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Editorial team

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BIOTECHNOLOGY

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PROBIOTICS OF THE NEW GENERATION BASED ON REGIONAL PROBIOTIC STRAINS OF CULTURES OF THE BIFIDOBACTERIUM GENUS

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Abstract

This article shows the results of the development of a new generation of encapsulated probiotic preparation based on regional probiotic strains of cultures of the genus *Bifidobacterium* based on an active probiotic culture - *Bifidobacterium bifidum* U-1.

Work was carried out to isolate and select a strain with high probiotic activity from the northern region of Kazakhstan. The study of lysozyme activity, proteolytic activity, resistance of the strains to the action of gastric juice, catalase activity, harmlessness and toxigenicity of the tested strains, as well as the study of the antibacterial activity of probiotic strains in vitro and in vivo was made. The optimal carrier with

prebiotic properties, lactulose, was selected. The main stages of the encapsulated mold production chain have been developed and optimized.

Keywords: *Bifidobacterium bifidum*, antibacterial activity, periodic cultivation, encapsulation.

Introduction

More than 10^{14} microorganisms that are actively involved in human life (digestive process, metabolism, maintaining the immune status, etc) represent the microbiota of the human intestine. Probiotics made on the basis of microorganisms are more and more widely used to normalize impaired microbiocenosis in healthcare practice. Recent scientific data indicate specificity in the composition of the intestinal microflora, both in each individual mind and in national and regional population groups (the presence of various entero-types) [1]. The data can be used to develop the scientific basis for the creation of probiotic drugs based on the principles of personalized medicine.

Increased attention to probiotic drugs is currently caused by an increase in the contingent of individuals with microecological disturbances and requiring correction of their own microflora [2]. The most effective and physiological means of corrective action on microflora in case of dysbiosis are biologics with live cultures of bifidobacteria. The creation and widespread introduction in medicine of high-quality probiotics based on regional biovariants of normal microflora is currently an urgent and important task [3].

According to a number of researchers, the effectiveness of bacterial preparations depends on the biological properties of the strains included in them. When developing probiotics of a new generation, preparations based on probiotic cultures of the genus *Bifidobacterium* of various species are considered promising [4].

At the same time, during the creation and development of new modern probiotic preparations, increased attention has recently been paid to taking into account the specifies of regional use. The creation of probiotic drugs based on the principles of personalized medicine and focused on specific regional groups of the population of the country is an innovative direction to improve the health of the population [5-9].

The aim of our work was to select the most active probiotic culture characteristic of the northern region of Kazakhstan and develop on their basis a comprehensive therapeutic and prophylactic drug with pre- and probiotic action.

Materials and methods

The strains of probiotic cultures of the genus *Bifidobacterium bifidum U-1, Bifidobacterium bifidum U-2, Bifidobacterium bifidum U-3* and *Bifidobacterium bifidum U-4* isolated from samples of the intestinal

tract of infants from the first days of life were used as objects of research. Isolation was carried out by the method of cumulative culture on a corn-lactose medium of the following composition [10].

To study the biochemical properties used the environment, the main background of the following composition, g/l: peptone - 5.0; K_2HPO_4 - 1.0; alcohol solution of bromothymol blue at a concentration of 1.6% - 2 ml, a solution of carbohydrate (cellobiose or fructose, or galactose, or lactose, or maltose, or beckon, or mannose, or raffinose, or sucrose, or trehalose, or xylose, or rhamnose, or arabinose) - 10%.

During determining the resistance of the strains to the action of intestinal juice, canned medical bile was used. The strains were incubated in an incubator at temperature of 37-38 ° C for 48 hours. The growth or absence of strain growth was checked visually.

Determination of the antibacterial activity of cultures *in vitro* - an inoculum based on an *Escherichia coli* culture was mixed with heated and re-cooled to 50 ° C and poured into Petri dishes agar. The dishes were cultured at a temperature of 37 ° C during 20 minutes. Symmetrically located disks with a diameter of 10 mm were cut from agar plates obtained by the deep method, and a suspension of probiotic cultures was introduced into the holes. After the suspension was added to the wells, the test plates were thermostated at 37 ° C for 24 hours until the growth inhibition zone of *Escherichia coli* appeared.

The study of the antibacterial activity of probiotic strains *in vivo*. During the study of antibacterial activity, a test strain of *Staphylococcus aureus* at a dose of 200 ml was used. The mice were injected with a culture mixture of *Staphylococcus aureus* at a dose of 0.1 ml, followed by the introduction of a sterile filtrate of the culture fluid at a dose of 0.5 ml for 7 days. The control group was injected only with a mixture of cultures of *Staphylococcus aureus* [8].

Results and discussion

Four separate isolates were picked out from the gastrointestinal tract of an infant of seven days of life. Identification of the isolated isolates was carried out in accordance with the Bergey bacteria identifier [12]. Strains of bifidobacteria - anaerobes, did not grow on aerobic conditions on the surface of solid nutrient media. During growing Bifidobacterium broth in a semi-liquid nutrient medium, growth was observed in the form of carnation-like characteristic colonies of a milky color, leaving the upper part of the medium transparent (aerobiosis zone). Separate colonies of bifidobacteria had the form of small "nails", white colored, in the shape of a crumb caused during shaking. During microscopy, stationary curved, club-shaped sticks were found, located singly or assembled into chains (Figures 1, 2, 3, 4). The spores did not form. Cell size 0.5 μm. Anaerobes. Non-acid resistant. The optimum

growth temperature is 37-41ºC. Well grown on a nutrient medium *Bifidobacterium* broth. Catalase-negative. Gram-positive.
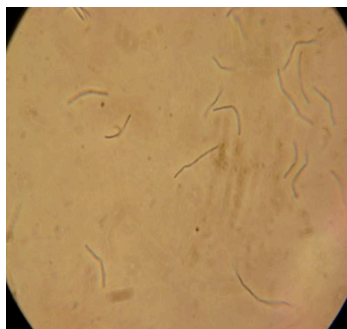
Рис. 1. Microscopy of
Bifidobacterium sp.U-1
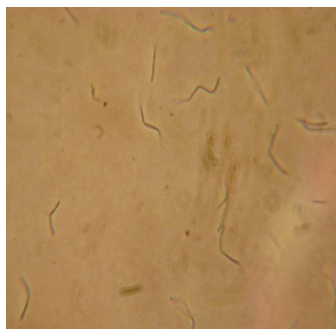
Рис. 2. Microscopy *of*
Bifidobacterium sp.U-2
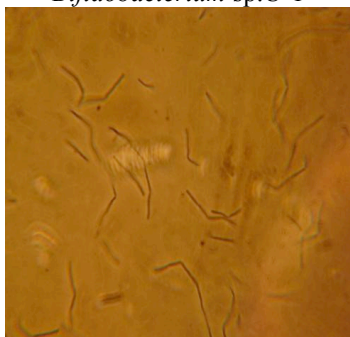
Рис. 3. Microscopy of
Bifidobacterium sp.U-3

Рис. 4. Microscopy of
Bifidobacterium sp.U-4

During studying the biochemical properties of the isolated isolates, identified as the genus Bifidobacterium sp., The main background medium was used. Based on the data obtained on the study of biochemical properties, the isolated isolates actively assimilated a wide range of carbohydrates: galactose, glucose, lactose, mannose, sucrose, fructose with the formation of acid without gas, and catalase was not formed. They did not consume arabinose, xylose, rhamnose, ribose, salicin, and cellobiose. Based on the data obtained, the carried out isolates were identified as representatives of the species of *Bifidobacterium bifidum*.

