have a shallow idea of their programs and goals.

There is a problem of a relatively low level of the political culture of people and also the lack of interest to participate in political life. The reason of it could be the different factors.

During the research were made an attampt to display the getting the information by electoral district residents about the upcoming elections in the

Vitebsk counsil of deputies and also possible methods of the influence upon the electirate with the purpose of increasing of the electoral activity.

It is hard to chellange that the mass media is a significant sourse of information about the diverse world. As a sensitive barrier of a state and society life, they shape public opinion and appear the effective tool of generation consicousness and politic impact. The mass media makes weighty contribution to the establishment of a system of value and landmarks,definding the developmrnt of society, politic and social-economical nation model.

However, during the research of the mass media influention on the holding of election into local commettee of deputies were established the information content is directed to informing the population about time and location of the voting and the potential electors show low interest to each condidate in the deputies.

Conclusion. Thus, for the purpose of the involvement of the largest number of the residents of the electoral district into political processes, deputy contenders need to expand the ways of the impact on potential electors by using not only local mass media, but also other forms of the impact on the electorate.

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TERRITORIAL DISPUTES IN THE SOUTH CHINA SEA

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Today we are witnessing a sharp rise in China. The elevation of the country is accompanied by an increase in economic weight and increasing its political influence. This led to strained relations between China and many other countries (USA, South-East Asia), as well as to the appearance of conflict in the Asia-Pacific region.

One of these hotbeds of tension is a territorial conflict that unfolded over the Paracel Islands and Spratly archipelago in the South China Sea (SCS) between China and some Southeast Asian countries. The Chinese leadership has an active offensive to strengthen China's influence in SCS and seeks to alleviate tensions around the territorial disputes in the region. The purpose of research – to characterize the problem of ownership of the islands SCS, to trace the origin and genesis of the territorial disputes in SCS.

Material and methods. The study was used scientific functions (description, analysis, synthesis) and special historical (historical, systematic, historical and typological) methods. This paper is based on research materials of modern Russian scientists.

Results and discussion. The importance of sea routes through the Straits SCS, its abundant mineral and living marine resources are the main causes of disputes ongoing for many years between China and the five littoral states and Taiwan because of the limits of exclusive economic zones and continental shelf, the waters of the sea and there are islands. The recognition of sovereignty over them for each country is to provide a legal basis for the exclusive exploitation of the seabed and the surrounding islands, which is the essence of all differences [1, p. 19–20].

In SCS unresolved territorial disputes taking place between China, Vietnam, the Philippines, Taiwan, Malaysia and Brunei. The claims of the parties are presented mainly in the Spratly Islands and the Paracel Islands.

Paracel Islands – uninhabited archipelago in SCS consisting of small islands and reefs. The archipelago in 1974 was captured by China, but it claims to impose as Vietnam and Taiwan. Spratly Islands – an archipelago in the southwestern part of SCS. Currently, the archipelago is used as a fishing area. As part of the Spratly archipelago are the Paracel Islands.

At the heart of the dispute over the Spratly Islands are primarily economic interests. In this area are assumed to large deposits of oil and natural gas. The waters of the archipelago is rich in biological resources. There are also the main transport routes, linking the Pacific and Indian oceans, which is carried out every year 50% of world traffic.

In general, the early twentieth century. the question of ownership of the islands SCS not arise. Only at the beginning of the last century the French colonial power in Indochina began practicing in the direction of the Paracel Islands waters military courts [2].

The most active challenger in the territory and the waters in the region is China. Established in June 1909, the expedition was to demonstrate that the island does not belong to the French Indochina and China. Having established on about. North Qing Empire State flag and pole with an inscription of the ownership of the Paracel Islands to China, ships hurried away. Thus, since the beginning of the twentieth century. You can watch the first attempts of China to establish their claims to territory in SCS.

Since the beginning of the 1920s of the last century, the French authorities have stepped up Indochina few work on the survey of the islands. On the island was sent to several scientific expeditions, they had established a police post [2].

In 1939, the military government of Japan announced its decision to occupy the Spratly Islands, which it considered «subject to its jurisdiction». But in response, France April 4, 1939 protested. During the Second World

War, France Spratly protected from encroachment Japan. In 1949, Vietnam «inherited» from France her rights to the Paracel Islands and Spratly Islands.

In 1951 in San Francisco signed the Japan-US Treaty of Mutual Cooperation and security guarantees. After the signing of this treaty Japan renounced all rights and claims to the Spratly and Paracel Islands.

After World War II the political arena once again came to China. In 1946, China seized the island of Itu Aba, which is located in the northwestern part of the Spratly archipelago. Continuing to carry out an «aggressive» policy in 1950, China seized the Paracel Islands and part of the continued occupation of the remainder of the 1974 Viet Nam considers these seizures contrary to international law and accuses the US of conspiring with China.

A new wave of conflicts in the region SCS observed in the XXI century. Proof of this are the events of the end of May 2011, when the Chinese government announced that the Vietnamese ship has violated the sea border and entered in the internal territorial waters of China in the Spratly Islands region.

In the summer of 2011, China launched the new aircraft carrier, designed to patrol the border with China in SCS. Despite the fact that, according to China's aircraft carrier will be used solely for the purpose of research and practice, many countries view the move as China's intention to influence the decision of disputes in SCS in the future [3].

In response, Vietnam decided to increase funding for its military sector and purchased from Russian missiles, able to withstand air attacks. In addition, Vietnam conducts naval exercises with the United States that has been seen by the Chinese authorities as a sign of hostility and attempts to involve the United States in debates around SCS.

Conclusion. The dispute over the territorial jurisdiction of the numerous islands in the SCS, which involves China and several countries in Southeast Asia, is the source of the potentially most serious conflict in the region. The history of the issue suggests that even a sufficiently long period of relative calm in this part of the world's oceans are replaced by tension flares up to the armed confrontation.

Intertwined geopolitical, military-strategic, economic factors, as well as national interests and ambitions of the disputants turn SCS issue ownership of the islands into one of the most dangerous conflicts in Southeast Asia, has a very high degree of military and political tension.

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VITEBSK REGIONAL MUSEUM NAMED AFTER THE HERO OF THE SOVIET UNION M.PH. SHMYREV: COMPETITION “PAGES OF MILITARY HISTORY”

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In the year 2015 in the Republic of Belarus was celebrated the 70th anniversary of Victory in the Great Patriotic War. Different events were held in Belarus, for example, volunteer orientation "Your victory - our freedom", "Good Heart" – veterans!"; military memorial event – the repair and improvement of memorials and monuments of the Great Patriotic War, military graves; development and commissioning of the tourist routes, with a military orientation. Also, they find and establish the names of solders and other victims, and establishing the fate of missing persons [2]. The aims of such measures are immortalization the memory of those killed during the Great Patriotic War, the preservation of national memory and patriotic education of the young generation of Belarusians. The aim of our research is to characterize the competition "Pages of Military History," as a measure improving the patriotic education of youth, perpetuating the memory of the heroes of the war and attracting the potential museum audience.

Material and methods. The official web site of the Regional Museum named after the Hero of the Soviet Union M. Ph. Shmyrev, the official web site of the newspaper “Vitbichi”, personal experience and observation of the researcher, as well as the following methods: descriptive and analytical, statistical, comparative benchmarking, methods of analysis and synthesis were used in this research.

Results and discussed. In modern society, museums develop knowledge about the world. Also museums reflect the phenomena occurring in the society. Naturally, such event as the 70th anniversary of Victory in the Great Patriotic War is also reflected in the various museums of the country. This work is devoted to the activities carried out Vitebsk Regional Museum named after the Hero of the Soviet Union M. Ph. Shmyrev within the marked themes - the competition "Pages of Military History".

This museum uses various forms of work with the audience: general and thematic museum tours; lectures; museum and educational sessions, themed games. In addition, during the excursions in museum documentaries and feature films are shown. Also, the museum gives historical information about the partisan movement during the Great Patriotic War [6].

As previously mentioned, the museum has active participated in organizing and conducting events dedicated to the 70th anniversary of Victory in the Great Patriotic War. In addition to standard programs, the regional competition "Pages of Military History" was held [4].

The event was held in two phases, the first of which was devoted to the 70th anniversary of liberation of Belarus from Nazi invaders, and the second – to the 70th anniversary of Victory in the Great Patriotic War. The first stage of the competition was held from 21 September 2013 to 26 June 2014, the second phase – from June 26, 2014 to May 9, 2015 [4]. According to the Regulations on the contest results were announced on the eve of the 70th anniversary of the liberation of the city of Vitebsk (06.26.2014 – the first stage of the competition), and the 70th anniversary of the Victory (09.05.2015 – the second stage of the competition) [4].

According to the contest each task consisted of 3 questions. Questions were prepared by employees of the Vitebsk Regional Museum named after the Hero of the Soviet Union M. Ph. Shmyrev. Responses need to be sent to the office of the newspaper "Vitbichi". Later, these answers were studied by the jury and participants awarded a certain number of points, depending on the correctness and completeness of response: 10 – for the correct full answer; 5 – the partly right answer and 0 – for the wrong answer [4]. Thus, the maximum number of points that could gain the participants for one task – 30. It should be noted that the maximum number of points that were recruited after the first three questions, made 25 balls (1 participant) [1].

After each task overviews were published in the newspaper: the names of the participants with the highest number of points overall summary ("Leader Board"), the questions coming to the newspaper about the competition. Also should point out that the newspaper published detailed answers to previous tasks. Thus, readers had the opportunity to learn interesting and little known facts about the history of the Great Patriotic War, even not taking direct part in the competition.

The main aims of the event, according to the regulations of the competition were: education of patriotism; popularization of the history of Belarus during World War II; development of creative potential of the participants [4]. However, in our view, this competition also allowed to reveal to a wider audience the little-known pages of the military history, see the history in faces and fates, learn about the people who died defending their homeland.

The tasks have been varying degrees of complexity, multiple destinations, but, nevertheless, demanded from the participants not only the knowledge of historical facts, but also the ability to conduct research sources. In addition, the conditions of competition does not restrict creative research participants, for example, one of the participants as an epigraph to her answers has led verses from the poem Tvardovsky "House near the road " [1]. Thus, we see that the contestants are not just looking for appropriate answers to quizzes, but they also experience new facts and give their own assessment to the theme.

The competition was attended by people of different ages (young people, pensioners, middle-aged people) and activity. So among the most active participants of the contest can be distinguished teacher of foreign languages, the head of dispatching a group of Vitebsk branch of "Beltelecom", pensioners (librarians and senior instructor of Regional Council of Trade Unions Sports Society), as well as college students and high school [3]. This statistic demonstrates that the contest has attracted interest not only among professional historians, but also among people who have an amateur interest in the history of their country. Also, the information makes it possible to conclude that the war pages of history are interested not only older people. Young people actively participated in the contest, but in our opinion, to draw attention to the more tender younger audiences such activities should also be carried out in social networks, where, the museum have an official profile.

Conclusion. Thus, as noted earlier, the Museum named after the Hero of the Soviet Union M. Ph. Shmyrev holds non-standard measures, which aim to attract and interest the modern museum visitor. The contest "Pages of Military History", has caused a great public outcry and show that the topic of the Great Patriotic War is interesting for the broad masses of the population of different age and occupation. Such events not only preserve and increase the nation's memory of his heroes, but also an indirect advertising of museum institutions. A modern museum must move away from the standard forms of work and to carry out diverse activities on their profile, for example, such as competition "Pages of Military History."

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THE ANTHOLOGY OF CONCEPT "STYLIZATION" IN ART

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An art pierces all displays of cultural life from her origin. To the 20 century there are an active exchange and synthesis of expressive facilities from other types of art, it is almost impossible to define the belonging of artist to certain school, style, direction. The use of elements of stylization became a determinative in art of plenty of artists [3, p. 125].

Aim hired – to analyse the anthology of concept of "stylization" in art.

An aesthetic attractiveness assists a wide and rapid distribution of stylization in culture and wakes up the interest in esthetically meaningful morphogenesis. Thus, stylization is the important component of aesthetic culture and, consequently, requires the further detailed and scalene study not only as a sign and a line, but as separate phenomenon in the modern painting.

Material and methods. Research builds on the analysis of corps of aesthetic, culturological texts and texts of art history, turned to the problem of stylization and style.

Results and discussion. The comparatively-comparable is in-process used, analytical methods of research. Stylization as a phenomenon is related not only to the decoratively-applied art but also purchased a large value in the modern painting, music, graphic arts. Stylization, simultaneously, is original, secondary and conditional. Secondary because uses artistic aesthetics terms of existence of certain style (romanticism, classicism, jazz), existence of music (folklore, professional music, signals of secondary nature and etc.) or even separate artist. Stylization is original as a selection of expressive facilities is enough subjective, carries on itself not only the imprint of the represented style but also personalities of performer, his tastes, world view, aesthetic necessities, emotional states etc. Convention of stylization depends on impossibility to classify the work of artist. Using an artistic language, the artist organizes the vision and understanding of work. The aim of stylization is an analysis and immersion in particular of original work for the sake of creation of the complete work. The aim of stylization in the impromptu activity consists of creation not only of colour, atmosphere of certain epoch, style and composer, but also in the achievement of aesthetic apogee in the process of creative self-expression [2, p. 364].

Style and stylization are family, but far not identical cultural forms. Their connection is obvious, firstly because, style and stylization are the varieties of shape-generating activity, executing cultural functions here, secondly because any stylization takes for basis of form of certain style, in - third, stylization can be included in the stylish system of one or another type of culture as one (sometimes even leading) of expressive facilities, bearing unmediocre sense, fourthly, the aesthetic (though distinctive from each other) mechanisms of action are inherent both these concepts in culture and, finally, even term “stylization” is produced from a concept of "style" [1, p. 240]. At the same time, distinctions of style and stylization are substantial and fundamental and their values can not be put on one stage and examine as one unit, and more precisely as identical or identical concepts.

With the concept of "style" in a fine art is closely enough bound the concept of " stylization ". Contiguity of these two concepts opens up in those, that creative stylization carries individual character necessarily, implies authorial vision and artistic processing of the phenomena and objects of the surrounding world and, that in the total, introduces the elements of novelty and freshness in a creative process.

Conclusion. Stylization – widely widespread in the varied repertoire of stylish senses of culture. Formally it consists of reproducing of already existent stylish forms, but cultural senses of stylization are richly in content saturated and functionally various. Stylization serves as the important means of communicative orientation of activity and a landmark in the process of self-definition of subject of cultural work, where style is the instrument of communication and language means [1, p. 225].

The origin of a new breathing, is the result of temporal description, traditions, artistic idea. Creative stylization absorbs individual character in itself, exposes new horizons for the reflection of reality and introduces a novelty the same, not only in a cogitative process but also in an existent epoch. Stylization, as accepted to consider, does not simplify the form of work with an object, and analyses and studies his essence, that in future assists to the development not only of art on the whole but also to the opening of new possibilities of modern epoch.

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INVESTMENT IN BASIC CAPITAL OF REPUBLIC OF BELARUS: CONDITION AND DYNAMICS

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The Investment is one of the most important conditions for the state development. *The purpose* is to study investments activities as an important indicator of attracting financial resources. The urgency caused by that the problem of investment require a deep scientific study, analysis and working out of the practical recommendations.

Material and methods. The materials for the studying of the investments into basic capital in Republic of Belarus are the data of National Statistics Committee. In the work were applied the methods of analysis, comparison and deduction to find out the causes and consequences of the investments.

Results and discussion. Investment activity refers to number of the financial techniques which are directly related with attracting and placement of financial resources. The investing of funds are made for the subsequent obtain income and profits.

The most common forms of investments are the direct and portfolio investments. Under the direct investment are understood investments of one enterprise into the authorized capital of other enterprise in order to establish the control over it (the acquisition of a controlling stake), as well as investments in the new physical assets – capitalforming investments [1, p. 388]. Portfolio investment is a set of financial instruments in the form of valuable papers, loans and other instruments by which the operations are executed on the financial markets.

The investment project is always associated with a risk. Moreover, the uncertainty amplifies the time factor: the longer payback period of costs, then riskier the project. Therefore, at decision-making the costs, income and efficiency of the project should be estimated taking into account this factor.

The bomb for investors is the right of the Republic of Belarus to terminate the investment agreement "for non-compliance or inadequate compliance with the investor of its obligations under the agreement." If literally interpret the rules of law: the absence of autobiography in the personal file of one of the workers, delay in the project in one day or a reduction in the amount of $1 of the sum of investments because of the banking commission may serve as grounds for termination of the investment project by the cost in several million dollars [2].

The main social-economic indicators of the Republic of Belarus in the partition of investments in the basic capital are shown in Figure and have a negative trend. In 2015 the volume of investments in September on 2,7 p.p lower than in 2014 [3]. However, compared with July 2015 in September 2015 is shown the growth of the volume of investments on 1,1 p.p.

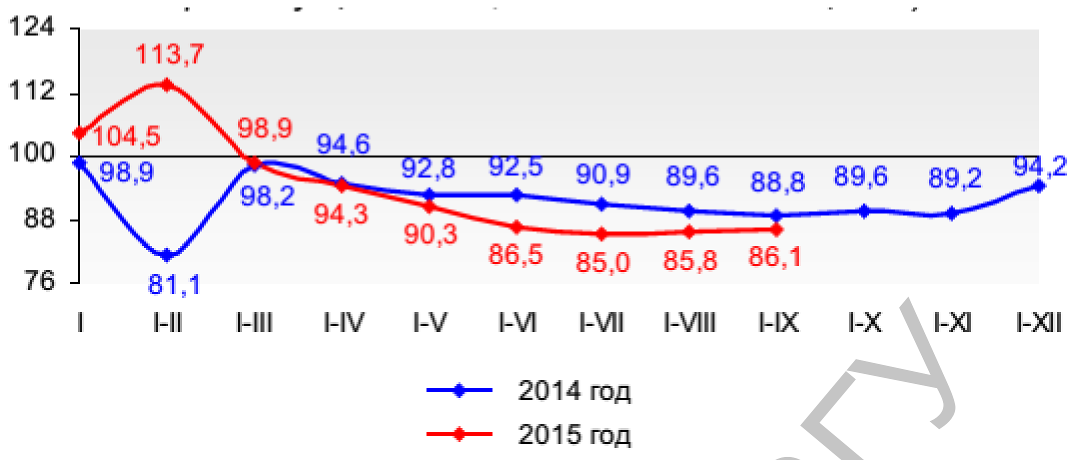

Figure – Investments into the basic capitals in the Republic of Belarus in 2014-2015. (in percents to the corresponding period of the previous year in the comparable prices [3])

In January-September 2015 were used 145,9 trillion rubles of **investments into basic capital** or in the comparable prices 86,1% to the level of January–September 2014. Decline of growth of investments are connected to the contraction of domestic demand in condition of reductions of the budget financing and lending to the real sector of the economy. The efforts of the Government of the Republic of Belarus are aimed on attracting foreign investors and liberalizing the conditions for domestic investors to set up the new production facilities, modernization of existing enterprises in order to produce the competitive products on world markets, thereby providing for investors to receive income and increase the level of citizens prosperity in our country.

The largest volume of investment in basic capital by regions has Minsk region – 30 632, 6 billion rubles and Gomel region – 29 787,9 bln. rubles (see Table). In comparable prices in January–September 2015 in percents to the prices January–September 2014 Minsk region has attracted investments 101,5%. In January–September 2014 in percents to January–September 2013 Gomel region was a leader with the index of investment in basic capital – 102,2%. If analyze the investment volume in basic capital in the comparable prices of September 2015 with respect to August 2015 then the total volume of investment in Republic of Belarus increased by 7,3%.

Vitebsk and Mogilev regions are considered less attractive by dynamics of investment in basic capital: 12336,3 and 12511,7 bln. rubles respectively in according to Table. It is necessary to find out the reasons and take appropriate decisions to increase the volume of investments and substantiate the effectiveness and attractiveness of their investments.

Table – Investment in basic capital by the regions and Minsk [3]

	billion rubles (in current prices)		In comparable prices			
	January-September 2015	September 2015	January-September 2015 in % to January-September 2014	September 2015 in % to		reference January-September 2014 in% to January-September 2013
				September 2014	August 2015	
Total on Republic of Belarus	**145 914,0**	**19 602,0**	**86,1**	**87,8**	**107,3**	**88,8**
Brest region	14 741,7	1 863,1	78,4	77,6	114,1	84,2
Vitebsk region	12 336,3	1 759,3	81,0	95,2	108,1	73,1
Gomel region	29 787,9	3 841,6	97,9	85,5	90,8	**102,2**
Grodno region	17 863,8	2 478,8	91,9	85,0	103,2	89,8
Minsk	27 784,4	3 986,7	69,2	88,4	120,1	93,8
Minsk region	30 632,6	4 364,3	**101,5**	99,2	125,6	82,2
Mogilev region	12 511,7	1 303,6	83,3	75,5	82,3	91,0

Conclusion. It should be noted, there are examples of successful implementation of investment projects in Belarus, including the European companies that are members of our association.

The State should more active use and translate this positive experience and, the most important, support the development of these companies, don't create additional barriers. The new investors should evaluate their own interests to the Belarusian economy on the specific case studies of already completed investment projects.

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DETERMINATION OF THE SOCIAL ROLE OF LANGUAGE, LANGUAGES, LITERATURE, BELARUSIAN FOLKLORE FUNCTIONING IN THE DEVELOPMENT CONTEXT OF EUROPEAN AND WORLD CULTURES

THEME PECULIARITIES OF THE LITERATURE OF VIRTUAL SPACE

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Nowadays the literature of virtual space becomes more popular and widespread. With the growth of the number of such writings the variety of themes raised in them also grows. The object of our research is the peculiarities of the theme in virtual literature. The aim of the research is to study theme peculiarities of the literature of virtual space.

Material and methods. In the scientific work we use such methods as comparative and textual analysis, and also the elements of a statistical method and the method of classification. The materials for the research are the works of writers in virtual space.

Results and discussion. Theme is defined as the main question of a literary work based on the particular artistic material. Major and minor themes are two types of themes that appear in literary works. A major theme is an idea that a writer repeats in his work, making it the most significant idea in a literary work. A minor theme, on the other hand, refers to an idea that appears in a work briefly and gives way to another minor theme [1].

Theme is an element of a story that binds together various other essential elements of a narrative. It is a truth that exhibits universality and stands true for people of all cultures. Theme gives readers better understanding of the main character’s conflicts, experiences, discoveries and emotions as they are derived from them. Through themes, a writer tries to give his readers an insight into how the world works or how he or she views human life [2, p. 86].

The literature of virtual space is popular and contains a great number of narrative archetypes. In their works authors use different techniques and creative purposes, combining them and creating literary works with the features of different genres. And in terms of this variety there are different themes presented in these works.

According to B.V. Tomashevsky, theme can draw closer together or even be identified with motif. Themes are “small parts” of a work called motifs, “which cannot be divided any more” [3]. Since there are major and minor themes in a work, we can speak about a combination of motifs presented in it.

And their variety is great because the genres of the literature of virtual space are synthetic and hypertextuality and intertextuality are common for these literary works. The combination of motifs is a very widespread approach to the research of theme peculiarities in different genres. A literary work is a combination of motifs, in which these smallest units stay in different positions. A.N. Veselovsky said that it is possible to reduce an endless variety of plots to a limited number of motifs, what is typical for the literature of virtual space. But as genres in such literature are synthetic, the amount of different combinations of motives is almost endless [4, p. 175].

Speaking about themes as motifs we can define different kinds of them, and at least one type is sure to be present in any work of the literature of virtual space. The main examples in literature are love, friendship, war, crime, mystory, revenge, etc. [1].

Love and friendship are frequently occurring themes in literature. They generate emotional twists and turns in a narrative and can lead to a variety of endings: happy, sad or bittersweet.

The theme of war has been explored in literature since ancient times. The literary woks utilizing this theme may either glorify or criticize the idea of war.

Crime and mystery are utilized in detective novels. Such narratives also include sub-themes such as “crimes cannot be hidden”, “evil is always punished” etc.

Revenge is another recurrent theme found in many popular literary works. A character comes across certain circumstances that make him aware of his need for revenge. The outcome of his action is often bitter but sometimes they may end up being satisfied [1].

The combination of motifs is a very widespread approach to the research of theme peculiarities in different genres. The motifs are the smallest narrative units, which are repeated in stories. A literary work is a combination of motifs, in which these smallest units stay in different positions. A.N. Veselovsky said that it is possible to reduce an endless variety of plots to a limited number of motifs, what is typical for the literature of virtual space. But as genres in such literature are synthetic, the amount of different combinations of motives is almost endless [4, p. 43].

John G. Cawelti developed a method of studying literary works of mass culture, according to the synthesis of genre research and narrative archetypes. He characterised the basic types of literary formulas as: “adventure”, “love story”, “mystery”, “melodrama”, “fantastic story” (“alien beings and conditions”). Cawelti’s literary formulas are the basis of genres in the literature of virtual space [5, p. 168]. And according to it we carried out the research of themes in different literary formulas and figured out the combinations of motifs used in them:

1. In Adventure we cannot find the major theme, as because of the variety of motifs no one dominates. This genre can be divided in different subgenres according to the dominant motif, and there practically all kinds of themes can be presented. The brightest examples of such literary works are “Pyramids of gods” by Andreev Nikita, Mihajlova Marina “Bereleh”, “True Road” by Radevich Evgeniy.

2. Romance – a female equivalent of adventure story. But here we can distinguish the major topic – love. Mystery, revenge and friendship can be the minor topics of this genre (“Lunar school” by Half-Jansky Katerina, “Chance fortunately” by Kudrina Victoria, “I Love You” by Adrianna).

3. Detective stories have mainly one major theme: crime or mystery. But in this genre the combination of motifs can be presented. Thus, the minor topics of Detectives are love, friendship and revenge, depending on the subgenre. The examples are “Tribunal” by Chirkova of Belief, “Marengo” by Aretta, ShChemelinina Denis "Ironclad alibi”.

4. Melodramatic formulas contain as a rule only one major motif. This theme is obviously love. And the combination of motifs is not presented in such literary works. The examples of the works of this genre are “Life after” by Travalator, “On an edge” by Lady Irene.

5. Fantastic stories mainly have mystery as a major theme. But on the basis of the subgenres different minor themes dominate in specific literary works. The combination of motifs is brightly presented in Fantastic stories. Thus, in Thriller the minor motive can be crime or revenge. In Horror stories not only revenge, but also even love can be presented. Fantasy can be further subdivided and in different works such minor themes as love, friendship, war, crime and revenge may interact with the main theme – mystery. The examples are “Game" by Bobkov Vladislav, "Unity" by Akvatella.

Conclusion. On the basis of the research it is possible to draw a conclusion, that there are different themes, presented in the literature of virtual space. We can always find major and minor themes, and according to this observation speak about the combination of motifs presented in synthetic genres in the literature of virtual space. And in each type of literary formulas we can find the limited number of typical motifs.

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NEOLOGISMS IN MODERN ENGLISH

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The English language is the most widely used language for international communication and as many other languages is in constant movement. The system of language, precisely its vocabulary, is changing all the time. Nowadays English goes through the so-called «neological boom». Every aspect of people's life is reflected in the words they use to talk about themselves and the world around them. With the development of science and technology a lot of new words appear in the English language. New words are constantly entering the lexicon to describe new concepts and technologies and what they mean to us. So, every change, innovation, revolution opens good opportunities for the coining of new words or phrases. Neologisms are an inseparable part of our everyday contact with language. Such words are easily found both in one's speech and in written texts. This concept is under study of various researches and deserves special attention.

The aims of the study are to observe reasons for the appearance of neologisms and to determine the main ways of their creation.

Material and methods. The main definitions are taken from the book Zabotkina V. "New Words of the Modern English Language" and from "The Oxford Dictionary of New Words". In this paper we have used descriptive and analytical methods of linguistic research.

Results and their discussion. A great amount of new words and the necessity to analyze them have caused the creation of a specific branch of lexicology – neology – a science about neologisms. There are various definitions of neologisms in different dictionaries and books. This term comes from the Greek word "neo", which means "new", and "logos", which means "a speech, utterance". The Oxford Dictionary (1998) defines neologism as a new coined word or expression; the coining or use of new words. American professor John Algeo admits that a new word is a form or the use of a form not recorded in general dictionaries. But most frequently, the concept of neologism is explained and defined as "a new word" which seems clear and simple.

New words appear due to the productive means of word-building in a given language. They can be borrowed from another language as the result of political, economic, trade and cultural contact or commercial, cultural, scientific exchange or they can be modified variants of the already existing words which change their meaning, or words which change their forms using such methods as abbreviation, slang and others. It should be noticed that neologisms are usually formed under the laws of the language.

According to the way of formation, neologisms are divided into [1, p. 8]:

1) Phonological neologisms, created from individual sounds (e.g. *zizz*, *to whee, to clapter*).

2) Borrowings, which are neologisms not typical for the English phonetics (sauna from Finnish, dacha from Russian).

3) Morphological neologisms, created by the means of word-building that exist in the language system (affixation, conversion, compounding, shortening). For example: *googable, to amazon, mouse potato, PC.*

But how does a neologism come into this world? And why? New words are created every day and their number in English is growing fast. It is very important to analyze the reasons for the appearance of neologisms in a language. Mass media such as television, newspapers, magazines, and radio are the means of communication that influence large numbers of people every day. Newspapers and television need to use new terms in order to describe new facts, happenings, ideas and inventions. Therefore journalists play a significant role in creating and spreading new words – neologisms. The sphere which is overloaded with neologisms is computer science. New computer technologies give rise to new words. Here, they become widely-spread. Most of them are connected with the Internet and e-mail.

In the conclusion we may say that English vocabulary is an adaptive system, it easily adapts to different changes in modern life. Nowadays, with the development of different inventions and innovations, a significant number of new words have appeared in the English language and many of them are still unfamiliar to many people. Neologisms are interesting for both scientists and ordinary people, because they are connected with the development of our society. Moreover, it is very useful to find out their origin, ways of formation, the process of their appearance in the English language.

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MULTICULTURALISM AS A PHENOMENON IN MODERN AMERICAN CULTURE AND LITERATURE

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The relevance of my research is that the subject is still little studied, the theoretical material is based only on American literature. Also, "multiculturalism" has become popular not only in literature but also in other genres of modern expression of art. My research will be useful for students to study the literature of America.

Aim is analysis meaning of multiculturalism.

Methods of research are descriptive method & analytical method.

Results and discussion. Many researchers use the concept of multiculturalism in different meanings. "Multiculturalism", according to the American philosopher Richard Bernstein, is definitions of the concept of uncertainty." Prominent American ethnopolitologist, Nathan Glazer defined "multiculturalism" as "a complex of various processes of development, during which revealed many cultures opposed to a single national culture." It is the broadest interpretation of multiculturalism and it was generally agreed R. Bernstein.

Within the framework of political science Borisov A.A. in his article, "The American experience and Russia" gave the following definition: "multiculturalism – is the ideology, standing up for the primacy of the "cultural diversity ", on the cultural homogeneity of a country, when the ideals of the nation-state are being questioned, and the appropriate her practice" [2].

The concept of "multiculturalism" appeared in scientific literature in the 70s of the last century in response to the need for theoretical understanding of the issue of coexistence of ethnic cultures within a single multinational space. In addition, the challenge of multiculturalism was to "reach every human being". It protects the pressure of other people's ethnic majority and its ethnic minority. To accomplish this, it was necessary to refer to the idea of freedom and the meaning of human existence, which existed in various American philosophies.

Our studies of the American philosophical anthropology, approaches in contemporary American philosophy leads to the following conclusions [1, p. 90].

In the implementation of the theoretical analysis of the formation of the american philosophical anthropology, it has been identified as a human interpretation of the specificity of individuality for whom the meaning of life is the result of specific goals and actions of specific people on the basis of individual or collective projects, realizing our true selves in society through freedom.

In the interpretation of the problem of man and his freedom of American philosophers in many ways changed the traditions of European existentialism. On the foundation erected by European "classics", they developed their concept of freedom as an individual self-realization.

The push for multicultural literature was a direct outgrowth of the Civil Rights movement in the United States in the 1950s and 1960s. Although African Americans began the initial push, the movement was rekindled in the 1980s by Latinos, Native Americans, Asian Americans, women, handicapped people, and people with varying sexual preferences. By definition multicultural literature has these groups as it is the main character and revolves around themes that impact their lives. These groups have often been overlooked or had minimal impact in literature and school curriculum, but that is beginning to change [2].

There are two general reasons for reading multicultural literature and/or incorporating it into an educational program. The first reason is to expose people to other ethnic and cultural groups. Overcoming ignorance is one of the desired outcomes of this exposure. Also, it is hoped that when people see how others live and understand where they come from, how they think, and what their motivations are, then they will be able to empathize with these groups and stop some of the prejudice and discrimination against them. The second reason, which is just as important, is the need for people of all ethnic and cultural groups to be able to identify with characters and see themselves portrayed in literature. Children who see themselves and their culture reflected in literature will experience a boost to their self-esteem. If people are able to see their own self-worth they are more apt to value diversity in others [2].

Just as important as the need for this type of literature and exposure is the need for the literature to be accurate. Many books that contain a multicultural flavor are actually written by authors who have no credible point of reference. As a result, these books are often filled with factual errors, stereotypes, and inaccurate illustrations. To help discern the accurate from the inaccurate pay attention to sources cited, acknowledgements by the author, and the authors own ethnic background. Often writers who are members of the ethnic or cultural group being written about will paint a more accurate picture than authors who are writing based on their perceived knowledge [2].

Another issue that needs to be considered is determining who is the book's target audience. Since the late 1980s, several African American authors have written books aimed at an African American audience. These books have tended to give a very accurate picture of the culture. When a book is written with a very general audience in mind, cultural distinctiveness is often toned down or explained to such an extent that it detracts for the story. Often this is done unconsciously, but it can also be done to help the book have a wider appeal [2].

The author's notes can be very helpful in determining the authenticity of the book and helping to explain the context and concepts of the book. This is especially helpful if the readers are unfamiliar with the group(s) being covered. These notes can take the form of a foreword, afterward, or notes, and can be used to explain the evolution of the story, the importance of the setting, the lifestyle, circumstances and histories of the characters, or they may explain how the information was gathered and compiled. The notes may also explain the authors motivation for writing and what he/she hopes the writer will gain from reading the book.

Conclusion. Many books have been written that accurately discuss the folktales and/or history of different cultures and groups. One reason for this maybe is an easy way to remedy the lack of multicultural literature. This is a good way to expose readers to the development of peoples; however, current events and lives cannot be ignored. To accurately portray a group, expose others to their way of life, and enhance their feeling of self-worth the group must be included in literature that shows their life in present times.

Americans are making strides to remedy this problem but still represent only a small portion of new books being published. However, most other culture groups are lacking in accurate, contemporary stories. Most of the multicultural books being published fiction works.

Poetry is one area of non-fiction that does have some representation from various cultures. Even though this is a market that is wide open, publishers are beginning to be very selective about what multicultural books are being accepted. However, since this area has been identified as such a large void there has been a rush of authors trying to fill the void. Editors are beginning to lean toward authors who write about cultures they are members of and experiences they have firsthand knowledge of, especially when writing contemporary multicultural fiction.

One drawback of this that has developed is that editors often want people who represent these overlooked groups to write multicultural stories and not just general fiction.

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ARTICULATION DRAWBACKS OF SCHOOL-LEAVERS ENTERING COLLEGES TO GET LINGUISTIC EDUCATION

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Every year hundreds of applicants are admitted to educational establishments to study English. Some of them can't be easily understood by their fellow-students and teachers and practically all of them need special training to acquire correct articulation movements, which are functionally important. The main goal of the present article is to reveal basic drawbacks in the articulation of English sounds and work out some rules which could help to master correct articulation. The results of the research would be especially important for school teachers in the line of forming correct articulatory background.

Material and methods. Critical analyzing the scientific sources, examining and observation students' pronunciation and describing are helpful in our investigation of the problem.

Results and discussion. Annual observation of students' articulation at college allows to single out several groups of typical drawbacks in pronunciation of English sounds and words.

Teaching pronunciation at school is based on the approximating approach, which means that the number of sounds in both languages is almost identical or rather similar. Their articulation isn't trained deliberately and systematically. Schoolchildren are expected to master it on imitation level. Thus,

- the participation of lips in producing a closure in English [p], [b], [m] is rather weak (98% don't perform the necessary movements by their lips);
- alveolar [t], [d], [s], [z] are substituted by their Russian dental variants (96% of the surveyed have incorrect articulation);
- though in some sources we can find that Russian and English [k] and [g] are almost identical, the quality of the English equivalents can't be achieved because a complete closure isn't made by the back of the tongue against the soft palate (93% replace English [k], [g] by the Russian equivalents);
- it's considerably difficult for young learners of English to make the closure between the back of the tongue and the soft palate pronouncing nasal sonorant [ŋ], to raise the mid part of the tongue to the soft palate in mediolingual sonorant [j] (100% have faults in articulation of [ŋ] and [j]);
- forelingual apical alveolar interdental [θ], [ð] are mixed up with alveolar [s], [z] or [f], [v] and require lasting drills (79% will have to learn how to pronounce these sounds anew);
- sometimes affricates have indistinctive quality (27%) and glottal [h] isn't breathed out (76%).

Vowels present a special group of articulatory difficulties. The skills of differentiation of low broad front [æ] and mid narrow front [e] aren't formed at school being functionally significant (96% of all the examined don't pronounce [æ]).

The substitution of mid diphthong [əu] by back monophthong in such words as *both, don't, won't, most, old, cold, only* causes misunderstanding and prevents correct perception of the ideas conveyed by the words in an utterance (100% of students are unaware of diphthong [əu]).

In articulating the other English vowels school-leavers are apt to make mistakes as well. They replace the English vowels [i:], [ı], [u], [u:], [ə:] and some others by the Russian equivalents, which differ in articulation (100% of the surveyed make this mistake). They make both elements equally distinct or don't tell monophthongs from diphthongs, etc.

These groups of mistakes are more typical of Russian learners of English.

The problem of misreading vowels in English words is closely connected with those mentioned above. “This happens because in the English language the words have long changed their pronunciation but their original spelling still remains the same” [2, p. 38]. About 79% of all the surveyed make mistakes while reading.

Mistakes in articulation of English sounds by school-leavers can be caused by a number of factors, the main of which are:

1) pupils at school don’t follow all the stages of the traditional approach to teaching pronunciation called the “pronunciation drill”;

2) the interaction between English and Russian sounds, known as mother tongue interference, leads to the emergence of phonetic errors;

3) students don’t observe qualitative and quantitative differences in the production of vowels, don’t pay enough attention to the position of lips and the tongue because they are unaware of specific peculiarities in the articulation of English sounds, and etc.

Having encountered and considered all the problems of the first-year students the teachers of colleges and higher educational establishments are supposed to work out a detailed plan how to solve them. We suggest the number of rules to follow:

1) make sure that the corresponding perceptual background and the sound-symbol correspondence is formed;

2) make your students realize that there are no identical sounds in both languages; each sound is unique;

3) make a detailed study of articulatory features of all English sounds;

4) learn vowels by listening and imitating. “It is easy to see and to feel the lip differences, but it is very difficult to see or to feel the tongue differences, and that is why a detailed description of the tongue position for a certain vowel does not really help us to pronounce it well” [3, p. 79];

5) use all traditional techniques for teaching pronunciation;

6) to prevent misreading vowels memorize check words for typical spelling patterns of vowel sounds and pronounce new words with these sounds on the basis of the check words;

7) consider individual peculiarities of your students.

Conclusion. It should be mentioned that a lot of drawbacks in pronunciation of English sounds could be avoided if school teachers were eager to form sound articulating background. It’s scientifically proved that if a person is over 10, the ability to imitate perfectly becomes less.

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COLOURS OF LIFE IN COGNITIVE ASPECT (BASED ON THE RUSSIAN LANGUAGE)

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The relevance of the article is defined by the academic interest and issue of language functioning from the perspective of cognitive approach and by linguists attention paid to the relation of language and culture. The choice of the subject – colours in life – is determined by its universality and meaningfulness. The purpose of the article is to analyse and describe semantic-cognitive meanings of colours referring to life since they refer to and reflect linguistic picture of the world. The work is an attempt to define the lexical group of colours relating to life, to deepen the knowledge on cognitive approach towards colours present in everyday life and idiomatic expressions, to describe the semantics of colours and to create their symbolic meanings, to indicate the metaphoricness of such expressions and to indicate repeated dominant features.

Material and methods. Definition of the research results from the work's basic assumption: the subjects of the description are colours found in language expressions or expressions connoting colours. Another assumption of the article is to narrow the circle of analysed colours and apply to them a thematic summary. The essence of the analysis is to present how colours co-participate in creating linguistic world of colours. Concerning connotations, they are comprehended as conventional, repeated and embedded in human memory (metaphors, idiomatic expressions). The point of the article is to show those colour which are present in linguistic expressions. Consequently, the objects of the analysis are colours lively existing in Modern Russian. The most complete monograph of colours is proposed by V.G. Kulpina [1] who analyses meanings of colours from the perspective of sociolinguistics, ethnolinguistics and mental representatives. In the work I apply a semantic-cognitive method of material description since the cognitive approach creates the basis for a multidirectional description of colours' functioning in Russian. E. Rosch [2] presented a theory of prototypes understood as the most distinctive element, being central in association. Prototypes are conditioned by geocultural factors and human personality according to R. Tokarski [3] and A. Wierzbicka [4]. The base for conceptualising colours constitutes the method of profiling [5, 6] comprehended as concentration and highlighting a given element within a context and presenting it as central, not peripheral.

Results and discussion. Life is conceptualised from two sides: happiness and sadness. People with positive attitude *see through rose-coloured spectacles* [смотреть сквозь розовые очки]. The expressions may appear in various versions, e.g. *wear rose-coloured spectacles/ glasses*. The idiom pronounces unduly cheerful, optimistic view of things, hence another expressions: *pink dreams* [розовые мечты] referring to romantic, however, unfulfilled dreams, or *pink light* [розовый свет]. Another colour describing positive attitude to life is golden [золотой] in an idiom *golden times* [золотое время] as an indicator of happy, but lost time. Sadness, on the other hand, is presented by underlining the lack of colouring – by achromatic colours: grey and black. Sad life is associated with monotony, ordinary, mundane life, boredom, dullness. The notion is expressed by means of a fixed expression: *grey life* [серая жизнь]. Lack of colouring is visible in an expression *a pale man* [бледный человек] also expressing sorrow. Black in a phrase *black thoughts* [черные мысли] connotes melancholy and grief. An expression *to see through black spectacles/ glasses* appears to be a contrast to *rose-coloured spectacles*, indicating opposition towards world perception. Additionally, black refers to tragic and unfortunate situations. The expression *black strip* [черная полоса] refers to temporal obstacles and failures, *black ungratefulness* [черная неблагодарность] means extreme ingratitude, *black hole* [черная дыра] and *black day* [черный день] indicate to anxiety toward something unknown yet destructive. There are two dominant approaches towards describing and comprehending life – positive and negative. In the former approach light and vivid colours are used – pink and golden, while in the latter one dark and colourless – grey and black. The analysed material presented not only the range of colours used linguistically as everyday expressions and metaphors, but also the relation of colours to human life and feelings. The analysis showed how colour meanings are built depending on cultural factors.

Conclusions. The analysis allowed to present semantic-cognitive meanings of colours referring to life. The lexical set of colours has been defined and categorised into two opposing groups – happiness and sadness. Both everyday life expressions and idiomatic ones have been included into the analysis to show their universality and similarities. Every colour bears symbolic and metaphorical meanings, e.g. pink has strong positive overtones, black is associated with sorrow and hopelessness. The dominant feature in a happy life constitute light and vivid colours, while a sad life is represented by achromatic ones.

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OCCASIONALISMS AND NEOLOGISMS. THE DIFFERENCE BETWEEN THE CONCEPTS

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Our language is constantly developing, its structure changes, its internal and external resources adapt to every change in social, cultural, political and scientific life, generating new words and concepts. In the early 21 century our language has become more independent, lively and expressive. It is one of those spheres of human activity that are first to bring reaction to social and other kinds of changes in human life and activities, thus our language becomes more figurative. This figurativeness is achieved with the help of some new lexical units, such as occasionalisms and neologisms. And we consider that it's necessary to concentrate our attention mainly on these lexical means, because they have their own specific character. Besides, the purpose of their usage in different sources of information arouses much interest among researchers.

The aim of our work is to describe occasionalisms and neologisms in order to study the difference between these concepts.

Material and methods. In our work we'll rely on such sources of information as «Linguistic Terms Dictionary» by O. Akhmanova, «Neologisms and Occasional Words» by V. Lopatin, «The Study of Occasional Words: Theoretical Aspect» by E. Smirnova. We'll use the following methods of research: documentary analysis, comparison, description and summarizing.

Results and discussion. The notion «occasional word» was first used in H. Paul's work "Principles of the History of Language" in 1880. He explained the notion «occasional word» as a departure in individual use from the usual meanings of the words. But all the new lexical units were identified as «neologisms» till 1957, when N. Feldman in his article «Occasional Words and Lexicography» used a new term «occasionalism» [5, p. 532].

According to the «Linguistic Terms Dictionary» by T. Zherebilo «occasionalisms are individual neologisms of a particular author, created in order to make a literary text more figurative» [3, p. 232]. Another dictionary, namely «Russian Modern Explanatory Dictionary» by T. Efremova proposes the following interpretation of this term: «Occasionalisms are words, created at a definite moment of time in relation to some special case as one of the variants of neologisms». L. Krysin says: «Occasionalism is a form of neologism: a word, created in relation to a particular situation, to a particular context».