During studying lysozyme activity it was found that all the isolated strains of probiotic cultures U-1, U-2, U-3, U-4 have activity against *Staphylococcus aureus*.

As a result of studying the lysozyme activity of probiotic cultures, we found that the most active were the strains: U-1 -3 mm; U-2 - 3 mm; U-3 - 2.5 mm; U-4 - 1.5 mm.

When studying proteolytic activity, it was revealed that the isolated strains of probiotic cultures U-1, U-2, U-3, U-4 had proteolytic activity.

Not less important characteristic for probiotic cultures is resistance to the effects of gastric juice - because when used orally, many beneficial bacteria die under the influence of gastric juice without getting into the intestines. During studying the resistance of strains to the action of intestinal juice, canned medical bile was used. As a result, it was found that the viability of bifidobacteria under the action of bile persists for 7 hours to 10^7 CFU / ml.

The next stage of the work was the identification of the most active strain with the highest frequency of division, by the method of studying the antibacterial activity in vitro in relation to the test culture of *Staphylococcus aureus*. The results of the antibacterial activity of the probiotic cultures U-1, U-2, U-3 and U-4 are presented in table 1.

Table 1. Antibacterial activity of probiotic cultures

Probiotic culture strains	Zones of growth inhibition of the test culture of *Staphylococcus aureus*, diameter, mm
Bifidobacterium bifidum U-1	4,5±0,2
Bifidobacterium bifidum U-2	2,2±0,4
Bifidobacterium bifidum U-3	2,0±0,5
Bifidobacterium bifidum U-4	3,7±0,3

A study of the antibacterial activity of the isolated strains of pro-biotic cultures of the *Bifidobacterium* genus showed that each isolated strain individually had a zone of inhibition of growth of the *Staphylococcus aureus* culture. The largest growth retardation zone of the *Staphylococcus aureus* culture was noted when exposed to the *Bifidobacterium bifidum U-1* strain.

A research of the antibacterial activity of probiotic strains in vivo was carried out. We used a culture of *Staphylococcus aureus*, a sterile filtrate of the culture fluid of probiotic strains, as well as a control and working group of mice.

As a result of the research, it was found that in the first group of animals, the survival rate of mice was 10%. At the same time, in the group of animals treated with a sterile filtrate of *Bifidobacterium bifidum U-1* culture fluid, the survival rate was 95%.

In the second group of animals, the survival rate of mice was 25%, in the group of animals receiving a sterile filtrate of *Bifidobacterium bifidum U-2* culture fluid, the survival rate was 80%.

In the third group of animals, the survival rate of mice was 20%, in the group of animals receiving a sterile filtrate of *Bifidobacterium bifidum U-3* culture fluid, the survival rate was 85%.

In the fourth group of animals, the survival rate of mice was 30%, in the group of animals receiving a sterile filtrate of *Bifidobacterium bifidum U-4* culture fluid, the survival rate was 75%.

This confirms once again that this strain is the most active strain with the highest segmentation frequency.

As the research has shown the most active probiotic culture with the highest dividing frequency and antibacterial activity is *Bifidobacterium bifidum U-1*, this strain was taken as the basis for the development of the capsule form of the complex probiotic drug. A lactulose prebiotic was used as filler.

Further was carried out work on the selection of a nutrient medium for the cultivation of the Y-1 probiotic culture in laboratory and semi-industrial conditions - the optimal medium for maintaining and cultivating a Y-1 culture in laboratory conditions is the nutrient medium with whey hydrolyzate. The medium of the following composition was selected as the optimal medium for industrial cultivation, g/l: 20% corn extract – 20.0; cystine - 0.5; glucose - 10.0; tap water up to 1 liter; medium pH was 6.5 ± 1, sterilization mode - 110 ° C, 20 min. - the average productivity of the titer was $5,0 \times 10^9$ CFU/ml.

The conditions for the deep cultivation of Y-1 in a 10 and 120 liter fermenter were worked out: the optimal cultivation mode at a temperature of $(37 \pm 0.5)°$ C, pH 7.0 during 18 hours. The average productivity was $(3.6 \pm 0.1) \times 10^9$ CFU/ml.

The modes of concentration and drying of Y-1 biomass in semi-industrial conditions were developed and optimized. The concentration mode at 4000 rpm for 30 minutes was choosed as the most optimal - the maximum biomass yield of 38.0 g with the highest titer of 5.3×10^{10} CFU/ml was recorded. The best drying mode is lyophilization in trays at temperatures from -58 ° C to +28 ° C. Depth of vacuum - 15-25 Pa, for 2 days.

An experimental industrial regulation was developed, an installation batch of the drug "Bifidumbacterin dry" in capsules, in the amount of 500,000 capsules, was developed and transferred for registration tests to the national drug certification authority. Based on the results of certification tests, this drug was included in the register of medicines of the Republic of Kazakhstan.

Conclusion

As a result of the work done, 4 new active strains of the probiotic culture of *B. bifidum* were isolated from the contents of the gastrointestinal tract of the infant. The cultural-morphological and physiological-biochemical properties of the selected cultures were studied. The technology of cultivating culture media and cultivation conditions of *B. bifidum* has been developed; optimal conditions for the concentration of native microbial suspension were selected; the process of lyophilization of industrial microbial culture was optimized; the methodology for obtaining the encapsulated therapeutic and prophylactic drug based on the newly isolated highly effective bifidobacteria has been worked out.

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CHEMISTRY

Gorobets S.N.

IDENTIFICATION OF THE CONVERSIONS PRODUCTS OF TRIACETONAMINE

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Abstract

The purpose of the article is to show the accessibility of the proton magnetic resonance spectroscopy and electron (ultraviolet) spectroscopy for the identification of the conversions products of triacetonamine. A study was made of the ^{1}H NMR and UV/VIS spectra of 2,2,6,6-tetramethyl-4-oxopiperidine derivatives. The data obtained provide an exhaustive interpretation of the structure of the compounds. The experiment results did not vary with different methods of producing triacetonamine derivatives.

Keywords: proton magnetic resonance spectroscopy, ultraviolet spectroscopy, six-membered nitrogen heterocycles.

Introduction

2,2,6,6-Tetramethyl-4-oxopiperidine, which is also known as triacetonamine, is a cyclic secondary amine with a six-membered heterocycle containing carbon atoms and nitrogen. Triacetonamine (1) serve as the starting material for the synthesis of a wide variety of 2,2,6,6-tetramethylpiperidine derivatives (Scheme 1) [1]. Such six-membered nitrogen heterocycles include tempalgin, tempanginol and other medications. They possess considerable biochemical and pharmaceutical importance.
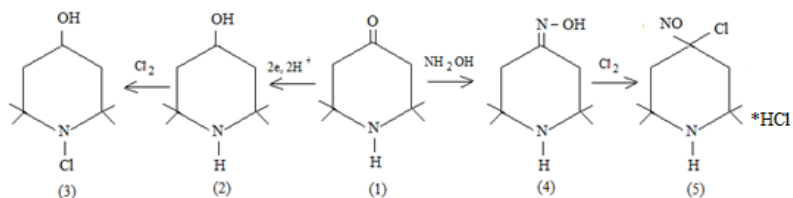
Scheme 1

Nuclear magnetic resonance spectroscopy, commonly referred to as NMR, has become the preeminent technique for determining the structure of chemical substances over the last decade. Especially valuable proton magnetic resonance spectroscopy, which measures the resonances due to energy absorption by hydrogen atoms in organic compounds. The chemical shifts of OH and NH protons vary over a wide range depending on substrate structure, solvent, temperature and concentration. The approach is applicable only to pure samples.