Thus we see that intentional or intuitive usage of occasionalisms by an author allows him to create and reflect personal emotive picture of the world in a text. A bright example of occasionalism in fiction is the following:

«Having duly inscribed a label with a date and place offinding, he once again **hopscotched** out of science – this time, into love» [Fowles, The French Lieutenant's Woman].

Occasionalism «hopscotched» is used by the author to describe the fact that the character of a novel leaves the world of science because of love, he skips from science to love. We may say that Fowles uses a considerable quantity of occasional words in his works and it defines the style of his fiction.

Let's look at another example of an occasional word:

«100 days: Living in **Obamaland**» [The Gardian 28 April, 2009].

Occasionalism «Obamaland» is used by the author of a newspaper article to give us a humorous description of the USA.

Probably, the increase in usage of occasionalisms can be explained by social need for extraordinary naming of everything new, besides it can be explained by intralingual factors – the tendency for economy, for the unification of some language means, for the usage of naming objects by words having different inner form and etymology. But the main reason for such a popularity of occasionalisms is the intention to reach the highest possible emotional and stylistic expressiveness of a word. Such new words destroy stereotypes as they are structurally extraordinary and semantically unusual.

The next lexical source of figurativeness is neologisms. The term «neologism» appeared in French in 1755 and in the 19th century was borrowed into English in the meaning of a new word or expression. Let's study the term «neologism» from different points of view. «Linguistic Encyclopedic Dictionary» gives the following definition: «Neologisms – words, word meanings or word combinations, which appeared in a particular period in some language and used once in a text or speech» [1, p. 331]. O. Akhmanova considers that «neologism is a word or expression, created in order to denote a new object or to express a new notion» [2, p. 486]. V. Lopatin says that «neologisms are new words, but people soon stop to recognize them as new, their originality disappears» [4, p. 70].

Some researchers consider that neologisms are words denoting new notions, which appear as a result of science and technology development. For example, *bio-computer*, *thought-processor*, *biocide* etc. The 2nd group of researchers thinks that we should take into account intralingual processes in the development of the word-stock, when new notions and situations can be represented by previously existing words. For example, *to version*, a *rip-off*, *a passfail* etc. And the 3rd point of view stands: neologisms are words, which are not marked by dictionaries. But in this case the words, which are omitted in dictionaries by accident and the words, which are ignored intentionally could both be related to neologisms, besides exoticisms can also be referred to this group as they are unusual. So we can come to the conclusion that neologisms are new lexical units, created in order to denote something that appeared not long ago or something that changed a lot, sometimes these words are not marked by dictionaries, but they are widely used in our life.

So we may say that both occasionalisms and neologisms are created for fulfilling the need for identifying some new objects, processes, qualities. They appeared as a result of the need for communication and are formed on the basis of different word-building models of the language.

But there are some differences between them. Let us look at the features that distinguish occasionalisms from neologisms. They are:

1) occasional words are created in speech directly for a particular situation, while neologisms are created in language. Some authors can just quote the most widespread occasionalisms;

2) the novelty of neologisms disappears after some time, while extraordinary and unfamiliar perception of occasional elements is their distinctive and constant feature;

3) the appearance of occasionalisms in language is always unpredictable, they have the so-called facultative function;

4) occasional elements are very expressive because of unaccustomed perception and because of special concentration of content.

In the **conclusion** we may say that neologisms after some time lose their originality and become just usual lexical units, which are widespread and marked in dictionaries. Occasionalisms, on the contrary, do not lose their novelty, they are new words of a particular moment of speech, of a definite situation of speech, they are individual lexical units of an author. Occasionalisms are notable for their high expressiveness, while the most important aim of neologisms is naming. We consider neologisms to be some stable innovative elements, which entered into communication of some group of people; while occasionalisms are understood as words, meanings of words, which are used once in any text, or process of communication.

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"FANTASTIC" AS THE HERITAGE OF FANTASY NOVEL

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In our research work we deal with fantastic genre, which appeared in the 19th century but first became the object of literary and linguistic research only in the second half of the 20th century. The significance of the research under this topic is doubtless, as the popularity of such kind of literature is constantly growing nowadays.

The aim of our research work is to identify the lines of development of the genre traditions in the novel «Fantastic» by Boris Akunin.

Material and methods. To achieve the goal, we used the following methods: mythopoetical, contextual, descriptive, descriptive and analytical and comparative- typological. The works of such famous scientists as M.M. Bakhtin, R.I. Kabakov and S.L. Koshelev were the methodological and theoretical basis of this study.

Results and discussion. In literary studies there is such a notion as «memory of the genre», which was introduced by M.M. Bakhtin. The essence of this concept is that every genre, whether it's a love story or a detective, contains a characteristic set of signs. So, in order to perceive the text as a love story, for example, it has to possess all these signs.

The novel by Boris Akunin that we have chosen for our study is the third novel from a series of works «Genres», in which he attempted to realize «clean» samples of different genres of fiction, where the names of each of the books speak for themselves: «Children's Book», «Spy novel», «Fantastic», «Quest» [2]. Having considered the novel «Fantastic» we try to identify the characteristics of the genre claimed by the author.

Out of the whole series of novels only «Fantastic» probably has the most unexpected and unpredictable plot that is definitely the characteristic of any fantasy novel.

During the study, we have identified some traditions in the text related to the genre of science fiction; first of all, it's the author's use of the idea of human contact with non-human intelligence. The main characters got fantastic abilities from the alien beings after the accident. Robert discovers that he hears the thoughts of person, when he looks straight into his eyes, Sergey is able to move 4 times faster than the average person, and Marianne «sees» the thoughts and souls of people.

We finally managed to refer the novel to the genre of science fiction by Akunin's method of changing the course of history, for example, a well-known event in August 1991, in which the author reveals the «true» identity of Boris Yeltsin.

During the analysis of the novel we can't but note the author's fantastic interpretation of biblical events, where he comically assigns main characters to alien creatures:

«– There was a tiny theory among Americunts. Total delirium. That Jesus Christ – is one of the earliest attempts of Migrants in order to update the human race. Well, to change the basic ethical attitudes of people. The aliens by some characteristics chose a baby, and gave it special Gifts. Christmas star in the Bible – is like a spaceship. Magi – are the crew. – Father-in-law laughed, but sadly. – But they just did not really manage to do this. We're not robots, we do not need to be updated. It's our own business» [1].

Mystic White Column, a mute woman with a strange but attractive appearance, fantastic creatures invented by the author («Polizei», «The dull», «zomboidy», «migrants») give the story some kind of a mystery, and the reader, enjoying the parodic scenes, doesn't notice how a funny story changes into a criminal-fantastic one.

Conclusion. In this novel Akunin acts as a true conceptualist working with the existing language in the culture, with the system of literature codes stored in the reader's sub cortex. We can conclude that the true purpose of the author is to bring all possible genre expectations to absurd, in order to create something entirely new. «Fantastic» – is the novel, which fully demonstrates the author's ability to invent fantastic, but moderately plausible interpretation of the well-known historical event. Therefore, our choice of this novel with the aim of research is not accidental, as the author really coped with the task and recreated a «clean» sample of the fantastic genre.

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"CONCEPT" AND "MENTALITY" AS AN INTERRELATED NOTIONS (BASED ON THE RESEARCH OF A "FAMILY" CONCEPT IN GERMAN)

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Concept is the key notion of cognitive linguistics. The study of its nature is in the focus of attention of not only linguists, but also representatives of many other sciences. Numerous works of logicians, philosophers, psychologists and culturologists are devoted to the research of concept matter essence that proves the significance and importance of this ambiguously treated phenomenon. It should be noted that the content of this notion varies in concepts of different scientists.

According to most of linguists mind, the concept is a cogitative category, not observable category that gives different shades for its interpretation.

The actuality of the research is caused by the need of consideration of the "concept" notion and its interrelation with the all-philosophical notion "mentality" that represents unconditional scientific interest.

The purpose of the study is to establish the connection between the maintenance of a concept and socially-cultural factors, that is personal and national experience of a person (using the example of research of a concept "family" in German).

Material and methods. Research material is the lexical layer forming a concept *"Familie / family"* in German.

The descriptive-analytical method was used for purpose attainment.

Results and discussion. There is a great number of definitions of the "concept" notion. *A concept* – (from latin. Conceptus – thought, notion) – semantic meaning of a name (sign) that is the concept content which object is a subject of this name [4].

One of the concept investigation phases, according to V.A. Maslova, is definition of a lexical meaning. So, "The Big encyclopedic dictionary" gives the following interpretation of a lexeme "family": "The FAMILY is a small group formed by marriage or consanguinity(blood relationship) which members are connected by life community, mutual aid, moral and legal responsibility" [4].

Certainly, the lexical meaning of the word forms a concept, however a concept notion is wider, multidimensional, "absorbing" in itself mental originality, historical, social and cultural aspects. So, today most of the scientists recognize that the word meaning in a dictionary entry is insufficiently full, far from reality.

Such scientists as V. N. Thalia, E.S. Kubryakova believe that the concept is a unit of memory, a product of human thought, a mental lexicon and the phenomenon of human consciousness, not just language consciousness [3, p. 26; 1, p. 7].

Any concept incorporates the generalized maintenance of a great number of forms of word expression in the natural language, and also in various spheres of human life which are provided by language and are inconceivable without it.

The cognitive notion "concept" is linked inseparably with mentality as all-philosophical category. Mentality is formed in learning world. The mentality is also a world picture in consciousness of the people. A concept is the main unit of mentality. We can see mental signs of national consciousness both in language, that is in semantics of the word: significance and sense, internal form of the word and in its secondary meaning.

In cognitive linguistics *mentality* is a totality of manifestations in the language of an outside and inner world, intellectual and spiritual qualities of one or another cultural-language community.

There are *group mentality* concepts (features of understanding and perception of reality of social, professional, gender and other groups of people) and *national mentality* (national way of perception and understanding of reality)which condition the widening of lexical meaning of "family" lexeme and the appearance of the new meanings forming the concept investigated by us (*group mentality: Verwandte – alliance, relatives, Schulfamilie / scoolfamily, Geisteswissenschaftler als Familie in der Uni / humanitarians and national mentality: die Pepublik als die Familie für alle Einwohner / republic as family for residents*) in German [2, p. 58–59].

Therefore, the objective reality leaves a mark on a system of word meaning and allows to see one or another notion from the other point of view. Mental signs of national consciousness are reflected in language, in concepts, that is our consciousness is caused ethnically and nationally.

Conclusion. Thus, the research of the concept is not limited only by the definition of a lexical meaning of the word. An important role is played by the consideration of universal, national and cultural, social and personal components. The concept arises not only from a word meaning, it is the result of interaction of a word meaning with personal, national experience of the person, mentality.

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ANTHROPOMORPHIC CODE OF CULTURE IN ZOONIMIA OF BELARUSIAN POOZERYE

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In the learning process of proper names onomastics interacts with different linguistic directions (sociolinguistics, cultural linguistics, ethnolinguistics and others), that's why we can talk about the possibility of a polyaspect analysis of the proper names.

The consideration of the proper names in a linguacultural aspect means the learning of the proper names' linguistic and cultural components. For the learning and understanding of the proper names on this level need to have a certain range of background knowledge, a wide outlook, to take into consideration a national mentality, cultural and historical traditions and recent trends.

The basic culture codes were distinguished by the representative of a linguacultural approach:

- somatic (bodily), which is connected with the symbolic functions of human body parts;
- spatial, which is connected with the division of the space;
- temporary, which are fixing the division of the time axis;
- objective, which is associated with the objects, which fill the space and belong to the world around it;
- biomorphic, which is associated with living beings, which inhabit the world;
- spiritual, which includes moral values and standards, which are related with basic oppositions of the culture («good-evil», «top-bottom» and others) [1].

The authors of the «Belarusian mythology» allocated 15 codes, which are typical for a traditional culture: somatic, objective, attributive, numeric, operating, gastronomic, vegetable, animal, astronomic, meteorological, cosmographical, landscape-topographical, personazhnoye, real-element and calendar-chronological [2].

A.M. Mezenko, analyzing intracity names, allocated 8 codes of the culture: topomorphic, anthropomorphic, physico-geographical, floral, faunal, emotional-characterological, temporal and color [3].

There are another classifications of the culture codes. It is important that there are no hard boundaries between the culture codes, for example, the objective code can have a cramped connection with the spiritual code through social relations and others.

Anthroponyms actively use when inhabitants of Belarusian Poozerye name their pets and it becomes an expression of the anthropomorphic code in zoonimia of this region.

The purpose of this research is to study the particulars of the representation of the anthropomorphic culture code in zoonimia of Belarusian Poozerye.

Material and methods. The objects of this research were pets' nicknames from 17 inhabited localities of Belarusian Poozerye. The material of the research has been based on the collection of the author's cards, numbering 1249 units and compiled as a result of the survey, which was conducted among the inhabitants and the collection of the material recorded in the electronic data bases of the vet clinics of this study region.

The theoretical basis of this research has been the scientific works by local and foreign linguists. To achieve this purpose have been used descriptive-analytical, comparative methods, elements of quantitative calculations.

Results and discussion. Anthropomorphic code of culture is objectified in zoonimia of Belarusian Poozerye with help pets' nicknames (near 53% from the total number of nicknames of the study region), which are connected with names and surnames:

- ***owners*** or ***friends***: **dogs –** *Олежка*, *Алёнка*; **a cat –** *Дарья*; **a bull –** *Борис*; **a cow –** *Любка*; **a horse –** *Мишка*; **a decorative rat –** *Фаина*; **a hamster –** *Коля Второй*; **a decorative rabbit –** *Ванька* and others.

It's an interesting fact that a certain part of the Russian complete forms of the anthroponyms, which are used in the process of naming pets (*Раиса, Василий, Рая, Иван, Николай, Александр, Георгий, Светлана, Любовь, Глафира, Людмила, Ульяна, Августа, Надежда, Матрёна* and others), rarely used for naming people. It's a tradition when people don't want to hurt their close people calling pets by names of their friends, relatives.

Perhaps we can explain a wide penetration of anthroponyms in zoonimia by its functional proximity;

- ***poets*** and ***writers***: **a dog** – *Лэм*; **a cat –** *Есенин*; **a hamster** – *Толстой*; **a decorative rat** – *Цётка*; **a bull** – *Горький* and others;
- ***famous Russian*** and ***foreign artists***: **dogs** – *Потап*, *Лайма*, *Митя*; **birds** – *Бьянка*, *Зара*, *Ираклий*; **a cat** – *Максим*; **a decorative rabbit** – *Адель*; **a bull** – *Малинин* and others;
- ***historical figures***, ***scientists***: **dogs** – *Адольф*, *Альгерд*, *Машеров*, *Ленин*, *Цезарь*; **cats** – *Бенджамин*, *Евклид*; **birds** – *Наполеон*, *Сократ*; **bulls** – *Аристарх*, *Исаак*, *Нерон*; **a horse** – *Наполеон*; **a decorative rabbit** – *Фрейд* and others;
- ***Russian*** and ***foreign athletes***: **a dog** – *Тайсон*; **birds –** *Рональдо*, *Кристиан*; **cats** – *Арчибальд*, *Ронни*, *Максим* (*Мирный*); **a bull** – *Тайсон*; **decorative rats** – *Бекхэм*, *Виктория* (*Азаренко*) and others;

• ***composers***: **birds** – *Бетховен*, *Паганини*; **a hamster** – *Штраус*; **a cat** – *Вивальди*; **a bull** – *Мендельсон* and others;

• ***models***: **dogs** – *Наоми*, *Клаудия (Шиффер)*, *Кардашиан*; **a cat** – *Синди* (*Кроуфорд*) and others;

• ***painters***: **dogs** – *Шагал*, *Айва* (*Айвазовский*); **a cat** – *Никас* (*Сафонов*); **a bull** – *Клод* (*Монэ*) and others;

• ***cosmonauts***: **a dog** – *Гагарин*; **a cat** – *Валентина* (*Терешкова*) and others.

Conclusion. Zoonimicon of Belarusian Poozerye is characterized by the domination people names as pets' nicknames. The inhabitants of villages usually use names of friends or relatives for naming their pets. In the cities people give their pets names of famous artists, models, painters and others, which have a high level of popularity. Also we can see some regional precedent names as pets' nicknames.

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THE DIAGNOSIS OF THE SPEECH CULTURE LEVEL BY THE STUDENTS-PHILOLOGISTS

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Certainly the normativity of speech is the main criterion of its effectiveness [1]. E.N. Shiryaev denotes that speech mistakes reveal the defective education of the speaker and impel the audience to refer to this speech reciprocally [3]. In most cases speech mistakes don't influence the adequate perception of meaning but when they are widely expanded in the oral public speech of people with higher education they can lead to the formation of certain tendencies that shatter the system of codified norms and become the sample of expression for all nation. So the investigation of oral public speaking can be determined as especially actual. The aim of this research is to reveal students-philologists' opinion about the speech culture level of their own and of the speakers with higher education.

Material and methods. 236 students of the philological department of Vitebsk state university took part in our questionnaire, where some questions about Russian oral public speech of speakers with higher education were asked. Two of these questions were: 1) what is your opinion about the speech culture level of your own? 2) what is your opinion about the speech culture level of the speakers with higher education?

According to the aim of this research the methods of the investigation were chosen, such as descriptive, comparative methods and the elements of quantification.

Results and discussion. The proportion of students' answers to the said questions is presented in the table.

The variants of the answer	Questions	
	What is your opinion about the speech culture level of your own?	What is your opinion about the speech culture level of the speakers with higher education?
low	0%	6,4%
middle	72%	67,2%
high	26,4%	20,8%
find difficulty in understanding	1,6%	5,6%

According to the results of the study the most students-philologists have determined their own level of Russian speech culture and the speech culture level of the speakers with higher education as middle. It is necessary to remark that nobody of the students have chosen the variant "low" identifying the speech culture level of their own and 26,4% have determined it as "high". At the same time 6,4% of students-philologists have defined the speech culture level of the speakers with higher education as "low" and only 20,8% of them have chosen the variant "high".

Consequently there is more critical attitude of students-philologists to the speech culture level of others than to their own one.

The results presented above correlate with the results that have been received after the analysis of speeches of Vitebsk habitants with higher education [2]. The most wide-spread deviations from the codified general literary norms that can be qualified as language mistakes exist on the lexical (55,5% of speakers) and grammatical (56,2% of speakers) levels in the Russian oral public speech of speakers with higher education.

The deviations on the grammatical level are considerably less characteristic. They have been identified in the Russian oral public speech of 22,2% of such speakers and are chiefly conditioned by the influence of Belarusian language system.

Conclusion. Thus it is necessary to raise the language competence of the people which are verbally active in the sphere of public communication in Belarus.

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DIFFERENT APPROACHES TO PHRASES IN LINGUISTICS

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The phrase is the main unit of syntax. But in spite of the fact that it is the subject of syntax, till now there is no exact definition of this unit. And there are still a lot of divergences of the definition of the phrase in home and foreign linguistics.

Home linguists define the phrase as a group of two or more notional words functioning as a whole (frozen waterway, affected minds). Besides notional words a phrase may contain one or more formal words (the eyes of the man, all for nothing). In comparison with home linguists, foreign ones treat the phrase as any syntactically organized group which is considered from the point of view of its linear structure (old books, George and William).

The aim of our article is to investigate different approaches to phrases in Linguistics and various relations both morphological and syntactical within word clusters.

Material and methods. While working at the article we used the following methods: analysis of various sources of information: books, publications in magazines; the compilation of the information; comparative analysis of numerous approaches of different scholars to classifications of phrases and relations within them.

Results and discussion. There are different approaches to phrases, each complementing one another. If we take the relations within the phrase we maintain that all scholars distinguish two main types: coordination and subordination, or agreement and government as L. Ilyish terms them. At present generally accepted is the point of view that coordinative groups are those groups, which consist of relatively independent elements, which may be combined with the help of one of coordinative conjunctions. But not all scholars share this point of view. Some linguists consider coordinative only those groups, components of which are equally correlated with the third unit, which is not found in the structure. For instance: William had been confused and embarrassed. Participles II confused and embarrassed are an example of the agreement. Professor L. Ilyish shares another point of view on the problem of agreement. By coordination he means a syntactical relationship where a subordinate word agrees in number with the head word. But this is practically found in two words only, the pronouns this and that, that's why they stand quite apart in the Modern English syntactical system. As to the problem of agreement of the verb with the noun or pronoun denoting the subject of the action (he cries, they cry), this is a controversial question. Usually such patterns are treated on the sentence level. However, if we assume, that phrases "noun-verb" do exist, we have to treat this problem on the phrase level. L. Elmslev introduced the term "interdependence" for this type of relations. But the controversy is this. Whether the verb subordinates the noun or the noun subordinates the verb.

There are some phenomena in Modern English, which show that the verb does not always follow the noun in the category of number. Such examples as, the teams are getting prizes and congratulations, on the one hand, and The United States is a country of many ethnic groups, on the other, prove that the verb can be independent of the noun in this respect.

By government scholars mean such syntactical relationship where one of the components predominates over the others and subordinates them in the form and position. Subordinate word groups are characterized by left-hand connections (young single fellows, completely unanimous), right-hand connections (sets of molars, early in the morning) and both left-hand and right-hand connections (the opposite side of the compass, good relations with relatives). In comparison with coordinative groups, subordinate ones are presented as limited. But recently it has been proved that nominal phrases with a noun as a kernel and a postpositive attribute may be infinitely extended: the girl in the street on the bench by the post-office and etc. But L. Ilyish states that "as to nouns, the notion of government may be said to have become quite uncertain in present-day English"[3, p. 165]. The problem is that if we stick to the view that father and father's are forms of the common and the genitive case, respectively, we could not assert that a preposition always requires the form of the common case. For instance, the preposition at can be combined with both case forms: I'd like to visit my aunt and I spent last Sunday at my aunt's. L. Ilyish confirms that the notion of government does not apply to forms of nouns.

This linguist assumes that the only thing that may be termed government in Modern English is the use of the objective case of personal pronouns and of the pronoun who when they are subordinate to a verb or follow a preposition. But even this type of government is made somewhat doubtful by the rising tendency to use the forms me, him, her outside their original sphere as forms of the objective case. The notion of government has also become doubtful as applied to the form whom, which is rather often superseded by the form who in such sentences as, Who(m) did you ask? Who(m) are you asking about?

Some linguists carried out further investigation and singled out some more relations within the phrase, which are characterized by specific features, distinguishing them from one another. They are enclosure, “примыкание” (L. Ilyish), accumulation (V. V. Burlakova) [2, p. 98]. If we single out such a phrase as our children toys from to buy our children toys, we may assume that there is some sort of syntactical relation between the nouns children and toys, as if we alter the places of the nouns the form of one of them is also altered: (to buy) our children toys and – (to buy) toys for our children. The relations between the nouns are not coordinative, as both elements are not independent from each other and cannot be connected with the conjunction and or some other ones. It is not the subordination either, as there is no kernel element in this phrase. And it can’t be the interdependence, as one of the constituents of the group may function without another one – to buy for our children; to buy toys. Linguist V. Burlakova uses the term “accumulation” for such relations.

The most usual example of such relation as “примыкание” is the relation between an adverb and its head word (an adjective, a verb, or another adverb). An adverb is subordinate to its head word, without either agreeing with it or being governed by it. But the subject requires some more exact investigation. For instance, if we take such a simple case as the sentence, I don’t remember him very well... and inquire what it is that shows the adverb well to be subordinate to the verb remember, we shall have to conclude that this is achieved by a certain combination of factors, some of which are grammatical, while others are not. But there may be several verbs in the sentence, and the question has to be answered, how does the reader know to which of them the adverb is actually subordinated.

The most widely known case of “enclosure” is when a word takes intermediate position between an article and the noun the article belongs to. The then government – here the adverb then, being enclosed between the article and the noun it belongs to, is in this way shown to be an attribute to the noun.

Besides the considered line of relations, there is one more line, including relations of more concrete type, thus: predicative – objective – adverbial – attributive. They arise as a result of combinations of particular classes of words (noun + noun, adjective + noun, verb + adverb, adverb + adjective, etc.). In Modern English the considered line is termed a combinatorial line of syntactical relations. Besides phrase patterns consisting of two notional words there are also phrases consisting of a preposition and another word, mainly a noun. Thus, such groups as in time, by chance, on strike, on a farm, at the end are prepositional phrases performing some function or other in a sentence.

Conclusion. The problem of phrases is still being discussed in Linguistics. Scholars do not adhere to the same point of view. The only reason is that they interpret the term “phrase” in various ways, that is why their approaches differ from one another. Until we have the exact definition, we won’t be able to define the exact relation within the phrase or give its classification, without referring to this or that scholar.

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PHRASEOLOGICAL UNITS WITH ‘WHITE’ AND ‘RED’ COMPONENTS

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In their daily communication, people often resort to figurative language, that is, they employ different linguistic devices, such as idioms, proverbs, similes in order to make their communication more original and effective. However, the use of figurative language may cause some problems for foreign language learners since these linguistic means may belong to different levels of the language use in terms of formality or situational context. Phraseological units play an important role in a language foundation and as such they need special attention due to the fact that their meaning cannot be derived from the meaning of its components. Consequently, people may misinterpret what the interlocutor is saying if they are not acquainted with the special meaning of a particular expression.

The aim of our research is to analyze some phraseological units in the English language.

Material and methods. The data for the practical analysis are taken from the Penguin Dictionary of English Idioms and The Oxford Dictionary of Idioms.

In our research we used the descriptive, analytical and continuous sampling methods.

Results and discussion. White is the colour that indicates purity, cleanliness, and neutrality. For example, *a white lie* (a harmless, minor lie), *to be whiter than white* (be very pure, honest and moral), *a white wedding* (a wedding where a bride wears white and the ceremony takes place in a church).

White colour also indicates nobility, privilege. That's why in English a lot of state symbols have the 'white' component in their names. For example, *White Rose* (an emblem of the House of York), *Whitehall* (*Palace*) (a street in Westminster, London, on which many government offices are located), *the White House (*the official residence of the U.S. president in Washington, D.C).

There are also some phraseological units with white colour, the meaning of which is negative (illness, fear, loneliness), but they are few in number. For example, *be/look white as sheet* (*ghost, death*) (to look very pale), *to be white-hot* (be in a state of intense emotion) [1, p.18].

Red colour is associated with the sun, heat, energy and blood, and emotions that stir blood, including anger, embarrassment. For example, *a red rag to a bull* (a provocation), *see red* (become very angry), *as red as a beetroot*.

Red is also the colour of love, passion, charity and joy. Therefore, some charitable organizations have the 'red' component in their names. For example, "*Red Cross*", "*Red Nose Day*".

Many phraseological units with the red component denote health and strength. There are such idioms, as *red as a cherry/rose*, *red blood* (to be strong, healthy and brave).

Phraseological units with the red component also have negative connotations. Red also speaks of blood, fire, aggression, war and danger. For example, *red coat* (a historical term that refers to soldiers of the British Army), *red alert* (a warning of emergency). Red is also used when you do not have enough money. For example, *in the red* (in debt), *not to have a red cent* (not to have any money), *red ink* (financial debt in a company) [2, p.240].

Conclusion. Phraseological units with 'red' and 'white' components are widely spread in the English language and they have both positive and negative meanings. But idioms with positive connotations are more numerous in the English language.

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THE SPECIFICITY OF NAMING IN THE TALE OF A.S. PUSHKIN “THE TALE OF TSAR SALTAN, OF HIS SON THE GLORIOUS AND MIGHTY HERO PRINCE GVIDON SALTANOVICH AND THE BEAUTIFUL SWAN PRINCESS”

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In fact, almost all aspects of the multifaceted creativity of A. S. Pushkin have been currently examined. The subject of our study is the specificity of naming in "The Tale of Tsar Saltan". In general, 7 stories were written by a great poet. Among them, according to the number of actors is «Tale of Tsar Saltan, of His Son the glorious and mighty hero Prince Gvidon Saltanovich and the beautiful Swan Princess», which was published in 1832. The field of our study is onomastics of the tale, as it is relevant in the framework of Vitebsk modern philological schools (researches of V.A. Maslova, A.M. Mezenko, T.P. Slesareva, T.V. Skrebneva, etc.), and in Russian linguistics (such dissertations as: "The Principles of the formation of the Dictionary of onomastic units of creativity of A.S. Pushkin" E.S. Obukhova, "System of naming characters in Russian folk and literary tales in the first half of the nineteenth century: based on the works of V.A. Zhukovsky, A.S. Pushkin, P.P. Ershov, I.O. Lyashkova).

Material and methods. In this paper, based on the text "The Tale of Tsar Saltan" we consider the specificity of using artistic potential of proper names of the main characters. Methods: analytical, integrity and anthropological analysis of work of art.

Results and discussion. After analyzing the content of the tale, we have identified 11 characters (conditionally "mariners" and "thirty-three heroes" considered as one character). Among them, 4 characters (30%) have specific names: Tsar Saltan, Prince Gvidon Saltanovich (the prince, the son), dyadka Chernomor, svatya Baba Babariha. 7 do not have names: one girl (povariha), one sister (tkachiha), the other sister (carica, mat), lebed (Carevna), the messenger, the mariners, and thirty-three heroes. Analysis of the tale allows us to make conclusions that only those characters, whose actions seriously affect the development of the plot, have names.

1. Prince Gvidon Saltanovich, the son of Tsar Saltan, is the central character in the tale. The name Gvidon is translated from the ancient German (means "forest, living in the forest"), from Italian (means "to rule, to run, to govern"). Both of these characteristics are suitable for Pushkin’s Gvidon, as he rules his Principality, located on the island of Buyan, remoted from civilization.
2. Tsar Saltan. It is the starting point of all the events described by the author. Knowing the interest of A.S. Pushkin to the world of the East, we can relate the name "Saltan" with the name of the eastern head "Sultan". Father

and son are the rulers of two different states, constantly between them there is a correspondence dialogue. "In the tale names Gvidon and Saltan match mariners' voyage from west to east and back" [2, p. 181]. Italian, western name "Gvidon" and Arab, eastern "Sultan" shows the connection between the two cultures. These cultures are quite exotic for the Russian reader. Exotic element introduced by Pushkin in the tale, is a corresponding method of romanticism, which affected the work of the poet.

3. Dyadka Chernomor. The name has a clear etymology: the character comes out of the sea (Black) with thirty-three heroes. The note that he is "dyadka" does not indicate family tires of the protagonist and other characters, but it means that he is a senior mentor, a teacher of heroes.

4. Svatya Baba Babariha. She is an initiator of everything that happens since the birth of Gvidon. On her initiative a barrel with the young mother and her child is thrown in the sea, thanks to her all "miracles" appear in the Kingdom of Gvidon. There are many versions of the origin of the name "Babariha". Among them "Babariha" is a phonetic version of the secular nickname of Boborika, from the basis that means a fish with a large head. Also there is a version that this name is the female derivative of "the wife of babarya" (derivational model, characteristic of East Slavic languages). In addition, there is a version of the origin of the name from the dialect "boboliha" – sloppy, dirty old woman. The absence of specific etymology of the name corresponds to the image of a mysterious, but very active woman.

On the whole, the tale is characterized by the creation of female characters. Creating a generalized image A. S. Pushkin does not give the specific name of the heroines:

1. Carica – the image of the mother, submissive, modest, patient Russian woman.

2. Carevna Lebed. She is a modest and smart girl; she is able to stand out, to be remembered by her actions. And for her it is better to stay close in the shadow of the strong shoulders of men and only guide and help them. The name "Lebed" allows to create an image of pure, chaste, wise girl. At the same time she can be lonely, but always faithful. In the article "Buyan Island: mythological symbolism of words and images" A. Rogalev said: "The image of Carevni Lebed can be interpreted as an echo of the ideas of the totemic ancestors clan, that has the ability to transform and take care of their relatives, helping them in different situations" [2 , from. 180].

3. Tkachiha, Povariha, svatya Baba Babariha are negative characters.

Using the vernacular suffix -ih-, A.S. Pushkin creates images of silly, jealous, angry, bad women. They are able not only to discuss the destiny of other people, but also to participate in it actively, creating all sorts of difficulties. The presence of indications of the type of activity demonstrates their social importance, perhaps even hard work. The presence of opposite traits of character in one image is a peculiar feature of image of Russian person. Let's compare: the characters of Russian folk tales, which are good, but lazy, etc.

Conclusion. The system of nomination of characters in "Tale of Tsar Saltan, of His Son the glorious and mighty hero Prince Gvidon Saltanoviche and the beautiful Swan Princess" helps to reveal the main characters of the tale; it is an essential plot-element of the text.

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THE SOCIOCULTURAL CONTENT OF LANGUAGE STUDYING: ITS LINGUACULTURAL COMPONENT

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The actuality of the research is caused by the importance of development of the pupils' national self-consciousness and their tolerance in interethnic relations.

The purpose of the study is to analyze the linguacultural component of sociocultural content in the process of studying the language in modern schools.

Material and methods. Research material is the sociocultural content of language studying. There was the descriptive-analytical method.

Results and discussion. It is not only a social component in the content development socio cultural, but also a lingua cultural one.

It is considered that children of the preschool age need to be telling that there are some groups of people in the world who have their own language, customs, names but they are one nation. For example, Belarusian nation is not only Belarusians, but also the other nations that live in the Republic of Belarus. A person when he grows up decides what nationality he belongs to.

It is necessary to develop the interest of other cultures, the ability to establish and maintain contacts with the representatives of different social groups.

The forming of tolerant relationship to the representatives of other nationalities consists of overcoming negative social stereotypes. Social stereotypes are learned by children at the early age, and during a lot of time they replace the knowledge of real events and real qualities of social groups, they're connecting with.

Pupils of the third and the forth grates were asked if, there were good and bad nationalities from their point of view. The opinions were different, from the formula "all the people are brothers" to the precise list of "bad" nationalities. Further dialogs have shown that children don't know the representatives of "bad" nationalities, but the negative images in their minds have been formed under the influence of ethnic stereotypes that are prevalent in a certain society.

To overcome this, it's necessary to increase knowledge of the ethnic groups that live together on the same territory.

The materials of this type are in great demand for the Belarusians who live in the regions with a predominance of ethnic groups (the Belarusians and the Russians, the Belarusians and the Polish, the Belarusians and the Tatars) who are getting used to the fact that everything around them isn't distinguished by the type of face, language and that all people have the familiar names. As a result a lot of them aren't psychologically ready to the meeting with "other", they laugh at "strange" names and unaccustomed eye shape.

There is a problem of the cultural misunderstanding. In this respect the nations experiences significant difficulties in overcoming cultural and language barriers.

It means that in the learning process we need texts on our nations and their contact with other people. It's necessary to find words, approaches that wouldn't provoke hostility in inter-ethnic relations.

The general work on the context, the meaning of the text must be complemented by the sociocultural analysis of words involving the identifying of words and expressions to show specific experience of the peoples, proper nouns, and words with emotionally evaluative background.

In the development of the socio-cultural aspect of the content of language studying it is important to do some work on the precedent phenomena [1], [2], [3]; on the problem of understanding cultures based on keywords [4], on the problem of constructing and using concepts [5].

A similar analysis forms the students' representation about the differences in the perception of the world by various cultures.

This work can revitalize pupils, increase their motivation that is necessary for the formation of any competence including the cultural and linguistic ones, because the competence is “the essence of motivated abilities’’ [6].The scientists determine a competence “ intellectual human experience based on knowledge ";"basic skills";"property of a person» [7], [8]. Within competent approach to the education (competence-based education-CE) The Council of Europe approved the core competencies that "must be equipped with young Europeans». They include such competences as the ability to study, the ability to live in multicultural society, selfdevelopment, work with the information, communicativeness. All of them are formed and improved in the process of pupils' sociocultural development.

Conclusion. Thus the revision of the content of learning language in educational institutions from linguistic fragmentation, social and cultural knowledge to the integrated formations of today's youth attitude to the language and the world allows scholars to fill the gap in the sociocultural development. It is an important task for the scientist and for authors of textbooks, allowances and for school teachers.

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BRITISH AND AMERICAN ENGLISH

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"England and America are two countries separated by a common language" – George Bernard Shaw said.

This quote by the famous Irish linguist and playwright still rings true today and various differences between British and American English remain.The theme is very actual as when you are learning English as a foreign language, it is important to understand the differences between British and American English. Mixing the two varieties will make your English sound strange and unnatural so it is best to choose just one and use it all the time.

The object of the research work is differences in vocabulary usage and pronunciation in American and British English.

The aim of our work is to find the difference between American and British English, to define if americanisms are popular among young people and create the vocabulary which will illustrate the defference between American and British variants of the language.

Material and methods. During the investigation different methods were used:

- Descriptive method;
- Comparative method;
- Analysis;

The variety of English spoken in the USA has received the name of American English. American English cannot be called a dialect although it is a regional variety, because it has a literary normalized form called Standard American, whereas by definition given above a dialect has no literary form. Neither is it a separate language, because it has neither grammar nor vocabulary of its own. From the lexical point of view one shall have to deal only with a heterogeneous set of americanisms. Americanism is a word or meaning that is common in American English but is not common in the kinds of English spoken outside the USA.

It's easy to point out the differences between the American and the English vocabulary: the differences seem quaint and there are comparatively so few that Americans can easily spot them. Many of the differences are merely a matter of preference: Americans prefer railroad and store while the English prefer the synonyms railway and shop, but all four words are used in both England and America. The following list gives some of the most interesting and typical differences between the American and English vocabulary, differences that may especially interest tourists and those who enjoy both American and English books and movies.

Examples:

Airfield–aerodrome.

apartment; apartment house, apartment building ; block of flats (to an Englishman an apartment means a room).

Barbershop – barber's shopcan.

Opener – tin opener.

There are, of course, hundreds of more terms that differ in American English and British English [1, p. 247].

American use of prepositions sometimes also differs: Americans live on a street, the English live in it, Americans chat with people, the English chat to them, Americans speak of an increase in something, the English of an increase on it, Americans get snowed in, they get snowed up, Americans say something is different something else, the English say it is different to it.

Having learnt different sources we have found out that there is a great difference in pronunciation as well. The major difference in American and English pronunciation is in intonation and voice timbre. Americans speak with less variety of tone than the English. American voice timbre seems harsh or tinny to the English, their's gurgling or throaty to Americans. English conclusion: Americans speak shrilly, monotonously, and like a schoolboy reciting. American conclusion: the English speak too low, theatrically, and swallow their syllables.

The more precise differences include:

Americans pronounce the [a] in such words as ask, brass, can't, dance, fast, grass, half, last, and path as a short, the English pronounce it more as the broad [a:] in father . American shorter, flatter [a] is just a continuation of the way first colonists from Southern England pronounced it.

On the other hand, most Americans sound the short [o] in such words as box, hot, lot, not, pot, and top almost as the broad [a:] in father, while the English give it a more open sound, with the lips rounded [2, p. 119].

Results and discussion. In order to know if americanisms are popular among people, I have conducted the survey. I've asked my group-mates: 1.What is americanism? 2. Do you use americanisms in your everyday speech? 3. What americanisms do you use?

Having learnt all the results, we can conclude that 80% of the students can explain the meaning of americanisms. Only about 30% use them in their everyday spoken speech. What concerns the third question, the most popular americanisms are: mail, mailbox, apartment, last name, family name, grade, cookies, candies, cookbook and so on.

The practical part of our work is also a vocabulary, which we have made up in order to stress the differences one more time. Here is the part of it.

Vocabulary

House

British English – American English – Russian translation

ground floor – first floor – первый этаж

first floor – second floor – второй этаж

lift – elevator – лифт

Family, children

cot – crib – детская кроватка

dummy – pacifier – соска-пустышка

elder brother – older brother – старший брат

nappy – diaper – пелёнка, подгузник

School

drawing pin – thumbtack – кнопка (канцелярская)

form – grade – класс (в школе)

holiday – vacation – каникулы, отпуск

Food

biscuits – cookies – печенье

crackers – crackers – крекер (сухое печенье)

chips, potato chips – French fried potatoes– жареный картофель

crisps, potato crisps – chips, potato chips – хрустящий картофель (чипсы)

Clothes, accessories

dinner jacket – tuxedo – смокинг

polo-neck jumper, polo-neck sweater – turtleneck sweater – свитер

Shopping, paying

bill (in a restaurant) – check, bill (in a restaurant) – счёт в ресторане

carrier bag – shopping bag – пластиковая сумка для покупок

note, bank note – bill, bank note – банкнота

Conclusion. So we can come to conclusion that the most popular americanisms among young people are connected with the following topics: family, school and food. But generally students from our group try not to use the American variants.

We also want to conclude that current americanisms still penetrate into Standard English.

All in all, you'll find that written forms of British and American English vary surprisingly little, while the most noticeable differences will be in the spoken form of British English. Winston Churchill once said: "England and America are two countries separated by a common language." True then, true now, but perhaps we can make the gap a little bit smaller. Or, as the Brits might say, make it teeny.

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BELARUSIAN LANGUAGE ADVERTISING TEXTS: FUNCTIONS, STRUCTURE, PRAGMATICS

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Advertising is the way of informing people about consumer products characteristics and advantages of different types of services in order to create active demand on them. Advertising generally is the dissemination of information about big events in the economic, cultural and political life with the intention to create a desire of active participation in them, to make someone or something widely known. Primarily, it is the information that argues for and motivates to make the decision. The most important thing in the advertising is the text [2, p. 5].

Advertising text has the following main properties: 1) it contains both verbal and audiovisual means; 2) it always has the addressee; 3) it must make an impact on the recipient in a certain way; 4) it must create a positive image of the object of advertising in the consumer's mind. *The objects* of our research are the Belarusian language advertising texts.

For advertising text not so much the category of text cohesion is significant as text coherence that presents it as meaning and communicative unity. Information capability of the advertising text can be called relative, because facts are given in advertising characterize only the positive side of its object. It doesn’t give information about negative features, defects in the goods.

The Belarusian language texts in advertising are used more often than their role in society increases. The Belarusian language advertising has its own characteristics in the operation, which must be observed and researched. But in the Belarusian linguistic there are not enough scientific studies about advertising communications. The aim – to determine the specific features of the Belarusian-language advertising text, the characteristics of its functioning, structure and application.

Material and methods. We analyzed 135 Belarusian language advertising texts, including 39 – TV commercials, 73 – outdoor advertising on billboards, 23 – others. Among the 73 texts of outdoor advertising 25 are social advertising. In the research we used a descriptive and comparative methods.

Results and discussion. The main task of the advertising text is to cause certain changes in the mind of the communication partner, therefore the main functions of advertising is traditionally considered the informing function and function of impact. The function of impact is the set of emotive, aesthetic and suggestive functions.

The emotive function is the ability of the advertising text to create some emotional reaction, to motivate the recipient. generally the aim of advertising is to cause the positive emotions. It is implemented in the text through the use of words with positive semantics (***уражваючы*** *дызайн,* ***карысныя*** *функцыі, квас “Хатні” –* ***калі ласка!***); avoiding negations (*беражыце чысціню* instead of *не забруджвайце*, *каманда Ceresit заўсёды выйграе* instead of, for example, *ніколі не прайграе*); the use of familiar and understandable to a potential communication partner words and locution (*месца пад сонцам, згубіць галаву*); creating the impression of closeness to the receiver and importance of his needs (*Для некаторых важны вытанчаны інтэр’ер ваннага пакоя, для іншых – яго бяспечнасць. А хтосьці выкарыстоўвае яго проста для задавальнення*). The advertising text happens to cause negative emotions. This is primarily social advertising, which often works “by contradiction”.

The aesthetic function is implemented when the advertising text refers to the ability of a person to feel the beauty, imagery, harmony and style. This is the basis for the formation of the aesthetic image of the goods.

The suggestive function is the ability of advertising to influence the recipient to make him change his mind about a product or fact, to force him to action. In connection with it, many verbs and pronouns of the second person are used in the texts. The suggestive function in the Belarusian language come to light first through the use of verbs in the imperative mood, which directly evoke to the action.: *“Гаспадар. Гатуйце з намі”; “Купіце чатыры літры Кока-кола са спецыяльнай этыкеткай…”; “Паспрабуйце БЯРОЗАВІК, пакуль ён ёсць!”.*

The approximation of the text to the colloquial language promotes the implementation of the function of impact. The fonts and designs, drawings and photographs, music and other are used there with the same purpose.

The informing function consists in reporting the required information about advertising object. The advertising text can pass the maximum amount of basic marketing information by the minimum possible number of words. The logic and validity are necessary components of the advertising text.

In the analysis of the collected material we discovered one more function the Belarusian language advertising texts. It is ***the culturological function***. Often advertising in Belarus introduces the addressee with some specific events of national life. By this way the culturological function come to light. For example, the advertising for the flour “Haspadar”: *“Дзеці, што такое заціркa? Гэта калі ёсць пакет мукі “Гаспадар”, 2 яйкі, пакет малака <…>”.*

In our opinion, the emergence of the culturological function in the Belarusian language advertising texts can be explained by the difficult situation of the Belarusian culture and language as its element. Fighting for their safeguarding entered into all spheres of the life of Belarusians.

In the analysis of the various advertising texts in Belarusian we identified the following elements of their structure: the title; the main text; slogan and echo-phrase. The main function of **the title** is to draw attention. **The main text** gives details that can force the customer to buy. The information must be presented interestingly. The main text can have its structural parts: an introduction and a conclusion. **The slogan** is an accurately, clearly and concisely formulated advertising idea. **The echo-phrase** is almost literal repetition of the advertising title. It is something that should be remembered and repeated. Most often, the slogan or echo-phrase stand at the end of the advertising message, because they are the sum of the advertising text ideas.

During the research, we noted, that the slogan and echo-phrase are the components, without them there is no advertising text. This is natural; they represent the laconic epitome of the main idea of the advertising text. It is easy to remember.