Another analytical tool to determine organic structures is electron (ultraviolet) spectroscopy. UV-Vis can be used in a qualitative manner, to identify functional groups or confirm the identity of a compound by matching the absorbance spectrum. Most electronic transitions in molecules appear in the range of 100-750 nm. The UV extends from 100–400 nm and the visible spectrum from 400–750 nm. The 100–200 nm range is called the deep UV. Organic compounds absorb UV or visible light, and the wavelength of light absorbed varies from compound to compound [2].

Materials and Methods

1-Chloro-4-hydroxy-2,2,6,6-tetramethylpiperidine (3) and 4-chloro-4-nitroso-2,2,6,6-tetramethylpiperidine hydrochloride (5) were received from 2,2,6,6-tetramethyl-4-oxopiperidine (1) [3]. Compounds (3) and (5) purity was confirmed by thin layer chromatography [4]. ^{1}H NMR spectra were recorded on a Varian VXR-300 (300 MHz) spectrometer with TMS as internal standard, solvent CDCl$_3$.

The UV/Vis| spectrophotometric analysis was performed on an «Specord UV VIS» spectrophotometer using 1 cm quartz cells. The solventy employed ethanol 99 % (b.p. 78,3 ^{0}C, n^{20}_d = 1,3616, water < 0,05 %). Has been cleaned according method presented in the work [5]. Sample of 1-chloro-4-hydroxy-2,2,6,6-tetramethylpiperidine (3) were weighted and transferred to 25 ml volumetric flask, being solubilized in ethanol (c = 0,0005 mol/L). Compound (5) was also solubilized in

ethanol. UV/VIS- spectra were recorded at the wavelength of 270 nm for compound (3), at the wavelength of 660 nm for compound (5). Experiments were carried at the room temperature (about 25 ^{0}C) and at the atmospheric pressure 750-760 mmHg.

Results and Discussion
^{1}H-NMR spectrum of 1-chloro-4-hydroxy-2,2,6,6-tetramethylpiperidine (3) presented in Figure 1.
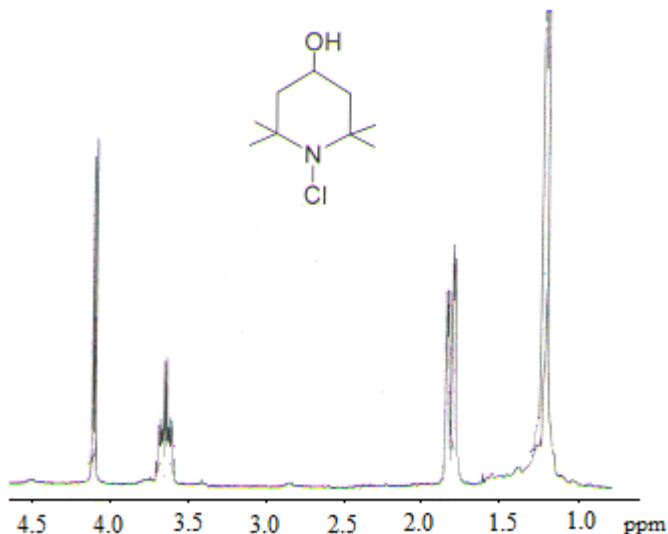
Figure 1. ^{1}H NMR spectrum of 1-chloro-4-hydroxy-2,2,6,6-tetramethylpiperidine (3).

Spectrum has the signal 1,2 ppm (12 H, 4 CH$_3$). The group of peaks (1,8 ppm and 1,85 ppm) is due to the CH$_2$ (doublets). The shift of 3,65 ppm (multiplet) causes CH group proton. The peak is the signal at 4,1 ppm represent the proton OH (hydroxyl group). Moreover, the appearance of a signal in a low field indicates a bond of CH with a hydroxyl group.
UV spectrum of 1-chloro-4-hydroxy-2,2,6,6-tetramethylpiperidine (3) presented in Figure 2 .
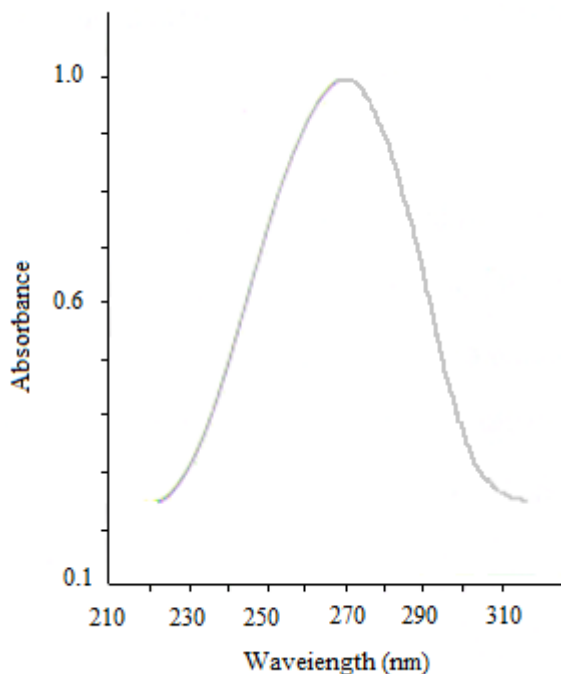
Figure 2. Ultraviolet absorption spectrum of 1-chloro-4-hydroxy-2,2,6,6-tetramethylpiperidine (3) in ethanol,
$c = 5*10^{-4}$ mol/L

Ultraviolet absorption curve shows the absorption maximimum at 270 nm (the long wavelength region). The molar absorption coefficient is a measurement of how strongly a substance absorbs light. The larger its value, the greater the absorption [6]. The molar absorption coefficient of 1-chloro-4-hydroxy-2,2,6,6-tetramethylpiperidine in ethanol at this wavelength are 2000 L $mol^{-1}cm^{-1}$.
^{1}H-NMR spectrum of 4-chloro-4-nitroso-2,2,6,6-tetramethylpiperidine hydrochloride (5) presented in Figure 3
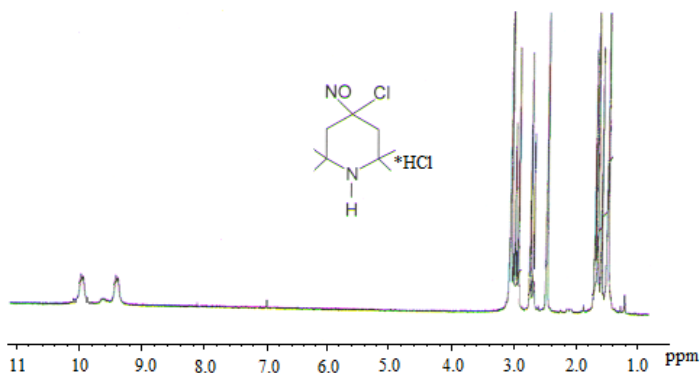
Figure 3. ^{1}H NMR spectrum of 4-chloro-4-nitroso-2,2,6,6-tetramethylpiperidine hydrochloride (5).

In ^{1}H NMR spectrum has the two singlet signals 1,45 ppm and 1,65 ppm (12 H, 4 CH$_3$). Two doublets 2,65 ppm and 2,95 ppm (J=1,6 Hz) is due to the CH$_2$ (4 H, 2 CH$_2$). The shift of 9,4 ppm causes hydrogen NH group. The peak is the signal at 9,4 ppm characteristic for hydrogen HCl.