In advertising, in the most cases, the pragmatic component is more important than the actual semantic. The phatic and emotive functions are more important than the informing function. The main means of the implementation of the pragmatic component of Belarusian language advertising text are the words with the positive evaluation semantics (***цудоўныя*** *прызы*, ***надзейна*** *абароніць*); the terms (their use is limited by advertising medical products); slang words and colloquial words (*файна*); the deictic words; the rhythm and rhyme. In some cases, the form of the advertising text emphases the characteristics of the audience, to which it is directed. As an example, advertising for “Ceresit”, which is made like comments to a football match, will be interesting primarily to men. Ways of implementation of the pragmatic component are various; they are often specific to the certain advertising text. In our opinion, the Belarusian language itself can be called a part of the advertising pragmatic component. It has been also noticed that the negative influence on recipients is had mistakes, unjustified bilingualism, mixing of graphic systems of the Russian and Belarusian languages.

Conclusion. The main functions of advertising is traditionally considered to be the informing function (includes the emotive, aesthetic and suggestive functions) and function of impact. The culturological function is specific for the Belarusian language advertising texts. The main elements of the structure of the Belarusian language advertising texts are the title; the main text; slogan and echo-phrase. The means of the implementation of the pragmatic component are the lexical units (the words with the positive evaluation semantics, the terms, the slang and colloquial words); the deictic words; the rhythm and rhyme; the form of the expression; the subtext and others. The pragmatic component is more important than informative component, because the relationships “the sender – the receiver” and the main functions of the advertising text are implemented only in it.

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MAIN EXPRESSIVE MEANS OF TOURBINA'S POETRY (RUSSIAN LITERATURE OF BELARUS)

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More and more publications devoted to the phenomenon of «multilingualism» in Belorussian literature are appearing nowadays. This fact is highly connected with the intensive development and the problem of Russian-language literature [3].

From the linguistic point of view, Belarus would seem to be the most Russified country among the former Soviet republics. Most Belarusian people know Belarusian, but speak Russian in daily life. They respect Belarusian as the language of the nation, but prefer Russian as a means of verbal communication. In Minsk one can see many Belarusian words on the street signs and billboards, but one hears only Russian in people's conversations. While in major it is difficult to find modern books of Russian literature in Belarus.

The place of Russian-language texts in the Belarusian literature is researched. The question of inclusion of Russian literature in the Belarussian literary process and the terminology problem are considered in detail. At different times the language of the Belarusian literature was Latin (XVI–XVII c.), Polish (XVIII–XIX c.), Belarussian, and Russian. The Belarusian literature in the foreign languages is actively studied, while Russian literature in Belarus, according to the analysis of scientific and critical material, has only recently been included in the context of national literature and literary criticism. And the question of terminology is still uncertain. Most researchers follow the binary classification (Russian-language literature of Belarus / Russian literature of Belarus) [2, p. 49–52].

Material and methods. The article deals with the analysis of Russian literature of Belarus. Also individual handwriting of the poet representing a new wave in development of Russian literature of Belarus is revealed in the article. The methods of investigation attempt to find out similarities and differences in Russian literature in Belarus. We use the scientific methods of observation and description.

In etymological sense expressiveness may be understood as a kind of intensification. Expressive means of language are phonetic, morphological, lexical.

Phonetic expressive means include pitch, melody, stresses, tones – intonation in general. The use of emphatic intonation enables the speaker to intensify an utterance emotionally or logically, to convey different additional meanings that are not expressed by the chosen words.

Morphological expressive means are those means of expressing grammatical meanings which display a kind of emphasis. These are, for example, stylistically marked forms of the Present and Past Simple Tense with emphatic verb do: He did come (Compare to stylistically neutral (He came) or marked forms of Imperative Mood: (Do come; Don't you forget).

Lexical expressive means includes stylistically coloured words (poetic, archaic, bookish, slang, jargon, vulgar, etc.). These words usually stand in opposition to their neutral synonym.

Stylistic devices (tropes, figures of speech) unlike expressive means are not language phenomena. They are formed in speech and most of them do not exist out of context. According to principles of their formation, stylistic devices are grouped into phonetic, lexico-semantic and syntactic types. Basically all stylistic devices are the result of revaluation of neutral words, word-combinations and syntactic structures. Revaluation makes language units obtain connotations and stylistic value. Expressive means and stylistic devices have a lot in common, they help to create personal style, express meanings [1].

Results and discussion. In this article it is spoken in detail about the main expressive means of Tourbina's poetry. It should be mentioned that Tourbina's poetry is notable for its original seeing the world. Tourbina continues poetic tradition of The Golden Age and at the same time she creates her own poetic style [4, p. 129–135].

She inherits a special musical rhythm thanks to which its poetry possesses unusual harmony. Her poems remind us musical play in which alliteration is a stylistic literary device identified by the repeated sound of the first consonant in the series of multiple words, or the repetition of the same sounds or of the same kinds of sounds at the beginning of words or in stressed syllables of a phrase. There are numerous examples of alliteration in Tourbina's poems. Alliteration plays a very crucial role: it provides a work with musical rhythms; it lends structure, flow, and beauty to any piece of writing; poems that use alliteration are read and recited with more interest and appeal. This device is commonly used to create witty and memorable catchphrases and tag lines. It's a fun play of words that brings out the imagination of the writer and the reader.

In her works she also uses ellipsis. It is the omission of a word or series of words. Author uses examples of ellipsis to build tension when it seems as though a character or the narrator is leaving something unfinished, unsaid, or unstarted. The omission of words whose absence does not impede the reader's ability to understand the expression. For example, Tourbina makes frequent use of the phrase with the missing of «you / your». The possessive «your» is left out in the lines, but it can be assumed that the woman addressed by the speaker.

She often uses repetitions. Repetition is a technique used to draw a person's attention to a certain idea. It might be a word. It might be a rhythm. It might be a whole line. It makes an idea clearer. Repetition is a way to produce deeper levels of emphasis, clarity, amplification, and emotional effect.

In her works we can find examples of conversational vocabulary.

Conclusion. The purpose of the article is to give the reader some information on the phenomena of Russian literature in Belarus. The fact that Russian literature of Belarus is known for its poetry is stressed. The article gives a detailed analysis of the main expressive means of Tourbina's poetry. She creates her own poetic style uses a particular language full of alliteration, ellipsis, repetitions and a special musical rhythm.

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PSYCHOLOGICAL AND PEDAGOGICAL DETERMINANTS OF THE ESTABLISHMENT AND FUNCTIONING OF THE EDUCATIONAL SPHERE

THE MANAGEMENT OF A CLASSICAL UNIVERSITY IN TERMS OF MODERNIZATION OF HIGHER EDUCATION

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Belarus has joined the Bologna process and entered the European Higher Education Area. It was announced on May 14, 2015 in Yerevan at the Conference of Ministers of Education of EHEA countries and at Bologna Policy Forum. The Bologna process accession of the Republic of Belarus requires the modernization of higher education, including fundamental reprocessing of existing regulatory support.

Aim – identification of the main resources of effective management for organized and innovative development of classical university due to the entering the Bologna process.

Material and methods. These were investigated during the research: the Bologna Declaration, the Education code the Republic of Belarus, works of national and foreign authors.

Such scientific methods as analysis, synthesis, induction, deduction, etc, special historical methods such as historic-systematical, historic-comparative, historic-typological were used in the course of the research.

Results and discussion. To fit the standards of the Bologna process, member countries were recommended to introduce the number of changes in their system of higher education for a certain period of time. Particularly, there are three main positions:

– the European evaluation system (the appendix to the European diploma, which will make it easier to apply for a job in any country, taking part in the Bologna process);

– two-cycle education (the first bachelor cycle, lasts no less than three years, the second – master or doctorate – lasts one to two years; in this case bachelor’s degree will be considered as a complete higher education);

– credit system (system in which each academic discipline is assessed by a certain number of credit units - credits; it allows to assess the student's level of mastering the training program, studied in different universities, and to give the diplomas, in correspondence with their the level of education and qualification).

Currently a great deal of perspectives were opened in front of our students. The main one, certainly, is facilitating an employment outside the country due to the diploma appendix of the European standard. It allows the employer to avoid confusion in different system evaluations, which, in turn, will increase the loyalty to the graduates of Belarusian higher education institutions abroad.

The second significant advantage is the student's free choice of studied subjects. Flexible approach to the learning process, its individualization allow students to tune up the learning process almost independently. Students due to such approach gain communication skills and self-presentation on the international level. They learn critical thinking and information analysis, which is important during the epoch of development and expansion of network society.

One more advantage is the European credit system. After its introduction students will be able to accumulate a certain number of credits, suspend their studies and renew them at will – i.e. studying throughout life, as people from Europe and America do.

Besides, Belarussian membership in the Bologna process will allow improving the image of the higher school of our country, which will be the part of the common European system of higher education.

In spite of positive tendencies of the higher education development there is a number of controversies.

For example, at St. Gallen University, the first to have entered the new system, the majority of professors and associate professors didn't like that the reform gave a negative outcome for the educational process. Most significantly the study's standardization and the establishment of credits ECTS hit humanitarian departments.

Estimated by our experts in the area of education, entering the Bologna process can produce the confusion about study programs and presumable problems for people employment with the diploma of bachelor. A four year bachelor is perceived by employers as incomplete higher education due to a significant shortening of a curriculum in comparison with the programs of a specialist (5-6 years course) and master (6 years course). Also getting a master's degree, for example, can become paid only.

Also we should fear that we can lose everything valuable that came to us from the soviet system of education. Nevertheless, as the rector of Belarusian State University S. Ablameiko said, neither we, nor other Belarusian Institutions of Higher Education will have change fundamentally. Integration processes with European educational system in Belarus have been active for a long time and are quite successful.

That's why the Belarusian higher school gets only the best from Europe, saving its individuality. Recommendatory pattern of the Bologna declaration allows us to do this.

Nevertheless, the polemic of scientific community on examination of certain characteristics of the Bologna process, their realization features in education practice have activated lately. Specifically it applies to classical universities whose phenomenon with all the serenity is insufficiently represented in the context of the higher school modernization. There is a need and an opportunity to comprehend scientifically and systematize gained material, to identify resources for development of modern classical university in the new social and cultural reality, in terms of entering the Bologna process.

The progress and results of research were discussed at meetings and methodological seminars of the pedagogy department and at seminars, which were conducted by educational-methodological department of VSU named after P.M. Masherov.

Conclusion. Belarus accession to the Bologna process is a factor of classical universities development. It leads them to the structural and substantial changes; forms a new aspect using various models of the improvement of regional classical universities, innovative and research universities and others. The requests of government and market lead to reduction of the classical part of the educational content (universities themselves are fighting for its preservation).

AUTOMATIC CHECKING OF STUDENT ASSIGNMENT

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The publication addresses the issue of partial or complete automation in the process of checking assignments of students who studies the Programming in higher education.

The results may interest practitioners tutors in highest school or other educational institutions as well as automation provides partial (or total) arrangement of work to automatic systems without any loss of quality, and often with an increase of quality.

Review of the problem. There are two following tasks appears while tutor checks assignments:

1) checking the depth of the student's knowledge in matters related to the assignment;

2) checking the correctness of the assignment.

The first task is traditionally solves by asking questions to students and listening to their answers. If we talk about the automation of this process, then it is possible to offer a well-known technique of testing and usage of special software [1].

The second task is divided at least into the following three subtasks. At first, it is necessary to check the correctness of the program. Secondly, it is necessary to check the correctness of writing code. Third, it is necessary to find out whether the assignment, already put out by another student. The question of automation is especially important in dealing with third subtasks inasmuch as a tutor is not able to remember all the programs that he reviewed.

Automated solution of the first subtasks can be performed by using the tools of automated software testing. The Robot Framework [4] may be an example of a such tool.

Solution of the second subtask appears the most difficult for automation. This issue requires further investigation, but it is assumed that the problem can be solved with the help of neural network technologies. As an initial correctnes evaluation it is possible to offer the validation of key words presence or checking the order of key words. As the key words it is possible to consider programming language statements and names of functions and libraries required for the assignment. Such evaluation can automatically identify the gaps in the student's programs.

Solution of the third subtasks may be achieved with help of special software that implements the validation algorithm. Let's consider this question in more detail.

At first, it is required the repository (database) that stores all the assignments that has already been submitted for review. In the simplest case it's required to compare the reviewing assignment with all assignments in repository, and look for a matches. The comparison can be performed on binary files or hash codes from binary files. However, this validation can only filter out exactly the same work as a slight change in the file, such as adding spaces or line breaks, will change the binary file, and hash code. As well as a compilation of the same source code on different computers, in most cases leads to a different binary code.

To perform more complex validation it is possible to remove all whitespaces and comments from the source code, and make comparison only after that. But even in this case it is enough to make a slight modification of the source code, such as changing the names of variables, and the validation algorithm will not detect matches.

For a good validation it is required to compare program structure not program code. But the identification of the program structure leads to the need of syntactic analysis of the source code and this task is nontrivial.

Results and discussion. Today while checking students assignments the author uses the partial automation tools such as:

- testing with CMS Moodle [3];
- maintaining a repository of accepted assignments;
- binary comparison of reviewed assignment with assignments in repository;
- initial validation of source code by keywords.

Conclusion. Described tools allow to make an initial assessment providing reduce of time spent on the assessment, and improving the quality of evaluation. However, the final grade based on the manual check.

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SYSTEM CHARACTERISTIC OF THE INCLUSIVE EDUCATION IN THE REPUBLIC OF BELARUS

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Changes in education do not leave anyone indifferent. One of these changes - the policy of inclusive education, that is, the education of children with disabilities together with ordinary children.

The relevance of this process is due to the adoption of the Concept of development of inclusive education of persons with special needs in the Republic of Belarus and the accession of our country to the Convention on the Rights of Persons with Disabilities, adopted by the UN in 2006, which proclaimed the duty of States parties to the Convention to ensure an inclusive education system at all levels and training throughout life.

Aim of the article to give system characteristic of the modern model of education in the Republic of Belarus - inclusive education. Under the "system characteristics" meant the most important, fundamental features of inclusive education

Material and methods. Methods related to the theoretical level of scientific knowledge: analysis of scientific and methodological literature on the problem under study, the analysis of the legal and regulatory framework for inclusive education of the Republic of Belarus; study of the experience of educational institutions of Russia and Belarus on the issue of inclusive practices.

Results and discussion. Results from theoretical analysis suggests that inclusive education is one of the major changes of the last decades in the world educational space. The priority of the practice of inclusive education is enshrined in the Salamanca Declaration, UNESCO, which states that every child, possessing unique characteristics, interests, abilities and learning needs, should have access to education in a regular school, in which the conditions have been created to meet their educational needs [1, p. 18].

It noted the development of the legal framework of the Republic of Belarus of inclusive education: September 24, 2015 A.G. Lukashenko signed the UN Convention on the Rights of Persons with Disabilities; July 22, 2015 the Minister of Education approved the Concept of development of inclusive education of persons with special needs in the Republic of Belarus, the draft core indicators of inclusive education, which was adopted as the basis for 5 countries Eurasian Economic Union.

In special education, inclusive education is defined as education and training, in which the special educational needs of all learners, including those with special needs being met in the institutions of primary and supplementary education while creating in them the conditions and most complete inclusion in a joint educational process all learners.

For the development of inclusive education in our country with respect to persons with special needs there are a number of preconditions: 1) barrier-free environment created in a number of institutions of basic education; 2) in some institutions of special education resource centers are functioning; 3) developing a system of teacher training; 4) work is underway on the formation of a tolerant attitude towards people with special needs; 5) well-established integrated training and education.

Inclusive education, as a logical extension of the system of integrated education, offering new, better and more flexible approaches to the organization of educational process and interaction with each child, and is characterized by the following features:

- ✓ attention is directed to all children kindergarten, school;
- ✓ change in the conditions of the educational system of the kindergarten, school - taking into account the educational needs of children;
- ✓ receive benefits all children;
- ✓ educational process is constructed using a creative teamwork of all its members (children, parents, teachers, professionals);
- ✓ high quality training for all children;
- ✓ transformation of social conditions, which include all the participants of the social system.

Inclusive education is based on the following principles:

The principle of normalization suggests that the lives of people determined not violations, and in that the hinders them to live a fulfilling life. The social model based on the concept of equal rights and opportunities for all members of society and the concept of normalization of human life with functional disorders.

The principle of active inclusion into educational process of all its members involves the creation of conditions for of understanding and acceptance each other in order to achieve fruitful cooperation on the basis of humanism; active inclusion of children, parents and professionals in joint activities: joint planning, carrying out common activities, seminars, celebrations for the creation of an inclusive community as a model of the real society.

Priority interests of the child in all spheres of its activities and social interaction. Implementation of individual approach assumes accounting requests and needs of children; choice of forms, methods and means of training and education according to individual educational needs of each member of the of disciplic group, including observance of the rights to education of children with a normative rate of development.

Stimulation of self-activity of the child. The implementation of this principle solves the problem of formation of socially active person who is the subject of development and social activities.

The principle of a multidisciplinary approach. A variety of individual characteristics of children requires a comprehensive, interdisciplinary approach to the definition and development of methods and means of education and training. specialists (teacher, therapist, teacher, speech therapist, social worker, psychologist, etc.), working in a group, regularly diagnose the dynamics of development of children and the discussion and make correction and development programs [2, p. 17].

It should be noted that inclusive education puts before modern school a lot complex issues and new challenges. Already on the early stages of development of inclusive education acutely problem unprepared of teachers mass school to work in an inclusive environment, we found a lack of professional competences of teachers, availability of psychological barriers and stereotypes of teachers professional [3, p. 74].

Readiness teachers – is a complex structure consisting of many components. Hitryuk V.V. introduced the concept of "inclusive readiness", which is defined as "complex an integral subjective quality of a person is revealed through a complex competencies and determines the possibility of effective professional activities in the current conditions" [4, p. 82].

Conclusion. Thus, the goal of inclusive education is to eliminate social exclusion that is a consequence of a negative attitude not only to persons with special needs, but also to the diversity in terms of race, social status, ethnic origin, religion, gender and ability. Based on the fact that education is one of the constitutional rights and the foundation of a just society, inclusion in education can be seen as recognition of the value of differences of children and their ability to learn. Inclusion in education means that the education system adapts to the child, not the child is under the system.

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SOCIAL AND PSYCHOLOGICAL PECULIARITIES OF CAREER PLANNING OF SENIOR SCHOOL STUDENTS

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This article presents the results of study on structure of social and psychological aspects career planning of senior students. Is given a definition of this term, considered its functions and peculiarities at school age. The study was conducted in a group of 11th class students of secondary schools, gymnasiums and lyceums of Gomel region. The data was gathered with use of a diagnostic survey by techniques described in this article. The result of study shows the top-priority career planning orientations of senior school students in various establishments of the general secondary education.

Nowadays, in the conditions of development of society and labor market have changed of requirements in the preparation of a professional, who should possess such qualities as flexibility, mobility, creativity when dealing with organizational tasks, interest, ability to plan career promotion and to make use of one’s personal competitive advantages. In turn, this requires a qualitative changes in the vocational guidance with students in schools. We are seeing that on the threshold of adult life, senior school students are in a state of helplessness, when they don't have sufficient experience for making important decisions, but should be determined with the choice of the professional way. At this situation, it is important to study the substantial social and psychological aspects of career planning of senior school students for organizing psychological support. It is the main objective of this study.

On the basis of the designated purpose of research next tasks were formulated:

• to define essence and the content of concepts of career and career planning;

• to study features of career planning of senior school students;

• to develop the directions of psychological maintenance of career planning in the senior school age.

This research is focused on the early stages of professional development-school years. There are many works on the early stages of career (E.N. Polyanskaya, 2002; N.L. Kirt, 2000; A.M. Sheveleva, 2000; D.A. Tkach, 2004 etc.). Career studies of the past decade are marked by cross-disciplinary character and multifaceted analysis: S.V. Mityunina “Personal professional career models”, 2006; A.A. Zhdanovich “Career orientation in the self-concept structure of students”, 2008; E.V. Sadon “Professional competence as a factor of future specialist’s professional development”, 2009.

We hold to an opinion that career is a multi-faceted socio-psychological phenomenon connected with the goal activities of a person and providing him with a feeling of successful professional self-realization. Career is formed on all stages of life through the processes of identity formation, self-organization, personalization and also depends on self-reflexion abilities [1, p. 113].

Career planning of seniors school students – active development of the generalized, stable, conscious and realistic ideas of itself and the place in the professional sphere.

Accordingly it is formed the new system of values at young people which is dictated by social factors changes of labor market, an economic situation, etc. We observe the new type of the identity of youth aimed on individualism, value of personal enthusiasm, calculation on the forces, aspiration to material well-being as value.

The theoretical meaning of our research consists in carrying out the system analysis of a psychological phenomenon of career planning by means of the analysis taking into account the studied age and conditions of career formation.

Material and methods. 382 students of the 11th class of Gomel Regional Lyceum, Secondary School № 2 of Svetlogorsk, Vasilevichi Secondary School took part in our research (198 young men and 184 girls at the age of 16–18 years). For research of psychological features of career planning of senior school students diagnostics with use of a technique of "A career anchor" of E. Stein and the questionnaire "Professional future", developed in the Gomel Regional Center of Testing and Vocational Guidance of the studying youth was carried out. All mentioned above methods allow both group and individual testing.

Results and discussion. Analysis of the results of the research revealed the following characteristics affecting to career planning process of senior school students:

• in the senior school age pronounced orientation to the management of other people (41%);

• graduates of the school are seeking to balance individual needs, interest of family and professional advancement (37%);

• senior school students are guided by stability of work (35%) that is natural in the conditions of dynamically changing market and an unstable economic situation;

• senior school students are less focused on the humanistic values in the career (3%);

• final year students less are showing their commitment to solving complex professional problems (1%) as it does not have a clear idea about future profession and about the possibility to use his inclinations, abilities and talent. The personal component when career planning is provided slightly.

As a result young people make the delayed plans, set before themselves the uncertain purposes, at the same time wish to achieve several objectives, don't differ in a wide choice of means for career realization. It is obvious that sensibleness of career planning – the problem zone at this age stage. Therefore, the problem of understanding of yourself, self-knowledge and self-determination is one of the most stubborn for modern youth and it is demanding serious psychological and pedagogical support.

Conclusions. Thus, we marked and described structural peculiarities of career planning of the personality at the advanced school age. These researches may be used in individual and group work with school students of different age and level of development.

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PERSONAL DEVELOPMENT FUTURE TECHNOLOGY TEACHER ART THERAPY

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Today the situation in the educational environment makes us think that the development potential of future teachers plays a significant role in the development of human personality, his predestination prospects, attitudes and priorities. Disclosure of internal resources requires focus and creating special conditions for the implementation of which is necessary to understand how is the personal formation. The national psychology is widely regarded notions of human potential and personal potential.

According to B.F. Lomov, human potential represented by his abilities, a system of knowledge and skills. The concept of building B.G. Ananiev included the development of a person as an individual and as a subject of activity and determine the potential of human relationships sistemokompleksov properties of various levels of the organization man [1].