Electronic spectrum of 4-chloro-4-nitroso-2,2,6,6-tetramethylpiperidine hydrochloride (5) presented in Figure 4.
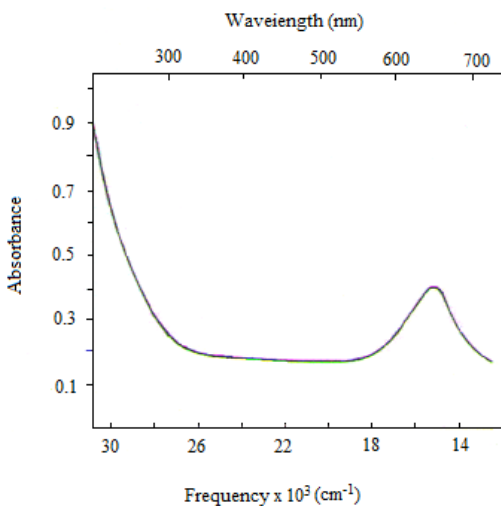
Figure 4. Electronic spectrum of 4-chloro-4-nitroso-2,2,6,6-tetramethylpiperidine hydrochloride (5) in ethanol.

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Absorption curve it has the absorption maximimum at 660 nm. The peak observed retain characteristic wavelength for tertiary nitroso compounds.

Using spectroscopy methods, the structure1-chloro-4-hydroxy-2,2,6,6-tetramethylpiperidine (3) and 4-chloro-4-nitroso-2,2,6,6-tetramethylpiperidine hydrochloride (5) was confirmed. The spectral characteristics match to known theoretical data.

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EDUCATION

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NATURAL SCIENCE AND HUMANITIES PROFILES' STUDENTS FEATURES OF THE COGNITIVE-ACTIVITY STYLE MANIFESTATION

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Abstract

The relevance of the article is due to the fact that in the conditions of increasing the rate of information growth in a rapidly developing high-tech society, teachers of modern education face the task of finding a new approach to learning, focused on the students' activities development, taking into account its cognitive style. The purpose of the article is to identify the characteristics of the natural science and humanitarian profiles' students cognitive-activity styles. As the leading method of research, the method "Definition of cognitive-activity style (L. Rebecca)" was used, which allowed to identify certain parameters of students' cognitive activity.

The article presents the results obtained on the basis of using the tests proposed by the author of this technique for the study of physical sensations in the learning process (vision, hearing, kinesthetics); communication (extrovert, introvert); individual abilities (emotional-intuitive, logical); approach to work (strictly regulated, unregulated);

operating ideas (synthesis, analysis) of natural science and humanitarian profiles students on the comparative analysis basis.

Knowledge of the identified features of natural science and humanities' students' cognitive-activity styles can be used by teachers of vocational schools in order to increase the students' cognitive activity.

Keywords: cognitive style, natural science profile, humanitarian profile, cognitive activity.

Introduction

The beginning of the XXI century in the conditions of increasing the rate of information growth in a rapidly developing high-tech society poses to the teachers of modern education the task of finding new approaches to learning, focused on the students' cognitive activity development. At the same time, taking into account the each student's cognitive style is great importance.

The term "cognitive style" (cognitive style from the Latin. cognitio - knowledge and Greek. stylos - rod for writing) is actively used in cognitive psychology to denote stable characteristics of how different people think, perceive and remember information or their preferred method problem solving "(Bolbakov R.G., 2014).

In the scientific literature there are about 10-15 cognitive styles (Shkuratova I. P., 1994). So R.G. Bolbakov, taking the dichotomous approach as a basis (from the word "dichotomy" (Greek)) - the consecutive fragmentation of the unified into parts), suggests certain cognitive styles presented in Table 1.

Table 1. - Cognitive styles (Bolbakov R.G., 2014)

№	Cognitive styles and their characteristics	
1.	*Field independence*	*Field addiction*
	Representatives of the field-independent style rely on internal experience and are easily separated from the influence of the field, quickly and accurately isolating the part from the integral spatial situation.	Representatives of the field-dependent style more trust visual impressions, hardly overcome the visible field, if necessary, detailing and structuring the situation
2.	*Concreteness*	*Abstractness*
	For "concrete" individuals, the following psychological qualities are typical: a tendency to black and white thinking, dependence on status and authority, intolerance to uncertainty, stereotyped decisions, situational behavior, less ability to think in terms of hypothetical situations, etc.	"Abstract" individuals are characterized by freedom from the immediate properties of the situation, orientation to inner experience in explaining the physical and social world, risk appetite, independence, flexibility, creativity, etc.

№	Cognitive styles and their characteristics	
3.	*Smoothing* In "smoothers," the preservation of material in memory is accompanied by its simplification, loss of detail, the loss of certain fragments.	*Sharpening* In the memory of "pointers", the selection and underlining of specific details of the memorized material takes place.
4.	*Rigid cognitive control* Rigid control indicates difficulties in the transition from verbal to sensory-perceptual functions due to the low degree of automation.	*Flexible cognitive control* Flexible control indicates the relative ease of such a transition due to the high degree of automation
5.	*Low tolerance to unrealistic experience* Intolerant subjects resist cognitive experience in which the source data contradicts their personal knowledge.	*High tolerance to unrealistic experience* Tolerant actors evaluate experience by their actual characteristics.
6.	*Focus control* Attention of the subjects turns out to be superficial and fragmentary, while it captures the obvious, conspicuous characteristics of the situation.	*Scanning control* The subjects quickly distribute attention to many aspects of the situation, while highlighting its objective details.
7.	*Impulsiveness* People with an impulsive style quickly put forward hypotheses in an alternative choice situation, while they allow many erroneous decisions in identifying perceptual objects.	*Reflexivity* For people with a reflective style, a slower pace of decision making in such a situation is characteristic; accordingly, they make few mistakes when identifying perceptual objects due to their thorough preliminary analysis.
8.	*Narrow equivalence range* Representatives of a narrow range of equivalence (analytical style) tend to focus on the differences of objects, paying attention mainly to their details and distinctive features.	*Wide equivalence range* Representatives of the wide range of equivalence (synthetic style) pole tend to focus on the similarity of objects, classifying them based on some generalized categorical grounds.
9.	*Cognitive simplicity* Some people understand and interpret what is happening in a simplified form based on fixing a limited set of information (cognitive simplicity).	*Cognitive complexity* Others tend to create a multidimensional model of reality, highlighting in it a multitude of interconnected aspects (cognitive complexity).

Each teacher understands that "each student is trained, in particular, perceives information and masters it, completely individually, depending on the psycho-physiological abilities and individual characteristics of cognitive activity" (Vasilyeva T.V., Eliseenko I.L., 2010).

In addition, it is impossible to consider all subjects educational process (teachers and trainees) cognitive styles features independently of each other, as in the process of teaching the natural science cycle subjects, the "connection between the fullness of learning information by a student and the degree of co-mastering by a student and teacher cognitive style,

called "field dependence-field independence" (Safronov SA, Rozum S.I., 2011); the absence of styles conflict leads to a more adequate perception and processing of information by students" (Safronov S.A., Rozum S.I., 2011).

Empirically, psychologists have established the influence of gender on the quantitative and qualitative structure of the cognitive styles relationship with temperament and achievement motivation. They concluded that "men and women are characterized quantitatively and qualitatively by a peculiar structure of the relationship between the parameters of cognitive styles, temperament properties and achievement motivation ....The interrelationships between formal dynamic properties, achievement motivation, and cognitive-style characteristics in men and women are complex and peculiar "(Semyashkin A.A., 2009).

How to determine the cognitive style of the student? So M. Kholodnaya offers methods for determining the cognitive styles of students, compactly placed in Table 2. (Cognitive styles and tests for their definition, 2019).

Table 2. - Cognitive styles of students and tests for their determination

№	Cognitive styles		How to determine?
1.	*Field Addiction*	*Field independence*	You can determine field addiction / field independence with the help of tasks for finding differences (for field-independent children it is easier to find differences between the two images), as well as using the "Included Shapes" technique (the ability to easily isolate one figure from the other speaks about field independence).
	When field addiction people perceive information, they pay more attention to the background (field) and less to details. In this case, the person focuses on external factors in the processing of new data. When being trained, such trainees need more visual material; large chunks of text should be shown in a structured form with a large number of charts, tables, lists, etc.	People with field independence, on the contrary, pay close attention to details and are guided by some internal (personal) factors when they perceive information. Students with this cognitive style can easily work with texts, make fewer mistakes when writing and / or editing, and are prone to detailed material analysis. For learning visibility is not important to them.	
2.	*Narrow equivalence range*	*Wide equivalence range*	For this it is possible to use the classification: ask the child to divide a certain number of concepts arbitrarily into groups. The more groups there will be in the end, the equivalence range will be narrower.
	The predominance of a narrow range (analyticity) indicates that a person is inclined to look for differences in perceived objects. Such students easily cope with tasks that require attention to many different aspects. At the same time, it is better not to give them a lot of information for memorizing at once – it is better to break it into pieces.	A wide range (synthetics) orients a person to search for the common between objects. Students with a predominance of this cognitive style can perceive and remember a large amount of information at once. But it is better not to give them to solve several diverse tasks at the same time.	

№	Cognitive styles		How to determine?
3.	*Rigid cognitive control*	*Flexible cognitive control*	To determine the flexibility / rigidity, it is possible to use color cards on which the name of the color is written. However, the color of the card and the color written on it must be different. The task: to read the names, not paying attention to the color of the card itself. In this task, people with the flexibility of control make fewer mistakes.
	For students there are more difficult to switch from one method of processing information to another, for example, from word perception to image perception. Such students need preliminary training for a change of activity, a break between various types of work.	People with flexible cognitive control, easily move from one type of perception and processing to another. For such students it is possible simultaneously give information presented in various forms, for example, textual and graphic (presentations). They do not need pauses between activities.	
4.	*Low tolerance to unrealistic experience*	*High tolerance to unrealistic experience*	Any tasks for creativity will help to determine the degree of tolerance: the more non-standard answers, the higher it is.
	People with low tolerance, in ambiguous or uncertain situations, can hardly accept information or experience that is contrary to their knowledge. In teaching such students it is important to develop creativity, which will help to consider a difficult situation from different sites. But they are easy to perform tasks on this template.	High tolerance will help ensure that the most ambiguous situation will be successfully solved, thanks to the willingness to look at them from the other side. Students with such a cognitive style are creative and easily find new solutions, but they can hardly follow one given algorithm in solving problems.	
5.	*Focus control*	*Scanning control*	It is quite simple to check: it is enough to ask the student to name the color, size, etc. geometric shape (or other object), which is shown in terms of distractions. For example, on a diaper fabric.
	Focusing control contributes to the fact that a person can focus on one object and study it in detail, but the perception of several objects at the same time will cause difficulties. For students with this type of control it is better to present the material gradually, in small quantities.	People with a scanning control distribute their attention evenly across all displayed objects. Such trainees can perceive a large amount of information at once, but it is difficult for them to focus on one thing when there are several objects. If detailed study is required, for them it must submit limited material.	
6.	*Smoothing*	*Sharpening*	To understand which pole of a given cognitive style a person is leaning on will help retelling a passage of an artistic text. Detail and brilliance will testify about sharpening.
	Smoothing is manifested in the fact that information memorized by a person is devoid of a large number of details, for such students is recommended to give information in small portions and for a longer time for detailed memorization. It will help the nuances better stored in memory.	Persons prone to sharpening are able to memorize information very clearly and in detail. It is quite easy for such students to preserve in memory a large number of objects in detail. If such memorization is not required, then it is possible to limit the time for presenting information.	

№	Cognitive styles		How to determine?
7.	*Impulsiveness*	*Reflexivity*	As a definition task, it is possible to use image comparison. The response time and the number of errors will be indicative: for the impulse the first indicator is less, and the second one is more.
	An impulsive person makes decisions quickly, and in a situation of alternative choice is able to decide instantly. It is easy for students with this characteristic to resolve situations in which a quick response is necessary, but they often make mistakes. Such students should be encouraged to think again, not to ask them immediately, even if they are ready to respond. Homework will require additional checks.	Those who are prone to reflectivity first put forward various hypotheses to themselves and test them, and only then give an answer. Students with this cognitive style should be given more time to make a decision, not to demand an immediate answer. But they often make mistakes much less.	
8.	*Cognitive simplicity*	*Cognitive complexity*	It is good to understand what kind of pole of this cognitive style a person belongs to, analysis tasks help. For example, analysis of a poem by a famous author. The fuller, deeper and more colorful it will be, the higher the cognitive complexity will be too.
	The pole of cognitive simplicity will determine the understanding and interpretation of the data obtained, which takes into account a small number of different criteria. For example, making a judgment about someone, a person with such a characteristic will pay attention to external data and already known information, without going into a deep analysis. Such students are well given tasks with a well-defined number of variables and clear conditions. They love mathematics more than literature and other disciplines where it is necessary to take into account phenomena that are not visible at first glance. Students, prone to cognitive simplicity, it is worth further explaining difficult material, to help them in capturing hidden connections.	People committed to cognitive complexity, perceive the object or information in its entirety and take into account all possible relationships, making a judgment. The students with this cognitive style do a good job with tasks that require in-depth analysis and the identification of hidden factors. However, they are often prone to fantasizing and can attribute characteristics to something that the object does not possess. Sometimes they need to be stopped, asking them to focus on specific aspects (if the task requires it).	

All considered cognitive styles in one or another of its poles are inherent in every person. However, not all people, they reach extreme values and may be in the average position. For example, a person is inherent in both smoothing and sharpening, the manifestation of which depends on the situation. In this case, it is possible to develop a style in one direction or another.

Research methodology. To determine the features of the natural science and humanities students cognitive-activity style, we used the method "Determination of cognitive-activity style (L. Rebecca)", which allowed to determine the purpose of the study - to identify the parameters

of students cognitive activity in the process of using the tests proposed by the author, presented in table 1.

Table 3. - Parameters of students' cognitive activity

№	Test	Parameters of cognitive activity
1.	Physical sensations in the process of learning and work	Vision, hearing, kinesthetics
2.	Communication	Extrovert, introvert
3.	Individual abilities	Emotionally-intuitive, logical
4.	Approach to work	Tightly regulated, unregulated approach
5.	Handling ideas	Synthesis, analysis

Experimental research base. The experiment involved 96 people, 60 of whom are students of natural sciences (20 people from the group 1161136 full-time department of the specialty "Automobiles and automobile economy" and 40 people of the same specialty of the extramural department) and 36 students from the humanitarian profile (18 students in the specialty 071201 "Art of ballet"in-depth training and 18 people in the direction 071203" The Art of Dance ", «Folk stage dance»).

Also there were conducted surveys of School-Studio (Institute) named after V.I. Nemirovich-Danchenko at the Moscow Art Theater named after A.P. Chekhov (Moscow Art Theater School) students; "Oryol State Institute of Culture", "Smolensk State Institute of Arts" students: specialties "Actor's art" and "Production" - 108 students, areas of training "Library and Information Activities", "Social and Cultural activities"," Museology and protection of cultural and natural heritage objects", "Folk art culture",

" Directing theatrical performances and holidays"," Actor's art"-112 students.