Personal potential implies a more complex form of thinking. It is not so much about the basic personality traits or plants, but about the individual features of the system organization as a whole, the complex of its architectonic, based on a complex scheme of mediation [2]. Today phenomenon of personal potential is not fully studied the problem in psychology, which is engaged in research Various scientists. YES. Leontiev introduces the concept of personal potential as this essential personality characteristics. Under the personal potential of the integrated system is understood as characteristic of individual psychological characteristics of personality that underlies the ability of the individual to come from sustainable internal criteria and guidelines in their life and activity to maintain stability and semantic orientations on the background of the pressure and changing ambient conditions. The concept of personal potential is at the heart of individual autonomy and self-determination and expressed "personal to the individual".

Material and methods. To solve the problems in the complex of methods was used, adequate subject matter: psychological and pedagogical modeling; studying and generalization of teaching experience, questioning, testing, interviews with teachers and students; experimental work, training on the basis of art therapy, psycho-pedagogical analysis, evaluation and self-assessment of its results.

Results and discussion. The importance of the development of creative potential of the future teacher on the stage adaptation of professional activity by a number of values:

➢ social as a person is formed with a special way of thinking capable of radical changes and transformations.

➢ scientific, as a means of knowledge of personal creative potential of the future teacher.

➢ practical as possible the use of new techniques in the framework of psycho-pedagogical impact for the development of the creative potential of the individual.

The purposeful use of an integrated system of specific and non-specific ways to prepare on the basis of a positive direction techniques Art therapy promotes adaptation of young teachers in early professional development. The system of psychological adaptation play a major role therapy (psychotherapy) exposure methods, such as discussion therapy, Interactional – communication techniques (psychodrama, Gestalt therapy, transaktnyi analysis), methods based on non-verbal activity (art therapy, music, mime, etc. horeoterapiya), group (individual) behavioral therapy, suggestive techniques.

Historically, that art therapy is mainly used in clinical practice. In the field of professional training of future teachers of art therapy has not found its application. Noteworthy is the fact that in the works, with practical focus, in particular, in the NV Kliueva "Program of socio-pedagogical training for teachers" and GI Marasanova "Socio-psychological training for teachers" and other art therapy finds its application in the structure of socio-psychological training techniques as contributing to stress relief, mood in the classroom. As the leading technology, organizes classes in general, art therapy in the light of the implementation of training for students, educators, is not considered. Most often use their own art therapy is only used in clinical practice with the objectives of the correctional orientation.

However, based on our analysis of the works devoted to the theory and practice of art therapy effects, personal experience (a course of "Art Therapy" on behalf of the Pedagogical fakultetet PMMasherov MAD), we found the presence of the rich possibilities of developing art therapy, the preconditions for the development of creative potential that can be used in the framework of the social and psychological impact in the process of professional training of future teachers.

Art therapy as a methodological tool, included in the process training future teachers, ensure the development of their creativity, as art therapy practice is in itself educational opportunities, promoting the full creative potential of the individual:

– Art therapy, which uses a set of various forms of creative expression, provides an opportunity to express themselves in creative work, which excites the flow of creative components (imagination, intuition, originality, flexibility and fluency creative thinking), but also contributes to the removal of barriers that block the expression of the creative potential of the person;

– The use of art therapy creates conditions for the realization of the value of creativity in personal and professional aspect of its review;

– Purposeful art therapeutic intervention focuses on the orientation of the individual creative activities, one of which is vocational and educational activities.

Conclusion. Personal Development requires individualization of future teacher training and the definition of forms and methods of self-organization. Organization of educational process in this direction should be based on the position that everyone has the right to choose their personal educational path, the choice of those in the study courses and special courses, as it deems necessary and appropriate to its interests and needs [1].

The problem of personal potential is a solution in creating developing environment also requires an individual approach to each. Disclosure of human capabilities helps technology learner - centered learning.

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ENVIRONMENTAL INFLUENCE ON MENTAL DEVELOPMENT OF INFANTS, BROUGHT UP IN ORPHANAGE

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The given research aimed at studying the role of cognitive environment in the formation of psychical development features of orphans, had the purpose to study an opportunity of compensation of psychical development delays in the given category of children by cognitive environment's modeling. "Cognitive environment" means set of sensory stimulus with sources such as material objects which the child interacts directly with, or through the adult intermediary, and adults themselves. As it is marked, by some authors (Matiurina, Mastiukova, Solovjova), who investigated the problem of compensatory opportunities of a person, infancy is an unique age, when there are real opportunities for complete compensation of disorders in the development. That's why it is interesting and important to study functional specialization of the central nervous system or its separate parts under the influence of environmental conditions during infancy.

The dynamics of psychical ontogenesis during the first year of life is mainly determined by the perception development. Perception is understood as the process which helps person to support contact with the environment. Development of perception is the process of increasing conformity between stimulation and perception, dependent on mutual relation of the perceiving subject and environment. The known fact is that during the certain time interval after birth the particular parameters of brain structures (thickness of a bark, number of cells, the size of nucleus, intensity axon dendritic ramifications, etc.) continue to vary, and the majority of similar changes depend on influences on child's sensory systems. In the number of experimental researches Blakemore, Movshon, Van Sluyters have proved that visual deprivation results in deficiency of formation of corresponding brain structures. However, the researchers Greenough and Lund R.D, gave the bases to suppose, that by means of the organization of certain visual environment, it is possible to change developed functional systems [1; 2].

Mental activity of a child proceeds among various environmental objects. The development of cortical functions occurs on the base of mastering the information of the given objects' features, which determines the process of mental development. Defective formation of functional brain systems results in delays or distortions of mental development. It is possible to assume, that sensory deprivation, results in specialization and adjustment to that type of stimulus which in these conditions most frequently meets owing what specific ability to analyze an environment develops. Thus, impoverished cognitive environment, monotony and regular repeatability of stimulus result in immaturity of a lot of functional systems of the central nervous system. Purpose of the research – to define the characteristics of cognitive environment, which foster the positive dynamics of orphans' psychical development.

Material and methods. We studied psychical development of 72 infants. Half of them are bringing up in families and 36 children are living in orphanage. In the research we used such methods as observation, experiment, objective tests (Munchen functional diagnostic, Neuro-psychological developmental diagnostic), analysis of mothers' diaries.

Results and their discussion. On the basis of the received results we had formulated the following conclusions. One of the major factors of infringement of psychical ontogenesis is the absence of optimal cognitive environment which is adequate to regularities of infants' psychical development. The environment that is necessary for normal child's development is the environment, having characteristics of an open system that is presence of an opportunity of changing it according to child's needs. Borders of the environment should not be strictly fixed. Such environment should have the following characteristics: dynamism, componentialty, novelty, difference, variety in modality, orderliness, conformity of stimulus to child's age features. The comparison of cognitive environments of orphanage and cognitive environments, characteristic for family education has allowed to establish sizeable difference in quantity and quality of the sensory stimulation, data describing the environment, and influences on children's sensory experience. Interaction with orphans from the side of looking after adults is characterized by attitude to children, prevalence as a whole positive, however not differentiated, an average level of an emotional involvement into the process of contact, decrease of quantity of personal references. Besides negative consequences of influence on babies' psychical development in a situation of "plural motherhood" are marked: infringement of attachment formation, adult's lack of initiative and visual contact avoid that reduces an opportunity of positive forecast of pedagogical influences on children. On the basis of above-stated information it is possible to conclude, that the specific type of psychical development of orphans is mainly determined by environmental features of an educational establishment.

Our research of orphanage cognitive environment and this in a family showed that:

1. Mental development of children who are brought up in a family is mostly normal, except for backlog of sensory development during the first month, an advancing of motor development during the first half of the year and, in some cases, delays of prespeech development during the second half of the year. Orphans' mental development lags behind of all indicators on different quantity experimental terms: from 2 (motor development, formation of skills and abilities of self-service), 2,5 (emotional and social development), 3 (sensory development, movements of a hand and action with subjects) to 4 on prespeech development.

2. Orphanage cognitive environment and cognitive environment in a family differ under following characteristics: dynamism (possibility of environmental change), componentialy (presence of enough quantity of stimulus), novelty (granting of new stimulus), difference (a variety of stimulus), variety in modality (presence of stimulus of a different modality), orderliness (the ordered structure of environment), conformity of stimulus to child's age features. It is expressed in quantitative (quantity of stimulus is bigger in family almost in 6 times), and qualitative senses (insufficient quantity, monotony of stimulus of all modalities, complexity of environmental transformation and an establishment of laws of its change, rare occurrence of sources of the new stimulus, the insufficient account of children's age features).

3. Positive correlation between intensity of cognitive environmental characteristics and babies' mental development is found. Cognitive environmental characteristics are more significant for mental development of orphans, than for family children: at orphans the quantity of sensory stimulus is connected with following indicators of mental development: «visual rough reactions», «acoustical rough reactions», «emotions and social behavior», «hand

movements and action with subjects», «speech understanding», «self-service skills and abilities»; in the group of family children presence of significant correlation of quantity of stimulus only with such indicators of diagnostics, is revealed: «preparatory stages of development of speech» and «active speech».

4. On the basis of block-circuit and vector modeling we made the analyses of orphanage cognitive environment. The block-circuit model showed that baby's mental development level (block R) is defined by interaction of blocks: S (system of sensory stimulation in interaction with adults) and N (qualitative and quantitative characteristics of the in detail-spatial environment), individual features of a child (health condition, age features of mental development, age of receipt to orphanage) – block P: $R = f(S,N,P)$. Vector modeling allows to predict how the dynamics of children's development will change if we change cognitive environment.

Conclusion. This article contains results of our research that prove the necessity of creation optimal cognitive environment promoting normal development of central nervous system functional activity at early stages of children's ontogenesis concerning children who are brought up in closed children's establishment.

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PSYCHOLOGICAL CONCEPT AS THE BASIS OF COMPUTER TRAINING

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The effectiveness of teaching process management is one of the directions of research in the development of modern educational technologies. Originated at the junction of pedagogy, psychology and cybernetics in the 60s of the 20th century automated training systems (ATS) and programmed training are becoming major tools for implementing these technologies. Activation of the ATS development is due to eliminate some of the shortcomings of traditional teaching. The growth of communication capacity by expanding modality of the information imposed to students, providing them with training content in a variety of text and multimedia formats, development of tools which greatly facilitate making of training courses for computer and distance learning, the absence of requirements for course developers and students to have programming skills – all these have greatly expanded the range of developers and users [1, 2].

The aim of this research was the analysis of theories and their content. Organizational forms and teaching methods of higher technical educational institutions as examples of practical application of contemporary ATS. When studying the psychological principles of education on the basis of programming, and new information technologies, it's recommended to apply the data of not only that specialized research, but also those of traditional psychology of teaching. Analyzing the psychological consequences of informatization, the authors note a tendency among users to bring into the computerized activities components typical of traditional activities, in particular, those of training [3].

Material and methods. The method of research is based on the study of products of engineering students' activities in graphics subjects. The study consists in the analysis of completed planned in-class works, written and final tests of students from Vitebsk Sate Technological University.

Results and discussion. The programmed approach is based on the following three ideas about teaching - 1) a process of management, 2) information process, and 3) individualized process, student's self-learning and self-control. A positive feature of programmed training is the intensification of students' learning activities, focus on the major, essential learning material and on its balancing. Active independent work and operational continuous monitoring of learning allows the student to exercise self-control, and the instructor to personalize training.

The analysis of the literature enabled to highlight a number of basic psychological theories and concepts applicable to the development of automated training systems: behavioral learning theory; associative reflex theory of assimilation; theory of stage formation of mental actions; algorithmization concept.

Behavioral learning theory. Behaviorism does not deal with internal processes of human cogitation. It studies behavior, which is interpreted as the sum of responses to any situation. Behaviorists see learning as a major increase in the probability of a correct response to some stimulus, for example, to the proposed training activities.

Programmed training takes into account the laws of learning, discovered by behaviorists in psychology. Computer training systems implement behavioral models of management in the framework of this approach. Attention is given to more complete control over explicit behavior and conditions of learning, the emphasis is made on training programs, directive in their nature and providing adaptation to the individual characteristics of students based on their replies.

Associative reflex theory of assimilation. This theory gave ground to formulating didactic principles and to developing of the overwhelming majority of teaching methods. According to this theory the human brain is in a constant process of building conditionally – reflex connections – associations. Individuality of each person depends on those associations which will be stable and secure in the consciousness. The study of physiology of mental activity has laid the basis for associative – reflex learning theory, which is widely used in programmed teaching.

The theory of stage formation of mental actions. The theory is based on the creation of favorable conditions for the formation of mental actions and answers the question, what should be done for the formation of the desired action. When studying transitive actions it is the action that is primary and the condition is secondary. The action shall be built but not just observed and asserted. And the conditions shall be developed that are necessary for this purpose. Following this technique, the mental effect is formed in stages. Each direction in which transitive action changes, has a number of stages, indicators, and makes up one of its constant parameters.

Algorithmization concept. An important step of programming is to develop an algorithm of academic activities, compilation of proprietary algorithms for assimilation of academic content. The algorithm is an entire series of precise instructions to be performed accurately and in full, in order to achieve the intended result, in this particular case, the intermediate one is a part of the overall result. These instructions, or algorithms for each "step", are cyclical, i.e. they are repeated in a circle: there are as many cycles as many "steps". Each cycle consists of the operations – instructions. Their fulfillment allows students to master the material of the "step", which is currently being studied.

Algorithmization in the academic process can be regarded as the management of the academic process by supplying information, its perception and processing by students, as feedback from the student to the teacher and, if necessary, correction of the educational process. The main application field of this theory is the study and application of algorithms for solving problems in the design of the ATS.

Advantages as well as disadvantages of automated training systems should be admitted. Enhancing of student's learning activities, individual rate of progress towards the success, and complete mastery of the academic content, the use of technology and electronic means of educational activity - all this characterizes the advantages of the ATS.

One can and should pay attention to some particular weaknesses of programmed teaching with automated training systems. Thus, available works on psychological problems of programmed teaching, describing the specific facts and solutions, do not give general theoretical approaches to the problem of "user friendliness". This includes a user-friendly interface, clear graphics icons, pleasant sensation of color, and so on.

Programmed teaching and the application of ATS gives good results when the task of teaching is associated with the development of practical skills, including solving typical problems, fixing and testing knowledge.

Conclusion. Thus, the automated training systems and programming can and shall be used together and alongside with other branches of scientific knowledge, which explore issues of education and training. They are the most productive in high school and universities.

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LIBRARY LEARNING ENVIRONMENT: STRUCTURAL-FUNCTIONAL ATTITUDE

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According to review of T.V. Eremenko «the activity of the university library as a component of a Common Education Space (CES) is at most adequate modern system of views on the purposes and objectives of the library of this type and can give fruitful results in terms of both theoretical study and make recommendations for activity library in system of higher education [2]. At the same time, according to opinion of O.D. Oparina, «updated understanding of the need for general changes CES, could affect the future of the library, because it is seen not as an isolated location information reposit, as well as one of the units of the global information space, through which the information reaches the user» [3]. Each library has the opportunity to prepare personality with a high level of information literacy is not even organized special events but improving its educational environment.

Purpose of the article is to present structural-functional model of library educational environment (LEE), which is the basis for implementation of relations «interpenetration» or «embeddedness» LEE into a single information-educational environment of the university.

Material and methods. In contrast to known scientific attitude, the basis of the developed model is a user who is mastering a library educational environment, as the information and educational product that is in demand by society and librarian who creates this environment. The result of the creation and operation of such an environment must become a student with a high level of information competence. The study uses a range of methods: comparison, generalization and modelling.

Results and discussion. Library educational environment is part of the single information-educational environment of the university and their cooperation is logical, which makes the work of higher education institutions more effective. Research of information professionals in the United States confirmed that «the majority of educational standards, revised in the last few years, show increase the role of libraries in learning and direct correlation between the using of library information resources and level of development of the educational environment of the university» [4].

The library component is one of the most dynamic in the structure of the information-educational environment of the university, because it is not only the space of information resources and means of information exchange, but also user information space. «The user is the most dynamic element of the «library». «He is a library purposive element, as it is created to meet their information needs» [1, p. 159]. Library educational environment is not something external to the users. It unites and shapes them. In other words the educational environment is the object of activities related to continuing education in general and the content of library cooperation. The library cooperation includes the «resource, value-orienting, intellectual, aesthetic, emotional environment of users and librarians, organizing their behavior in the library and have a positive or negative impact on their activity».

We have taken into account the background technology (methods, directions), let us to design and provide the management of cognitive activity, thanks to information resources, which are specially organized and adapted according to the age and level of information competence. Also, when we were creating a model, we focused on those of its components that would ensure the formation of new properties and relationships in the system, which the library educational environment is.

The main essential characteristic of the new LEE is a fundamentally new basis for its substantive content. The distinctive feature is to access to local and global information networks for students. Its organizational and technological basis are information and telecommunications technologies that provide input, storage, updating and transmitting the user educational and reference materials, which are presented in traditional and electronic forms. In this environment, search for information should be replaced by high-performance information and information using for studying and later in their professional activity.

The main aim of the modelling and creation of the library educational environment is the information support of the educational activity of the students and ensure appropriate conditions for the formation of their information competence. The structure of the environment is determined by the system aims and objectives, and may be represented by the resource, technological and human units. We propose to allocate as the structural and functional components of LEE the next:

1. Information and educational resources: intellectual, methodological and software resources with the knowledge and technologies to work with them, recorded on various media. These traditional resources provide the stability of the environment, and electronic resources – its mobility.

2. Organizational and management structure to ensure the functioning and development of the library educational environment. First of all these are the library staff and users.

3. Communication options, providing interaction between the actors and the library educational environment and access to resources on the basis of appropriate communication technologies. These include: information search tools, access to electronic documents, means of promptly informing, information service tools, tools for interactive communication, means of information exchange, means the integration of resources.

The model also reflects the principles, functions, factors that determine the pedagogical conditions of its creation and successful existence and levels of interaction between the individual structural elements.

Conclusion. Thus, created and actualized all the time library educational environment will be capable of the diverse needs of users in various types of information required for the progressive development of all forms of learning at the institution of higher education. And also it allows to generate the necessary level of information competence, which is a required condition for the success of future professional activity of the modern graduate.

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DYNAMICS OF TOLERANCE TO AMBIGUITY AND PERSONAL FACTORS OF DECISION-MAKING AT VARIOUS CATEGORIES OF THE MILITARY MEN

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In a century of information technologies when the volume of the received and processed information increases in a geometrical progression, to ability quickly and adequately react to any life situation becomes especially necessary. The armed forces of Republic of Belarus, an integral part of society carrying out the task of "protection of the sovereignty, territorial integrity and independence of Republic of Belarus" [1, p. 5], have to meet the modern requirements. Successful performance of this task in many respects depends on high professionalism of officers trained for administrative activities, on personal qualities. One of the most difficult stages of administrative activity in any sphere is decision-making. Research in the field of decision-making is conducted within various theoretical paradigms. Psychologists study interrelation of intellectual features and process of decision-making (T.V. Kornilov, D. L. Petroviç, O.K. Tikhomirov), personal determination and differentiation of decision-making (A.V. Karpov), values and probabilities of decision-making (D. Kaneman, A. Tverski).

Decision-making is carried out in situations with various levels of ambiguity expressed in the need to choose between a set of alternatives in conditions of limited information on the situation and consequences of the decision made. The concept "decision" represents a certain cognitive activity of the individual aimed at reduction of ambiguity, inaccuracy, uncertainty in the situation [2]. Therefore we pay attention to cognitive style, tolerance to ambiguity, and its possible influence on decision-making. As far as we know, research of interrelation and dynamics of tolerance to ambiguity and decision-making at the moment are presented insufficiently, especially in the military sphere. So, the purpose of our research consists in studying the dynamics of cognitive style of tolerance to ambiguity and decision-making in the course of training of cadets at a higher military education establishment.

Material and methods. Directly, 334 respondents took part in our research: cadets and sergeants of 1 – 3 courses of three faculties (271 and 63 respectively) trained in specialties of a technical profile.

As diagnostic tools we used the following techniques:

1. Questionnaire "Personal factors of decision-making" (LFR-25). The questionnaire includes two scales, "rationality" and "readiness for risk". In the context of the questionnaire readiness means considering the decisions and working at perhaps full orientation in a situation by "rationality". "Readiness for risk" means readiness to rely on the potential and ability to productively resolve ambiguity situations [3, 4].

2. New questionnaire of tolerance to ambiguity (NTN) [5]. The questionnaire consists of three scales: tolerance to ambiguity (TN), intolerance to ambiguity (ITN) and interpersonal intolerance to ambiguity (MITN). TN is understood as the generalized personal property meaning aspiration to changes, independence and an exit for a framework of the accepted restrictions. ITN means aspiration to clarity, orderliness in everything and ambiguity rejection. MITN means aspiration to clarity and control in the interpersonal relations [5, p. 80]. For processing of results and their statistical analysis methods of descriptive statistics and *U*-Mann-Whitney criterion were used (in IBM SPSS Statistics 19).

Results and discussion. During intergroup comparison on scales of LFR-25 and NTN the hypothesis of distinction of the studied properties on the level of their expressiveness depending on the military rank and term of training of examinees was checked. As a result, it revealed that the most rational at decision-making are cadets and sergeants of the first course. Average values of readiness for risk are higher for cadets of third year and sergeants of first and second year. The most tolerant to ambiguity are cadets of the second year and sergeants of the second and third year, and intolerant are cadets and sergeants of the first course. The interpersonal intolerance to ambiguity is most expressed at cadets of the first and second year and sergeants of the first course.

Besides, for cadets of the second year interpersonal intolerance to ambiguity is reliably higher than for sergeants of the second year. Lack of distinctions between cadets and sergeants of the first course in the studied variables, is probably, explained by the fact that sergeants had a brief experience of administrative activity. On the contrary, both sergeants and cadets of third year have a wide experience of administrative activity, but sergeants are more rational and tolerant, and cadets intolerant and ready to risk. That demand from sergeants in military establishment of education for decision-making is much higher than from cadets and they, despite aspiration for novelty and originality is the possible reason for it, are ready to solve more complex problems, but nevertheless need fuller information on the situation.

Cadets of the first course are statistically more rational and also intolerant than cadets of the second year. In comparison with cadets of third year they statistically strive more for definiteness and control in interpersonal relationship and don't accept ambiguity situations. Cadets of the second year statistically, as well as cadets of the first course, feel bigger discomfort from ambiguity in the relations with others in comparison with cadets of third year.

Sergeants of the first course are statistically less tolerant to ambiguity than sergeants of the second and third year, and also more intolerant to ambiguity in comparison with sergeants of third year. It is of interest that sergeants of the second year are statistically more ready to productive solving of situations of ambiguity than sergeants of third year.

Conclusion. As a result of the conducted research new data on dynamics of tolerance to ambiguity and decision-making for cadets of 1 - 3 courses of military establishment of education are obtained. During research, the hypothesis of distinction of the studied properties between levels of their expressiveness depending on the military rank and term of training (administration) of examinees is partially confirmed. At the same time, questions of interrelation and influence of tolerance to ambiguity on decision-making by various categories of military men demand further study.

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THEORETICAL AND METHODOLOGICAL PROBLEMS OF CREATING OF LEGAL CULTURE FOR YOUNG PEOPLE AT THE PRESENT STAGE

WAYS OF HARMONIZING LEGISLATION IN THE EEU FOR THE SUBJECT BUSINESS

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In accordance with the primary goal of creating community is the formation and creation of conditions for the stable development of the economies of the Member States in order to improve the living standards of their populations; the desire to create a single market for goods, services, capital and labor within the framework of the EEU member states; comprehensive modernization, co-operation and competitiveness of national economies in the global economy. The aim of this work – the analysis of possible harmonization of the laws of the EEU in respect of business entities.

Timeliness of the topic lies in the fact, that we need to develop new approaches that entail harmonization of the laws of the EEU in respect of business entities for its operations, which in the first instance, contributes directly to the approximation of the laws of the Member States EEU.

Material and methods. The material of our study was the number of regulations that are directly related to the legislation of member countries of the Eurasian Economic Union. The methodological basis of the study of the dialectical method of knowledge of legal phenomena, allowing open their integrity and system. In addition, the study used: logical method, system analysis, simulation method, and others.

Results and discussion. The Eurasian Economic Union was founded May 29, 2014. Within the framework of the Union is scheduled to hold a coherent, unified policy on the most important areas of the economy.

Towards the international unification of law and economic integration were not only developed economy in the world, but also developing. Today, in the first place come the regional economic and political union of states, such as the European Union (EU), the Shanghai Cooperation Organization (SCO), the Union of South American Nations, the BRICS and others.

There is a need for standardization and harmonization of legislation by all the Member States EEU. There are several different legal regulation of creation, operation and liquidation of corporations among the Member States EEU. Such an entity as a corporation is still not present in the legislation of all Member States EEU. Although some amendments to the legislation introduced. Thus, in the Russian Federation since 1 October 2014 introduced the concept of «corporate body» and made the division of legal persons, not only on commercial and non-commercial, but also on unitary and corporate [2, p. 65].

The harmony types of corporations throughout the EEU requires further research and harmonization of legislation, at least in that part of the legislation that applies to commercial corporations. Thus, in the Russian Federation can be attributed to those open and closed joint-stock companies, limited liability.

According to the legislation of Kazakhstan – joint-stock companies and economic partnerships with limited liability and additional liability [3].

Under the legislation of Belarus – a society with limited liability and additional liability, closed and open joint stock companies. The law of the Member States are allocated separate subspecies. Thus, in the Russian Federation introduced the concept of «public corporation». In Belarus, Ltd. is established by at least two persons, although the existence of such a structure, in case of withdrawal of one of the participants, is acceptable [1].

Thus, the legislation of the Member States EEU governing the establishment of certain types of corporations require harmonization.

The international practice of accounting and auditing reports indicate the need for harmonization of national legislation with international standards.

For example, in the international practice has long been accepted among the public corporations publication, along with the national form of financial statements, reporting on International Financial Reporting Standards or US reporting form. Currently, only Russia, Belarus and Kazakhstan have developed legislation in this area, the other Member States of the Union have generated only the provisions relating to specific sectors of the economy.

The difference between the legal regulation of issues necessary for a clear and transparent corporate governance, hinders the development of economic ties. Harmonization requires not only the substantive law and the norms of procedural law [4, p. 205].

In the countries of the EEU various principles of antitrust regulation, apply different criteria to the conceptual apparatus in this area, there is a difference in approach to the regulation of mergers and acquisitions. The law of Russia, Kazakhstan, Belarus, the issue of cross-border mergers and acquisitions settled enough. In some Member States, the EEU resolved certain aspects of mergers and acquisitions in specific industries, and under certain conditions. Thus, in the Russian Federation are regulated foreign investments in business entities of strategic importance for national defense and state security.

It should be noted that the existence of such a need as the maintenance of the state of small business is determined by its importance in solving a number of tasks, such as providing the flexibility of the economy, elimination of monopoly, reducing the unemployment rate.

To solve these problems certainly need resources, the direction and amount of use of which is certainly to be justified. The experience of countries with developed market economies shows that in this case is possible to use various forms of maintenance of small businesses. Preferential taxation, the provision of consulting and information services, the establishment of incubators of small business, insurance funds, direct budget allocations – all of this is the support of business processes [5, p. 8].

It is advisable to consider the quantitative criteria for assigning to small business entities in the member countries of the Union, as they are quite important for understanding the qualitative composition of small businesses.

One of the main problems of private entrepreneurs in the EEU is considered a sharp increase in social taxes, and increasing fiscal and administrative burdens. For many law-abiding entrepreneurs running their business on the verge of profitability, such taxes proved unfeasible, and they were forced to join the ranks of the unemployed or go «into the shadows» [6, p. 33].

Conclusion. Harmonisation of legislation is not the only tool of convergence of legal institutions of the Member States EEU. Entrepreneurship is an essential element of any state. Business increases its value, and is a growing interest on the part of the authorities. Business needs a certain characteristic of a set of entities as participants in business relations.

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MONEY LAUNDERING SCHEMES IN J. GRISHAM'S NOVEL "THE FIRM"

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Income legitimization and money laundering schemes are an integral part of any shady business hidden from the authorities. Money laundering is not always related to legalization of profit gained from clearly criminal activities, for example, sale of drugs, weapons, people or provision of illegal services. Most money laundering schemes are aimed at tax exemption, disinvestment of capital accountable to or registered by supervisory bodies for personal use or inclusion in further illegal schemes.

The objective of our research is to study the most popular money laundering schemes as represented in John Grisham's novel *The Firm*.

Material and methods. The subject of research is the novel *The Firm* by John Grisham. The research is based on descriptive and sociological methods.

Results and discussion. There are several money laundering techniques shown in the novel [1]. They include:

1. Finance segregation, capital restructuring

The principle of finance segregation is that the bulk of illegal finance is divided into smaller portions, e.g. 5–10 thousand dollars and turned into various financial instruments with the help of intermediaries, including bank cards. This approach is based on the assumption that the authorities miss small amounts being unable to control all cash flows.

She knows that in the last three years the Morolto gang and its accomplices have taken over eight hundred million bucks in cash out of this country and deposited it in various banks in the Caribbean. She knows which banks, which accounts, the dates, a bunch of stuff [2].

2. Smuggling

Naturally, the implementation of this technique is to a certain extent limited. Money is smuggled from a country with a high degree of cash flow control to another one, with minimal restrictions. After that it is put into an anonymous bank account, offshore or in the intermediary's name in parts or as a lump sum. Next, the legalized money is transferred back to the country of origin to be put to use.

In J. Grisham's novel the money crosses the border on the company's plane and then is put into different bank accounts.

She knows that the Moroltos control at least three hundred and fifty companies chartered in the Caymans, and that these companies regularly send clean money back into the country. She knows the dates and amounts of the wire transfers. She knows of at least forty U.S. corporations owned by

Cayman corporations owned by the Moroltos./.../ But they also mule it. They've got a small army of mules, usually their minimum-wage thugs and their girlfriends, but also students and other freelancers, and they'll give them ninety-eight hundred in cash and buy them a ticket to the Caymans or the Bahamas. No declarations are required for amounts under ten thousand, you understand. And the mules will fly down like regular tourists with pockets full of cash and take the money to their banks. Doesn't sound like much money, but you get three hundred people making twenty trips a year, and that's some serious cash walking out of the country. It's also called smurfing, you know[2].

3. Convergence, or mixing

Illegally obtained money is added little by little to legal income so that it would be impossible to single it out for audit. Any enterprise could be used as a legal business to take in illicit finance provided it handles cash, there is no direct correlation between its revenue and operational expenses and its income is made up of numerous minor payments.

Tax fraud. They do all the tax work for the Morolto bunch. They file nice, neat, proper-looking tax returns each year and report a fraction of the income. They launder money like crazy. They set up legitimate businesses with dirty money [2].

This procedure is described in the novel in detail through the example of the Dunn Lane Ltd., a corporation registered in the Caymans and established with ten million laundered dollars transferred into the corporation from a numbered account in *Banco de Mexico*. It was just the ten million that had been smuggled there by the company's plane. Then there was another ninety million invested into the company in cash over the next couple of years. After that the corporation started its own business, which also brought profit.

Conclusion. Thus, John Grisham's novel *The Firm* provides a number of vivid examples of money laundering techniques used by the mafia. Therefore, the novel is of special interest to law students helping them not only enrich their English vocabulary, but also enhance their knowledge of crime prevention methods and improve their professional skills.

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PROBLEMS OF RELIABILITY OF THE DATA OF PERSONS WHO HAVE SIGNED A PRE-TRIAL A COOPERATION AGREEMENT

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It is known that the introduction of pre-trial criminal procedure institute a cooperation agreement recognized as a form of a special order of the trial, stimulated active scientific debate. Legal regulation of these institutions, as shown by many publications of researchers and materials practices, requires further improvement and adaptation to the realities of practice in the field of crime investigation, and thus, with the emergence of the Republic of Belarus the institute pretrial agreement on cooperation, the topic is very relevant. The aim of this work is to develop and offer special provisions allowing exposing the person providing false information.

Material and methods. We used the Criminal Procedure Code of the Republic of Belarus (hereinafter – the Code of Criminal Procedure), as well as the works of Alexander Shatalov and Victoria Kondratova. For writing the work of following methods were used: a general scientific knowledge of the dialectical method, formal-legal, logical.

Results and discussion. According to Art. 6 – Code of Criminal Procedure, pretrial cooperation agreement – agreement concluded in written form between the suspect (the accused) and a prosecutor, which defines the obligations of the suspect (the accused) to assist the preliminary investigation and terms of liability of the suspect (the accused) in carrying out these commitments [1].

Despite the huge discussions that raged in the pages of the legal press release regarding the deeper improvement of the legal regimentation proceedings in criminal cases against persons who have signed pretrial agreement on cooperation, as well as studying the all sorts of problems at the conclusion of the pre-trial agreement and directly estimation of this procedure evidence of the presence both organizational as and directly legal shortcomings in this area [2, p. 122].

Alexander Shatalov in his writings pointed out that pre-trial agreement on cooperation aimed, as a rule, into a narrow scope of application but pretends to be a real measure aimed at combating by organized forms of crime [3, p. 36].

So particularly urgent becomes a question of reliability of information of the suspect or the accused.

Is obvious that enticing for suspected and accused prospects of obtaining of punishment for the crime committed of smaller the term and of data size may push the participants to the crimination of others to the crime.

Some of the accused, with the goal avoid criminal prosecution, sometimes can give evidence against people who are not involved, and have no relation to the case and did not fit into the whole picture of the crime committed. Of course, all the evidence, including readings suspects and accused persons are assessed by the investigator. In this case, the actions of the suspect or the accused should be considered as false denunciation, but really dangerous problem is that the authorities may take note of the information without first checking it.

Conclusion. Thus, on the basis of the above, are prompted to enter the Criminal Procedure Code a norm with strict regulation procedure of oversee the accuracy and legality of the execution of a cooperation agreement. For example, it could be given the right to the supervising prosecutor at any stage of preliminary investigation the investigator to give binding instructions concerning cooperation with the suspect or the accused.

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JURY STRUCTURE AND FUNCTIONS IN J. GRISHAM'S NOVEL "THE LAST JUROR"

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Jury service is one of the most important civic duties a US citizen can perform. The protection of rights and liberties in federal courts is largely achieved through the teamwork of a judge and jury. Jury service is a way for US citizens to participate in the judicial process.

John Grisham (born in 1955) is an American bestselling writer, attorney, politician, and activist best known for his popular legal thrillers. A graduate of Mississippi State University and Ole Miss Law School, John Grisham practiced law for about 10 years, specializing in criminal defence and personal injury litigation. Therefore, several of his novels are set in the state of Mississippi and touch upon its judicial system.

The aim of our research is to study the jury structure and functions as represented in John Grisham's novel *The Last Juror*.

Material and methods. The subject of research is the novel *The Last Juror* by John Grisham. The research is based on descriptive and sociological methods.

Results and discussion. There are two types of juries serving different functions in the federal trial courts: trial juries, also known as petit juries, and grand juries. This division is mentioned in the text, when an attorney requests *that the case be presented to the grand jury as soon as possible* [1], emphasising its special importance as he does not believe in a fair trial for his client in the county court, while grand juries deal with federal criminal cases and their proceedings are not open to the public [2]. The secrecy of grand jury trials is referred to once again when attorney Loopus complains about potential leaks of information from the grand jury room.

There was also another case mentioned in the novel. It was definitely tried by a trial, or petit, jury as the author describes a defendant's clothes in which he had to appear in court and try to convince the jury he was not guilty. We know that with trial jury defendants have the right to appear, testify, and call witnesses on their behalf, while neither defendants nor their attorneys have the right to appear before the grand jury.

The juror selection procedure is as follows: Each district court randomly selects citizens' names from lists of registered voters and people with drivers licenses who live in that district. The people randomly selected complete a questionnaire to help determine if they are qualified to serve on a jury. Those qualified are randomly chosen to be summoned to appear for jury duty. This selection process helps to make sure that jurors represent a cross section of the community, without regard to race, gender, national origin, age, or political affiliation. This procedure as referred to in the novel by mentioning *a hundred summonses for jury duty mailed to registered voters all over Ford County* [1].

Special attention is paid to the procedure of selecting candidates to serve on a jury. The judge and the attorneys ask the potential jurors questions to determine their suitability to serve on the jury, a process called voir dire. The purpose of voir dire is to exclude people who may not be able to decide the case fairly from the jury. Members of the panel who know any person involved in the case, have information about the case, or may have strong prejudices about the people or issues involved in the case, typically will be excused by the judge. The attorneys may exclude a certain number of jurors without giving a reason. Thus, *in criminal cases, the prosecution routinely challenged blacks under the belief that they would be too sympathetic to the accused. In civil cases, the defence challenged them because they were feared as too liberal with the money of others* [1].

Before pronouncing the verdict the jury deliberate in a special room, which is shown in the text as *the deliberation room, with deputies at the door as if someone might gain something by attacking them* [1].

Another issue arises when the defendant tries to make a deal with someone on the jury or intimidate them to secure a favourable verdict. In his novel J. Grisham tells the reader about the Padgitts – a family who managed to take control over the sheriff and was likely to try to bribe or scare the jury.

If they can intimidate the newspaper, then they'll try it with the jury. They already own the Sheriff [1].

Since the trial described in the novel is a criminal one, the decision reached by the jury must be unanimous. The government must prove the crime was committed "beyond a reasonable doubt" [2]. The author also pays attention to this fact explaining why the Padgitts didn't want the trial to be moved to another county.

They knew Danny was dead guilty and that he would almost certainly be convicted by a properly selected jury anywhere. Their sole chance was to get a jury they could either buy or intimidate. Since all guilty verdicts must be unanimous, they needed only a single vote in Danny's favor. Just one vote and the jury would hang itself; the Judge would be required by law to declare a mistrial. It would certainly be retried, but with the same result. After three or four attempts, the State would give up [1].

The book says that a regular jury pool for a criminal trial includes forty people, of which *about thirty-five would show up and at least five of those would be too old or too sick to be qualified. /.../Those who survived the early rounds of questioning were routinely excused before the final twelve were empanelled* [1], which matches the actual number for a trial jury. On reading the novel we come across the number of jurors summoned for jury duty. As we know, a grand jury (and this is the type of jury referred to therein) consists of approximately 20 people. However, to avoid intimidation of the jury, this time the jury pool was extended to a hundred people and *when the preliminary questions were over, the panel was down to seventy-nine duly qualified jurors* [1].

Conclusion. In view of the above, we can state that the novel *The Last Juror* presents a vivid and true to life picture of lawyers' and jurors' functions. It goes without saying that fiction books written by the authors with first-hand experience in the area are much more appealing and interesting to read. Thus, the credibility of the facts allows us to use the novel as an additional source of information when studying the US law.

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CHURCH AS AN EMPLOYER IN GERMANY

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Relevance of the topic was the issue of increasing the number of jobs in the public and private sector of Belarus. One of the major employers, as history can be, for example the Catholic Church. Indeed, in Western Europe it provides millions of jobs in the field of care, social protection, health, education, etc. Therefore, the issues of legal regulation of relations of state of the European confessions can be considered interesting from both a theoretical and practical point of view.

Material and methods. This paper investigates the materials posted on the official website of the Bundestag. Methods: legal techniques, methods of analysis of the effectiveness of the legislation, comparative legal, formal-legal method.

Results and discussion. The system of church-state relations in Europe Germany occupies a middle position between church and state strict separation of church and state. The legal basis for the German state-church system is based on three basic principles: neutrality, tolerance and parity. The neutrality of the state is not obliged to identify themselves with any church; state church does not exist (Art. 137 (1) of the Weimar Constitution and Art. 140 of the Basic Law). The State is not allowed to be a special arrangement with respect to a particular religious congregation, or to judge how good the religious dignity or ideology. Ideological institutions must respect the equality of respect to religious organizations; this applies to congregations humanistic orientation, and to those who do not go to the question of God or gods. On the other hand, religious organizations should not be placed in a less favorable position than other social groups; it also prohibits the decision in favor of state atheism. Neutrality means, above all, non-interference: the state is forbidden to intrude in the affairs of religious communities. This is particularly clearly stated in the article 137 (3) of the Weimar Constitution, every religious community manages its own affairs independently under the general law for all. This right to self-determination applies regardless of the legal status of religious congregations. The principle of tolerance enjoins the State not only be impartial with respect to different religious views, but also to strengthen the positive tolerance, making it possible to realize the religious needs of the community. Parity, the latter principle is considered equal to the duty of all religious communities. This means that, despite the constitutional differences in legal status, there is parity, which provides an adequate framework for dealing with the various social actors.

Religious freedom guarantees a person the right to act according to his faith. Jehovah's Witnesses Freedom of expression in the sense of positive tolerance also provides an opportunity for the government to authorize the public schools interdenominational prayer, to the extent that participation in it is an expression of social relations and is conducted on a voluntary basis. Religious organizations can also be confident in the freedom of faith, which exists as a collective right. In Germany, the religious community with a large number of members, as well as many smaller religious communities have the status of legal person of public law. Parishes, dioceses, land churches and church federations considered as corporations under public law. Unlike other corporations under public law, religious organizations with this status are not integrated into the state structure. Every religious organization after the call to the appropriate Land Administration will receive the status of a public law, if it can confirm through its charter and membership of that it really is a continuously operating community. During the struggle for the recognition of Jehovah's Witnesses subject of public law, the Federal Constitutional Court decided that the loyalty to the law is also necessary for obtaining this status. In 2004, their case was not yet completed the administrative courts. Other religious communities receive the status of a private registered association.

1) Each religious community manages its affairs under the general law for all.

2) Every religious community can, regardless of their legal status, to manage their affairs independently.

3) the right to religious teaching and training, performance with the official statements, the commission of worship, the organization of charitable activities, questions concerning important aspects of relations between the employer and the employee and the protection of information.

4) Taking into account the status of a public corporation, this fact has led to the Federal Constitutional Court as the recognition of religious hospitals not covered under the state laws on bankruptcy. It will be recognized incompatible with the right to self-determination when the court appointed liquidator administration will act in a certain structure or organization of religious institutions.

5) The scope of the right to self-determination allow religious organizations in Germany to develop its own detailed internal legal system parallel to the existing state law.

6) Recent events indicate that state courts are increasingly willing to consider church affairs, but they respect the right to self-determination and therefore take into account when considering each case.

Big churches Federal Republic of Germany employs more than one million people: it shows the importance of the role of employers. As a public corporation of the church ranked as public offices. This means that they can have employees that are considered civil servants; church administration can create the structure for the same parameters as the corresponding state organizations. Church formed their own legislation on the civil service under the same rules as the law on civil service, even in respect of salaries and bonuses. For priests, there is a separate law on the service, which also reflects the legal provisions of the Public Civil Service. Whatever it was, the majority of employees of churches the norms of labor law. These rules, however, are modified depending on the circumstances, on the basis of the right to self-determination of the Church and the particular religious content. Freedom of religion requires that the specific parameters resulting duty of the Church, were taken into account when considering their employment status. It manifests itself primarily in the requirement that employees of the churches have been loyal to their church employers. The church itself determines the content of such obligations. The right to self-determination of religious organizations allows the churches under the general law to regulate the conditions of work according to their own understanding and considered mandatory special duties of church workers. What obligations assumed mainly determined by the church formulated its own standards. In case of disputes, the labor courts are obliged to respect the standards of the Church in view of the obligation of loyalty to the extent in which the Basic Law recognizes the right of the Church to define their internal affairs. It is normal if the church itself determines that it is compatible with teaching specific ecclesiastical duties, basic principles of faith and morals, and that is considered as contrary to them. In case of violation of such obligations of loyalty of workers, state labor courts are the final arbiter in deciding how fair Shutdown church workers.

By virtue of their religious mandate of the Church have the right to issue warnings to the employee, if he is in his public life or in the public expression of their views acting against the teachings of the church. The Federal Constitutional Court declared the constitutional decision to dismiss Catholic hospital doctor, publicly opposed the church on television and in magazines on the subject of women's rights to abortion. This decision was confirmed by the European Commission of Human Rights. In the field of collective labor law, in principle, the State can not interfere in the internal organizational structure by churches. Church developed the so-called third way in this area. The Catholic Church, along with many Protestant churches refuse to enter into collective agreements with trade unions.

Conclusion. Thus, in conditions of dynamic changes in the unemployment rate, the church would become one of the employers in the field of education, social security, health care, increasing the number of jobs. To do this, consider topical issues, for example, to enter into a limited concordat with the Vatican, other agreements with officially recognized denominations.

PRESCHOOL AND PRIMARY EDUCATION. SPECIAL EDUCATION. MUSIC EDUCATION

THE ROLE OF EDUCATIONAL DIALOGUE IN PRIMARY SCHOOL AND METHODS OF ITS ORGANIZATION

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Common requirements to the level of students' training who finish their studying at the first stage of secondary education (1–4 classes), reflect compound components of their forming value orientations and also studying skills and aquirements that are connected with cognitive and communicative educational activity:

– to build a monologue, take part in the dialogue, possess necessary means of speech etiquette in order to use them in the process of communication;
– to observe, analyse phenomena of reality, do primary generalizations and conclusions, confirm them with the help of examples [1].

In this way students' training to productive communication is a relevant problem of primary school which includes interaction in systems "pupil-teacher", "pupil- pupil", "teacher-class".

We named our object of investigating as delineation of the role of educational dialogue at the lessons in primary school and methods of its organization.

Material and methods. The materials of our investigating are: scientific and methodical literature, periodic editions, teachers' lessons from School № 21, Orsha and the lessons of persons undergoing practical training from college. The methods of our investigating are: terminological analysis, comparison and generalization, pedagogical observation, written and oral survey and ranking.