Surveys revealed preferences in the cognitive-activity style of students undergoing training in universities of the culture and art sphere.

The results of the study are presented to colleagues from the University named after Masaryk (Brno, Czech Republic) for the comparative analysis.

Results. In the process of research in accordance with the goal, the features of the natural sciences and humanities students cognitive-activity style were identified.

The first test allowed to consider the physical sensations of students in the cognitive sphere: vision, hearing, kinesthetic. Students with a predominantly visual perception of reality habitually rely on their visual memory and better absorb learning material through visual means (video, books). Students with predominantly auditory perception in the process of learning tend to conversational and auditory activity (discussions, lectures, records). And, if the kinesthetic feeling is the most developed among the students, then they are in direct contact with the subjects of training (games, modeling, practical experiments).
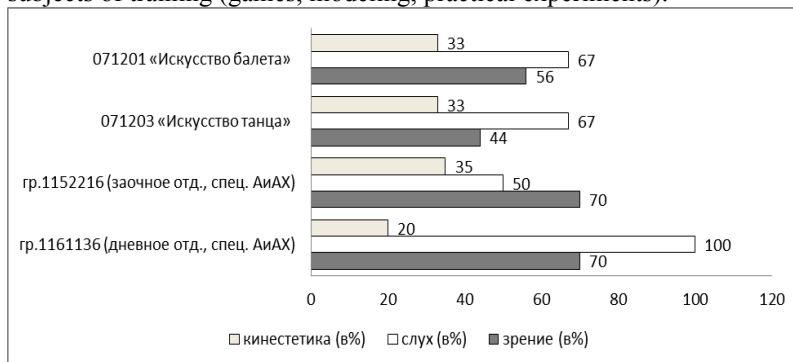
Figure 1. - Physical sensations in the process of learning and working (kinesthetic, hearing, vision)

Comments

071201 "Art of ballet"
071203" The Art of Dance "
1152216 (extramural department, specialty "Automobiles and automobile economy")
1161136 (full-time department of the specialty "Automobiles and automobile economy")

▪ kinesthetic (in%), hearing (in%), vision (in%)

As can be seen from Figure 1, students of the humanities have the most pronounced hearing (67% each), and students of the natural science cycle have hearing (100% full-time department) and vision (70% extramural department).

The second test allowed to reveal the peculiarities of the respondents' communication based on their division into introverts and extroverts; so, an extrovert likes to study in the environment and in interaction with other people (games, discussions, practical jokes),

introverts in study strive for independence and personal freedom (independent reading, computer training), and they are able to take "good acquaintance" as companions that optimizes their communication and creates conditions for achieving productive results.

Figure 2. - Communication

Comments

071201 "Art of Ballet"
071203" The Art of Dance "
1152216 (extramural department, specialty "Automobiles and automobile economy")
1161136 (full-time department of the specialty "Automobiles and automobile economy")

▪ introvert (in%), extrovert (in%)

Figure 2 suggests that humanitarian students ("The Art of Ballet") are equally introverts and extroverts (67% each); and among students, "The Art of Dance" is dominated by extroverts (78%). Extroverts (70% and 80%) mostly prevail among students.

The third test presented information on the quantitative ratio of the individual abilities of the subjects: emotionally intuitive and logical. An emotionally intuitively-minded student is focused on the future, easily recognizes the fundamental principles of the proposed topic, loves to think freely and figuratively, avoids rigid rules and instructions. These students have a developed imagination, they tend to collect information in an arbitrary manner, sometimes "spasmodically", finding their own meaning and interrelations between various phenomena, trusting intuitions and premonitions. When making decisions, people of this type

rely on their inner voice, their own intuition, without looking back at how other people act in such situations. A logical-minded student, on the contrary, prefers a progressive course of study with the obligatory knowledge of what exactly should be taught at any given moment and throughout the entire educational process. Unlike emotionally-intuitively thinking people, their perception of reality is always real. Such students consistently and persistently implement the decision, without changing it, clearly planning and controlling their lives and even the lives of people around them. People of this type make a decision quickly, not always considering new information, even if it indicates that it needs to be changed.

The conducted surveys allowed to determine that students of higher educational institutions in the sphere of culture and art have difficulties in learning - and, above all, they are of a psychological nature. These students are particularly challenged by the situation of business communication, work with documentation: they have little knowledge of terminology and do not know the specifics of the design of such documents. At the same time, 21% of the surveyed students (out of a total of 220 people) were not satisfied with the volume of practical skills obtained at the university. The greatest difficulty was raised by the question of the significance of mastering the humanities in the future profession. Only 14% of students decided that they themselves are passive in their studies and do not aspire to self-education. Thus students do not have professional reflection and are not ready to meet the challenges of society, they are not well adapted to the modern information environment (Stukalova O.V., 2017).

It is significant that according to surveys of colleagues from the University named after Masaryk (Brno, Czech Republic) students-philologists also demonstrate a low level of cognitive interest, while their knowledge outlook is rather narrow, but they are not aware of this.
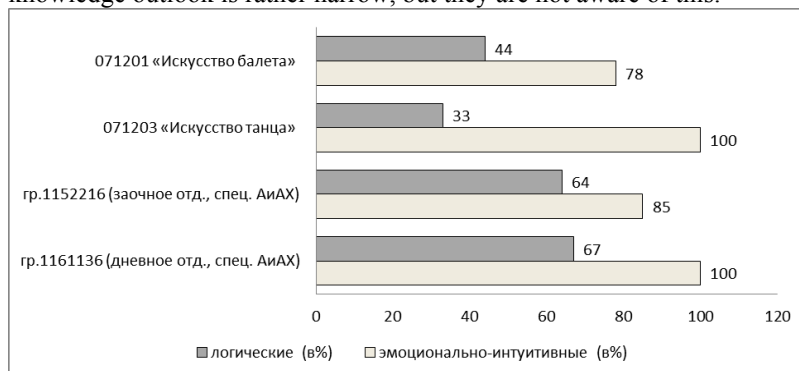
Figure 3. - Individual Abilities: emotionally intuitive and logical
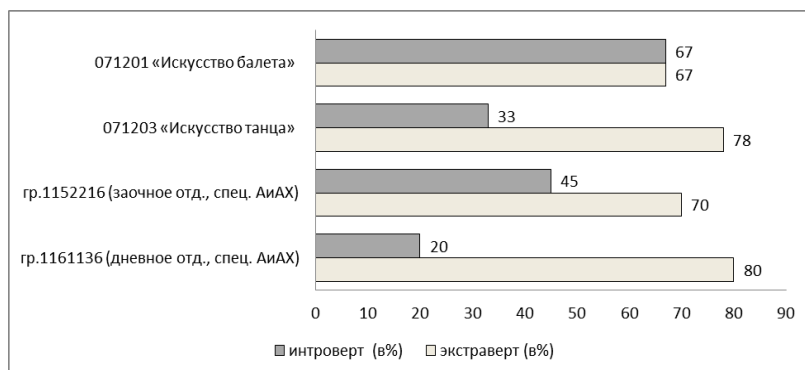**Comments**

071201 "Art of Ballet"
071203" The Art of Dance "
1152216 (extramural department, specialty "Automobiles and automobile economy")
1161136 (full-time department of the specialty "Automobiles and automobile economy")

▪ logical (in%); emotionally intuitive (in%)

The experiment revealed (Fig. 3) that all the surveyed students to a greater extent have a fairly high level of emotional-intuitive abilities (78%, 100%, 85%), but logical abilities are more developed among students of natural sciences (55% and 67 %).

The fourth test allowed us to determine the approach to the work of the respondents: strictly regulated or regulated. If students prefer a strictly regulated mode of operation, this means that they are concentrated throughout the educational process, plan their work from task to task, approaching its completion. If, on the contrary, they prefer to study without strict restrictions of the regime, therefore, they are inspired by the learning process itself - the knowledge of the new, the interesting, they are relaxed during the classes and they are not very concerned about the formal rules or the time limit.
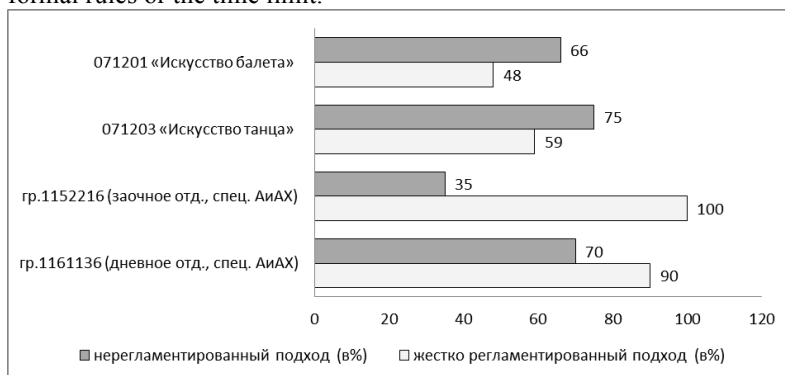
Figure 4. - Approach to work

Comments

071201 "Art of Ballet"

071203" The Art of Dance "

1152216 (extramural department, specialty "Automobiles and automobile economy")

1161136 (full-time department of the specialty "Automobiles and automobile economy")

▪ unregulated (in%) strictly regulated (in%)

The data in Figure 4 shows that most of the students of the humanities prefer an unregulated approach to the organization of educational work (66% and 75%), students of the natural sciences prefer a clear organization of the educational process (90% and 100%).

The following summarizes the results of a survey on assessing the level of of the educational process organization at a higher educational institution in the sphere and culture:

- 81% of the surveyed students answered that they consider that the level of the educational process organization is "quite good";

- 15% called the level of the educational process organization "not high enough" or "average";

- 4% said that communication problems with other students and teachers were the most difficult to solve. First of all, this is manifested in the unwillingness to take a responsible decision, in the inability to overcome distrust on the part of others and the ability to create a constructive dialogue, not to conflict, etc.

Almost a third of the students (mostly future producers) also identified a lack of knowledge in paperwork, poor knowledge of a foreign language, stereotypes in personal and business professional communication, etc. (39%).

The fifth test revealed the preferences of students in the choice of mental operations (analysis or synthesis) in the process of cognitive activity. For students with the dominance of synthetic mental operations, thinking is characterized by general categories. On the contrary, it is typical for student analysts to focus on particulars, their opposition and logical analysis.
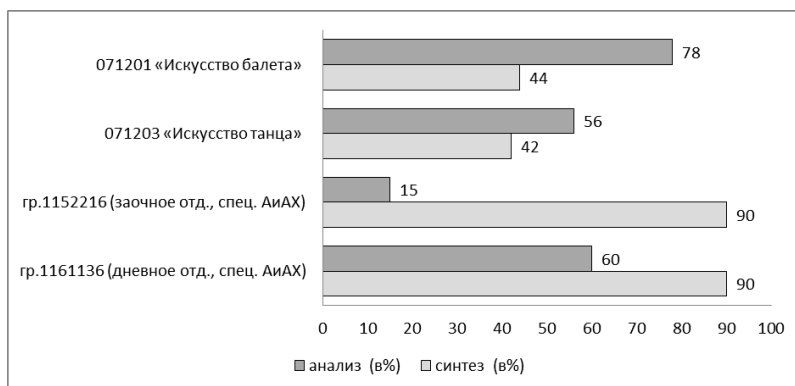
Figure 5. - Handling ideas (synthesis, analysis)

Comments

071201 "Art of Ballet"
071203" The Art of Dance "
1152216 (extramural department, specialty "Automobiles and automobile economy")
1161136 (full-time department of the specialty "Automobiles and automobile economy")
▪ analysis (in%), synthesis (in%),

The experiment revealed (Fig. 5) a pronounced tendency: all surveyed students of a humanitarian profile based on handling ideas is an analysis (56% and 78%), students of natural sciences prefer to use synthesis (90%) as mental operations.

In surveys of students of the culture and art sphere universities, in particular, it was clarified that among the professionally important qualities of cognitive activity for them the most important are:
• independence in the choice of educational strategies - 73%;
• creativity in the received information interpretation - 63%;
• the ability to use the knowledge gained in productive communication - 61%;
• readiness for self-education - 57%;
• general cultural knowledge and breadth of cultural horizons - 54%.

The information presented aroused the approval of the Czech colleagues, they suggested expanding this list by including the section "readiness to master interdisciplinary knowledge", which, in their

opinion, is especially important for modern humanities students, since this quality is basic for developing the ability to interpret some concepts not only at the level of the studied discipline, but also in a broader - social sense.

 Researchers consider a number of the cognitive-cognitive processes characteristics that can affect the students' cognitive-activity style. So Kholodnaya M.A. identified cognitive styles as metacognitive abilities that are responsible for the regulation of intellectual activity, the main functions of which are participating in building objectified mental representations of what is happening and controlling affective states in terms of cognitive reflection Kholodnaya M.A.., 2004).

Ya. Reikovsky believes that, depending on the degree of structuring of the cognitive process, the degree of self-regulation influence on cognitive processes will change (Reykovsky Ya., 2003).

In modern psychology, the involuntary regulation of the cognitive-activity style activation components concept is associated with the self-regulation of the mental tone theory created by american psychophysiologist D. Freeman (Freeman D., 2008).

The emotional-intuitive and logical components of the cognitive-activity style relationship studies are presented in the V.V. Ovsyannikova and D.V. Lyusin's works (Ovsyannikova V.V., Lyusin D.V., 2005). In their research, cognitive styles were considered as mechanisms for understanding and controlling emotions.

An interesting approach is also a more holistic consideration of personal characteristics in terms of subject-object orientations and the cognitive-style hierarchy (Rudykhina O.V., 2013). based on a two-dimensional typology of subject-object orientations (Korzhova E.Yu., 2001).

O.V. Rudykhina revealed that among students with an objective orientation, compared with a group with a subject orientation, there are significantly more representatives of the field-dependent style, while students with a subject orientation have more representatives of the field-independent style. It was also shown that the cognitive-style profile of subject-object orientations' different types has an individual identity not only at each level of the cognitive styles hierarchy (cognitive and intellectual styles), but also in the ratio of cognitive-style characteristics (Rudykhina O.V., 2013).

The authors of the article in the comparative analysis process revealed the features of natural science, humanitarian profiles students and future specialists in the field of culture and art cognitive-activity styles based on the study of their physical sensations in the learning and working process (vision, hearing, kinesthetics), communication (extrovert, introvert), individual abilities (emotional-intuitive, logical),

approaches to work (rigidly regulated, unregulated), operating with ideas (synthesis, analysis). Teachers can use the results to improve the cognitive activity of students.

Conclusion

1. In the conditions of increasing the rate of information growth in a rapidly developing high-tech society, teachers of modern education face the task of finding new approaches to learning, focused on the development of the students' cognitive activity, taking into account their cognitive style.