Results and discussion. Theoretical analys of scientific and methodical literature and periodic publications shows that among dialogue forms of communication that are used at the lessons in primary school, the most popular of them is heuristic conversation, educational discussion and an educational dialogue. In this way L. Epishina defines dialogue as arbitrary context speech that is rich for thoughts, type of logical action and a particular method of cognition. She underlines that the main line of educational dialogue is purposeful exchange of ideas, judgements, opinions for the searching of truth also moving of the participants to the common cognitive result is provided [2, p. 41].

Defining a dialogue lesson as “the place of meeting with people who think in different ways many scientists and practitioners (G. Tsukerman, E. Melnikova, S. Pozdeeva and so on) accent their attention on concrete factors that hinder from the dialogue at the lesson, describe in their works conditions, techniques and methods of organization of educational dialogue [2; 3].

Never the less observation and analyses of the teachers’ lessons from School № 21, Orsha and lessons of persons undergoing practical training from college shows that in most cases educational dialogue in primary schools suits modern requirements of its organization. In most cases it’s a conversation between students. At the basis of it we have delineated principal reasons that hinder from literature organization of dialogue forms of conversation at the lesson:

– unpredictable way of a lesson;
– authoritarian activity of a teacher;
– lack of teacher’s emotions to children audience;
– provocation of “chorus answers” (Have everybody done this task? Do you understand in what way should we do this task? Who else doesn’t know what to do?...);
– reproductive and “closed” quesions and so on.

The practice shows that for developing interpersonal interaction in educational process different ways of educational dialogue are used: “*teacher-class”, “pupil-class”, “pupil-pupil*”. The most common type of dialogue in primary school from our point of view is “teacher-class” (or question-unswer dialogue) which requires the teacher’s knowledge of the structure of its realization:

1. Telling the theme.
2. Posing the educational problem.
3. Co-search of educational problems’ solve; listen to different points of interlocutors’ view; correcting (when it is necessary).
4. Recepting joint final decision.
5. Generalization (teacher does it when he lead to the result of pupils’ speech at the lesson).

If the problem stays unsolved till the end of the lesson the teacher offers to think it over and thereby gives a right of choice to pupils.

The leading aim of “pupil-class” dialogue that is realised mainly in the form of discussion we can call the determination of opportunities of sides’ agreements, or compromise. In front of one of the pupils and the class there is a problem, the common solution of which they should find taking into account the views of like-minded learners. The pupil generalizes, systematizes the knowledge obtained at the previous stages of education and appears to be a carrier of information.

In the form of interpersonal communication “pupil-pupil” (work in pairs, groups, collective dialogue, dispute) the decision is found with the help of reciprocal arguments which satisfies both sides. Such type of the dialogue unites participants for their further team work which results in the optional solution of the problem.

Characteristics of such a dialogue are: presence of bank off ideas from its participants, completeness of used information, it versality, clear validity of judgements.

There are a lot of interesting examples and means of entering into a dialogue in the arsenal of experienced teachers. 20 teachers from School № 21 were offered to number them in order of frequency of use at the lessons. In the first place teachers put *role-playing and action games* because at primary school a game is one of the leading methods of educating and upbringing. The following method was *illustrative material* (photo- and video extracts, records, computer presentations and so on) because practically all children have computers at home and they "like everything made on the basis of information technologies". *Small literary genres* (proverbs, sayings, rhymes, puzzlesand so on) the teachers ranked only as the third type explaining it by the fact that learners got used to theese means of activating intellectual activity. *Dramatizations* rounded the list. Relatively low rating is explained by the fact that younger students do not sufficiently possess artistic abilities.

Certainly all the methods are effective in their own way. However, the teacher as the organizer of the dialogue shouldn't forget about time, "hanging on" any introductory moment in other words getting away from the heart of the problem. It should be mentioned that the dialogue mustn't be interrupted when the bell is ringing. The conclusion of the discussion requiers a logical ending, summing meaningful outcome, generalization of the above mentioned. It's desirable for the conclusions to be short and not to cover the whole range of ideas and opinions.

Conclusion. The investigation has shown that the use of educational dialogue at the lessons in primary school orients younger students on the searching activity, forms reflective thinking skills, develops their communicative qualities because in the dialogue regime children learn how to help and ask each other for help. In its turn the ability to build a dialogue, use interesting techniques, methods and means when entering into it, is one of the most important indicators of professionalism of the teacher.

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PSYCHOLOGICAL CORRECTION OF THE CHILD PARENTAL RELATIONS IN THE FAMILIES RAISING CHILDREN WITH INTELLECTUAL INSUFFICIENCY

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The subject “Psychological Correction of the Child Parental Relations in the Families Raising Children with Intellectual Insufficiency” is actual as in modern psychological researches in insufficient volume problems of the families which are bringing up the child with intellectual insufficiency are analyzed. There are researches of mental features of different categories of children with intellectual insufficiency, various approaches to rendering psychological assistance to children though parents need not less close attention from psychologists and other experts [3, p. 311]. However recently the increasing importance the problem of social adaptation not only gets the children with intellectual insufficiency having this or that heavy pathology, but also a family in which they are brought up [2, p. 197].

Object of research – the child parental relations in the families raising children with intellectual insufficiency.

Subject of research – the organization and the content of psychological correction of the child parental relations in the families which are bringing up the child with intellectual insufficiency.

Research objective – scientifically to prove and approve contents of the program for correction of the child parental relations in the families which are bringing up the child with intellectual insufficiency.

Material and methods. In the course of work the following methods of research were used:

- the analysis of the psychologist – pedagogical, special literature on a research problem;
- experimental studying of psychological features of the child parental relations in the families which are bringing up the child with intellectual insufficiency;
- methods of mathematical and statistical data processing.

As techniques of experimental studying of the child parental relations in the families which are bringing up the child with intellectual insufficiency us the following psychodiagnostic techniques were used:

• The technique questionnaire "The analysis of family education" (DIA) developed by E. G. Eydemiller and V. Yustitskis.

• Technique "Family drawing".

• Questionnaire of the Parental Relation (QPR) of A.Ya. Varga, V.V. Stolin.

• The questionnaire "Responsibility" – (author V.P. Pryadein), directed on identification of a level of development of responsibility.

• Questionnaire "Interaction parent child" (author I.M Markovskaya). Results underwent the qualitative and quantitative analysis by means of methods of mathematico-statistical processing [6, p. 94].

This research took place on the basis of UO "Vitebsk Public Auxiliary School No. 26". 16 parents raising children with intellectual insufficiency of various diagnoses took part in research.

Results and discussion. The obtained data on the basis of the carried-out technique testify that patologiziruyushchy roles at members of families, in particular at parents, arise under influence inside – and the interpersonal conflict relations traced in several generations in dysfunctional families [1, p. 92]. These conflicts, being not structurally resolved, are transformed to personal installations which distort process of family education, doing it patologiziruyushchy.

The sympathy relations between her members are distinguished from violations of mechanisms of integration of a family. These relations play huge role in educational process. Education – hard work which is considerably caused by parental love, that the child's benefit for parents quite often more important, than own. Violation of the relations of sympathy (love, attachment) at parents involves considerable adverse effects.

Concerning violation of system of mutual influence of family members it is necessary to tell that formation of family relationship happens successfully if each family member is capable to affect others, their behavior, their opinion on the most various questions. Influence of parents on the teenager is especially essential; its existence – the important prerequisite of implementation of social control of his behavior from a family.

Thus, results of research showed that in the families raising children with intellectual insufficiency it is possible to carry to psychological features of the child parental relations:

• high emotional and verbal contact;

• aspiration to show and state the care of the child, high interest in ensuring wellbeing of the child;

• aspiration to equality of the relations between parents and children, respect of feelings and experiences of the child;

• existence of deep internal experiences of communication with the child's birth with intellectual insufficiency, an aktsentirovannost on the personal grief, feelings connected with the child;

• the increased personal uneasiness;

• insufficient level of integration of a family;

• a conflictness, transfer of the family conflicts to other spheres of life.

Results of our research testify to need of carrying out special work with the families raising children with features of psychophysical development in harmonization of the child parental relations between parents and children [4, p. 68]. This activity has to be carried out at close interaction of teachers of school and especially the psychologist, the social teacher and the teacher-speech pathologist [5, p. 5].

Conclusion. Psychology and pedagogical maintenance of a family is very significant link in the medico-psychology and pedagogical help to children for prevention of primary violations, in correction of secondary deviations in development. It demands wide use in practice of a complex of an integrative interdisciplinary handshaking of all adults who are the interested participants of educational and educational processes.

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COMPETENCE APPROACH TO THE DEVELOPMENT OF "THE CHILD AND THE SOCIETY" EDUCATIONAL SECTION CONTENTS OF THE PRESCHOOL EDUCATION CURRICULUM

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One of the important problems of preschool education in the Republic of Belarus nowadays is the development of the contents of the preschool education curriculum in the context of competence approach. Great attention here is paid to the updating of the contents of "The Child and the Society" educational section, which is connected with the necessity of creation of optimal conditions for versatile social and personal development and successful socialization of the child of preschool age.

The urgency of development of the contents of "The Child and the Society" educational section of the preschool education curriculum is defined by the necessity of formation in children of preschool age of initial key competencies, which manifest itself in independent application of acquired knowledge about social reality, of skills, abilities, experience of productive interaction with surrounding people for the successful solution of problems in various kinds of children's activity and in new situations.

The purpose of this article is to present the specific features of development of the contents of “The Knowledge of Society” educational component of “The Child and the Society” educational section of the preschool education curriculum for 4-5 year old pupils.

Material and methods. In the study of the above problem we relied on the researches of domestic and foreign scientists mentioning issues of competence approach in education (O.L. Zhuk, N.V. Kukharev, A.P. Lobanova, V.F. Rusetsky, A.V. Khutorskoy, etc.); specific features of application of competence approach in preschool education (A.G. Gogoberidze, O.V. Dybina, L.V. Svirskaya, L.V. Trubaichuk, N.S. Starzhinskaya, L.C. Khodonovich, etc.); scientific and theoretical aspects of social reality cognition by children of preschool age (S.A. Kozlova, M.D. Makhaneva, N.V. Miklyaeva, etc.).

Methods of research: analysis and summation of papers in scientific editions, curriculum and methodological materials, psychological and pedagogical literature, guidance manuals, reference and encyclopaedic sources, publications in Internet on the issues related to competence approach in preschool education and social and personal development of the child.

The analysis of sources made it possible to define the types of initial key competencies of preschool children:

– Personal, including communicative, social competence;

– General, containing cognitive, activity-related, intellectual, informational competencies;

– Domain-specific, reflecting the curriculum contents of the separate educational section, aimed at formation of knowledge, skills and ways of activity specific to each educational sphere, experience of transformation of new knowledge and ways of its application in different life situations [1, p. 366].

Results and discussion. Within the research framework the preschool education curriculum contents of “The Knowledge of Society” educational component of “The Child and the Society” educational section was developed for pupils aged 1 to 7 years, to be focused on initial key competences (personal, general and domain-specific). Let us present the details of its development at the example of the contents of “The Knowledge of Society” educational component for pupils of medium group (aged 4 to 5 years).

For the purpose of realization of this component’s contents pupils of medium group should be taught the following:

- With adult’s aid, to distinguish coevals and adults, being guided by exterior attributes, age, gender, occupation; to tell about one’s mates in the group, about their hobbies; to display good feelings towards them, to render feasible assistance to them; to observe the rules of polite behavior with mates and adults in the group and public places.

- With adult's aid, display positive emotions towards one's own homeland, home, city; to name one's own native city, settlement, country – the Republic of Belarus, its capital; to learn and name sightseeing attractions of the city of Minsk, well-known Belarusians, objects of arts and crafts of Belarus, etc.

To distinguish, compare, and analyze emotional conditions of surrounding people, character traits of one's mates and adults, etc.

The formation of initial key competencies are reflected in planned results of acquisition by the pupil aged 4 to 5 years, of preschool education curriculum "The Child and the Society" educational section (educational component "The Knowledge of Society"). For example, the child knows:

- Names and patronymics of his/her parents, close relatives, employees of the preschool education institution, surrounding adults;
- The name of the country – Republic of Belarus, its capital – the city of Minsk, own native city, settlement, red-letter days, etc.

The child is able to:

- With adult's aid, distinguish coevals and adults, being guided by exterior attributes, age, gender, occupation; understand emotional state of surrounding people, display good feelings towards them, render feasible assistance to them; recognize and name well-known Belarusians, the main sightseeing attractions of own native city, capital of Belarus, objects of arts and crafts of Belarus, etc.
- To apply acquired knowledge, skills, ways of activity for active participation in social life of a group, family, and other children's associations.

Conclusion. The presented contents of educational component "The Knowledge of Society" of preschool education curriculum "The Child and the Society" educational section will make it possible to generate in the pupils from 4 to 5 years old the initial key competencies, reflecting the following:

- Emotional and axiological attitude to own family, native city and country, to the events of today's life, behavior of surrounding mates and adults;
- Interest to knowledge about the Republic of Belarus, its cities, sights of attraction, well-known people, and the Belarusian national culture;
- Skills of understanding emotional states of mates and adults, showing good feelings towards them, assisting them;
- Experience of polite behavior, dialogue and self-expression with mates and adults in educational process, in various kinds of activity, and in new life situations.

Application of the curriculum contents developed in the context of competence approach will promote comprehensive social, moral and personal development of preschool children, which will allow raising the quality of preschool education as a whole.

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FORMATION OF INTERPERSONAL RELATIONS OF PUPILS IN CONDITIONS INCLUSIVE EDUCATION

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Inclusive processes in the social and educational practice declared to be an innovative movement of modern society towards its humanization. The development of inclusive education - a systemic, evolutionary change at all levels of education and society in general (SV Alekhine, 2011). In domestic psychological-pedagogical science study of inclusive processes occurs mostly in the context of organizational and methodological problems of upbringing and education of children with special needs, the issues of socialization and rehabilitation (N.N. Malofeev, N.M. Nazarova, L.M. Shipitsyna, T.V. Furyaeva et al.).

Salamanca Statement notes that schools should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions. Schools need to find ways of successful education for all children, including children who have severe physical or mental disabilities or disadvantages. The basic principle of the inclusive school is that all children should learn together, in all cases when this is possible, regardless of any difficulties or differences that exist between them, it is important that training in the interests, needs and the needs of all children.

A number of authors (Furyaeva T. Schmidt VR, H.Myuller-Kollenberg, Richard Rieser et al.) Indicated exclusion factors in today's education, which can be analyzed at the macro, meso and micro level. At the macro level marked the formal nature of the relationship between educational technology and the social and political tasks of education, a gap between the achievements of psychological-pedagogical science and the level of their implementation in education, reducing social importance of education, and others. At the meso level - the lack of a sufficient number of organizations that have supported the children with special needs, the variability of programs for children with high potential and the monotony of training programs for children with problems, the discrepancy of some programs by age and individual characteristics of the child. At the micro level marked discriminatory attitudes towards children with disabilities, children from families of ethnic minorities, not the possession of means of the individualized approach, the tendency of teachers to the comparative evaluation of children and the stability of stereotyping others.

The main aim of inclusive education is the socialization and integration of children with special needs into society as its full members, ie ensuring their social inclusion. One of the major conditions for achieving this goal is to create favorable interpersonal relationships between children with special needs and their normally developing classmates. Studies of domestic and foreign scientists and educators have identified a number of problems arising in the process of interpersonal interaction of children with special needs and their peers in terms of integrated education. A special study of interpersonal relations in school integrated education SA Shaporova showed that children with special needs are less favorable than normal children [1]. H. Müller-Kollenberg, K.Kammann note that children with special needs are not taken automatically peers, availability of educational differentiation is perceived with contempt or jealousy. [2] Gottlieb, leyser, Mamson indicate that in some cases the education of children with special needs in the class of integrated education lead to greater segregation than in a special school [3].

Material and methods. To identify the features of interpersonal relationships in the classroom of the integrated training we conducted ascertaining experiment. As research methods were used: a standardized observation of the process of free communication of students, monitoring the labor activity of pupils at lessons "Technology", in extra-curricular work, and autosotsiometricheskoe sociometric research, discussion with students and teachers, a survey of teachers, the study of school records.

On the basis of ascertaining experiment, we developed a program of correction of interpersonal relations for use in integrated education classes, which educate children with mental retardation, designed for teachers of integrated education classes, teachers working in groups afterschool classes integrated education. The object of this educational work is the work of children with special needs and pupils of a class of normally developing integrated education. Testing of the program was carried out during the formative experiment, which was attended by students of first and second class integrated learning, teachers of these classes, teachers, speech pathologists Class 29 integrated training school in Vitebsk and Vitebsk region. In the experimental and the control group had an enrollment of 30 children with special needs who have significant problems in the system of interpersonal relations class (on the results of ascertaining experiment). In the experimental group carried out purposeful work on teaching students the correction of interpersonal relations in the workplace.

Results and discussion. Results ascertaining experiment showed that although the structure of interpersonal relations in the school integrated education corresponds to the structure in regular classes, children with special needs are in a much more disadvantaged in the system of interpersonal relations class than their classmates. Most children with special needs have a low status in the category of interpersonal relations class (91.5%), of which 38% belong to the group of isolated, which indicates an absolute or relative isolation from the system of interpersonal interaction class, negative or neutral with respect to them classmates. Educational activities in the framework of a formative experiment in the experimental group consisted of several stages. At first, diagnostic phase was carried out (with the class teacher, teacher pathologist, school psychologist) diagnostics features of interpersonal relations in the classroom.

These specific data on the situation of children with special needs in the system of interpersonal relations, the causes of this situation were taken into account in the further remedial work. In the second, the main stage, the special organization of extra-curricular and extracurricular work (including joint activities) students in the class. In the third, final and diagnostic phase was carried out re-examination of the existing interpersonal relations, the situation of pupils with special needs in the system, their level of satisfaction with the relationship.

The main reception and a special organization of work integrated learning in the classroom were: instruction for children with special needs adequately available labor orders; if enrolled in the class several children with special needs, in determining pairs of subgroups for the performance of duties, to avoid permanent inclusion in a couple (subgroup), which will facilitate the deployment of their relationships with all students of class; self-employment of children with special needs should be used as a way to improve their status in the class; use the technique of combining separate individual works in general and others. Totals formative experiment showed that a special organization of work in classes integrated education is a means of pedagogical correction of interpersonal relations in the classroom can improve and interpersonal relationships of children with special needs and their classmates, and class system of interpersonal relations in general. Normally developing students began to consider children with special needs as partners in joint ventures, facilitated the organization of the experience of joint cooperation in the labor market. Special organization of work contributes to the formation between children with special needs and their peers stable friendly relations in all activities.

Conclusion. One way to overcome social exclusion of children with special needs is to develop positive interpersonal relationships in terms of inclusive education. Special organization of work of teachers in classrooms integrated education is a means of pedagogical correction of interpersonal relations of pupils.

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THE FORMATION OF CHILDREN'S EXPRESSIVE READING HABITS AT PRIMARY SCHOOL

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Expressive reading is the right, conscious and emotional reading of a work of art. It is a quality of reading, which is closely connected with correctness, fluency, awareness. Expressiveness significantly increases the degree of assimilation of the literary material, it promotes understanding, comprehension, it also helps to understand the idea of the readable text [1, p. 6]. An attention draws to the program of four-year primary school for the organization of this work [2, p. 66].

The development of expressive reading habits is not easy. As it has been shown by school practice, work in this area requires an integrated approach, systematical but not an episodic activity, relying on the technique of speech in general. Urgency of the problem is related to the fact that children have a reduced interest in reading in general and some parents (7% of respondents) don't pay much attention to the expressiveness while children are doing their homework on the subject of "literary reading". In addition the work is carried out mainly at reading lessons, at the lessons of the Russian language often only some teachers focus on this type of activity.

Material and methods. During the research the work was organized on the basis of two third forms. Five primary school teachers the administration of secondary schools № 2, № 21 in Orsha were involved in participating in the experiment. In order to solve the problems we turned to the study of scientific-theoretical literature, questionnaires, interviews, comparative analysis of the lessons which were given by teachers with working experience of 10 years, the analysis of 3rd year students trial lessons. As the aim of the study we regard the identification the system of effective exercises which promotes the development of certain skills related to the articulatory speech culture.

Results and discussion. T.V. Veryasova (Russia) notes that funds of intonation, expressive reading are supported by a common voice technique - diction, breathing, orthoepical correct pronunciation, melody of tone, rhythm, tempo of speech [3, p. 21]. This requires including execution of a variety of exercises at each lesson of reading, but is not limited only by voice warming-up. Almost all teachers use them – 100% of respondents. However, the effectiveness of work is more effective if special tasks are used such as some assignments on the breath, onomatopoeia, choral reading, articulation exercises, improvement of diction, work on the key words and pauses and the development of the voice.

During research it has been found out that the majority of teachers (80% – 4 persons) pay more attention at the lessons of reading to speech warming-ups, repetition of tongue twisters and by-words.

At the same time it is important to include exercises for improving diaphragmatic-costal breathing. For their implementation the following requirements, addressed to students should be taken into account: *to breathe out deeply throw the nose and mouth; breathe out quietly; don't sort out while breath inhaling; restore the supply of air whenever possible; don't hold breath during the pauses; not to spend the whole supply of air.* An example of such exercise: *"Onomatopoeia"* means to reproduce the whistling of the wind, the sound of the sea, a mosquito squeak, chatter of a magpie, ringing sound, the roar of the engine, squeak titmouse, etc.

40% (2 pers.) of teachers during the observation apply to some methods for stimulating the diction but exercises like these were rarely carried out. At the same time for an immature teacher it is useful to know that the system of exercises in diction includes: *exercises for speech apparatus, mastering vowels and consonants, exercises on a combination the trained sound with vowels; reading of short texts abound in trained sounds; exercises with by-words texts and tongue twisters; reading of rhythmically difficult texts, tongue self-massage, etc*. For example, *"Clock"* (the mouth is closed don't move lips, the tip of the tongue touches the check), *"Pies"* (biting a tongue rolled into a tube), *"Mushroom"* (a tongue stuck to the palate, and mouth is opening and closing).

Pupils often pronounce tongue twisters texts mechanically. There are taught conciseness by the exercise with the *"surprise"*: *to pronounce with the intention to surprise, to please, to make a joke, to warm, give advice.*

A significant benefit in expressive reading of poems is brought by getting an idea of the verbal score. Symbols can be:

– | – a short pause between syntagmas;
– || – a long pause between sentences;
– logical stress – ___;
– ↗ – rising of the voice;
– ↘ – lowering of the voice.

Conclusion. The research results have led to the following conclusions: 1) mastering of expressive reading habits should be carried out systematically; 2) the improvement of the expressive reading habits are contributed by variety of special exercises. 3) development of expressive reading habits if possible shouldn't be torn off from the study of the Russian language educational material.

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C O N T E N T S

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