2. Identified the need to determine the characteristics of natural science and humanitarian profiles students' cognitive-activity styles based on the study of physical sensations in the process of learning and working (vision, hearing, kinesthetics), communication (extrovert, introvert), individual abilities (emotional-intuitive, logical), approaches to work (strictly regulated, ad hoc), operating ideas (synthesis, analysis).

3. Comparative analysis of the identified features of students cognitive-activity style can be used by teachers of natural science and humanities at vocational schools in order to increase the students' cognitive activity.

4. There is a need to develop a technology for developing the various profiles and educational levels students' cognitive-activity style.

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PEDAGOGY

Ragrina Z.M.

«BLENDED LEARNING CONCEPT» AS AN EFFECTIVE CONDITION FOR THE ORGANIZATION OF EDUCATIONAL PROCESS AT UNIVERSITIES

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Abstract

The article is devoted to the features of the organization of blended learning environment at the university. The specificity of the concept of "blended learning" is analyzed and it is noticed blended learning is effective when it has a combination of off-line and on-line learning that provides the intensification of the educational process, combines the professionalism of a teacher and technological tools, and allows teachers to work in small groups using adaptive potential and the latest technologies. Priority aspects in the organization of a blended learning environment are highlighted, including interactive learning, the use of modern information and computer-oriented technologies for structuring educational information and presenting it in various formats. The general algorithm of activities for the implementation of blended learning is explained. The most frequent models for organizing training activities in the blended learning environment such us «Rotation», «Personal Choice», «Autonomous Group», «Flip-the-classroom technique» and others are characterized. The importance of a special electronic educational and methodological complex that contains the training material and tasks for studying and control is marked.

Keywords: blended learning environment, blended learning, activity models in a blended learning environment.

Introduction

The development of the modern educational system significantly affects the formation of the educational policy of each country and the professional training's reorientation at universities to the new forms of the educational material presentation. That is why issues associated with the use of technical means in the educational process require a particular attention. Moreover, the organization of classes of new types, based on a combination of traditional and innovative forms of learning, demands to be discussed.

Materials and Methods

The use of the blended learning model at universities was described by the Ukrainian and foreign researchers. The historical aspect of the development of blended education is reflected in the researches of R. Brown [3], D. Craddock [4], K. Kun [12], D. Romanenkova [19] and others. The opportunities for developing a new type of educational environment were investigated by J. Groff [7], C. Graham [8], A. Kachalov [9], G. Polyakova [17]

Having analyzed various aspects of the problem, scientists, however, agree that it is necessary to update special pedagogical tools for high-quality professional training at universities, to challenge pedagogical stereotypes and to create a special environment that will combine traditional and innovative forms of learning.

It seems relevant to develop and introduce the blended learning model that will help students to become more involved in the educational process and to get maximal efficiency of it.

According to this, the purpose of the article is to investigate the characteristics of the organization of the blended learning environment in the educational process at universities.

The relevance of the research results is determined by the authors' definition of the role of the blended learning environment at the university that is understood as a teaching system that combines fulltime and distance learning, as well as self-studying. It also includes / presumes an interaction between teacher, student and interactive sources of information.

Results of the research

The concept of «educational environment» is understood as a system of influence and conditions for the formation of personality, as well as opportunities for its development contained in the social environment in the framework of an organized educational process (V. Radul [18]). It is called multi-aspect and it is considered not only as «a multicultural educational system that is individual for each subject of training, but also as a condition for building your own style which provides the basis for actualizing the inner world of the personality» (A. Belinsky [1]).

The educational environment is an open, complex, integrative, dynamic system (G. Polyakova [17], translated by us) where certain connections and relationships between the subjects, teachers and students take place. In A. Kachalov's opinion, the structural components of a pedagogically comfortable environment that ensure its efficiency and effectiveness create a friendly atmosphere, organizing an individual success situation and promoting students' personal fulfilment [9].

Nowadays, speaking about the creation of a comfortable learning environment, we should take into account the global process of computerization. We get a qualitatively new learning environment, which is called Blended Learning by involving new technologies into the educational process. This environment is able to solve numerous problems and increase students' motivation for the processes of studying.

Researchers define the blended learning as «a combination of offline and online learning that provides the intensification of the educational process, combines the professionalism of a teacher and technological tools, and allows teachers to work in small groups using adaptive potential and the latest technologies» [20]. This type of training is based on the provisions of synergetic, activity, creative, innovative approaches and the principles of the availability of means for creating an interactive dialogue, computer visualization of educational material [2].

Blended learning environment also means a combination of formal training tools (working in classrooms, studying theoretical material) and innovative (electronic) forms of training (e-mail, on-line conferences, working together at a telecommunication training project, creating blog quests, doing practical tasks and posting their results, etc.).

Blended learning is represented by on-line learning activities. They can be organized by means of providing links to resources and downloading texts and materials, managing online quizzes and facilitating the presentation of tasks for independent work.

According to K. Kuhn, the purpose of the blended learning is an attempt to combine the advantages of full-time education and electronic resources [12]. S. Moebs and S. Weibelzahl define blended learning as «a combination of distance and traditional communication in integrated learning activities» [16]. According to C. Graham, blended learning is an approach that integrates traditional learning into computer-mediated teaching environment [7].

As defined by V. Kukharenko, blended learning is a purposeful process of obtaining knowledge, skills and abilities in the conditions of integration of classroom and extracurricular learning activities in subjects of the educational process, based on the use of traditional, electronic, distance and mobile technologies [11].

Despite the fact that blended learning provides a student's independent studying, the role of a teacher is still significant. But this teacher should act as a «tutor» (lat. tutorem – mentor [23]). A tutor is a pedagogical position that provides an opportunity to develop individual educational programs for students and accompanies the learning process in the system of continuing education [13].

The concept of blended learning allows us to solve new educational tasks. First of all, it becomes possible to expand the educational opportunities of students by increasing the availability and flexibility of education. Secondly, an important moment is the stimulation of the formation of a student's subjective position: increasing their motivation, independence, social activity, self-reflection and, as a result, increasing the effectiveness of the educational process. Thirdly, the transformation of the teacher's style is becoming real. Finally, such type of studying personalizes the educational process, encourages students, determines their educational goals and takes into account their own educational needs, interests and abilities [3].

So, the blended learning model is a model of using informational and educational resources in the educational process that seems optimal for high education. Still, for the high-quality implementation of this model some requirements must be taken into account. Following E. Martynova and D. Romanenkova [15, 19], we focus on the requirements for the adaptation of educational programs and technical support. First of all, they are:

− special sound equipment, multimedia and other technical means of receiving and transmitting educational information in accessible forms for students;

− Internet access to resources, audio, video and graphic information;

− special software;

− educational and methodological resources;

− combination of online and offline technologies, as well as individual and collective forms of work in the educational process.

It is also necessary to take into account individual characteristics of students, including health disorders. So, it is necessary to have Braille computer equipment, electronic and video magnifiers, non-visual access to information programs, speech synthesizer programs and other technical means of receiving and transmitting educational information in accessible forms for students with visual impairments; the computer equipment with special software that is adapted for people with disabilities; alternative information input devices and other technical means of receiving and transmitting educational information in accessible forms for students with musculoskeletal disorders; the use of e-learning organization tools that

allow the reception and transmission of information in accessible forms depending on the nosologies.

The general algorithm of activities for the implementation of blended learning consists of 4 stages [2]:

1) preliminary activities in preparing for the use of on-line technologies;

2) student's preparation (training exercises, instructions for using the technique);

3) the direct use of on-line tasks, programs, multimedia;

4) reflection.

Educational content should be represented as electronic educational and methodological complexes and should be structured according to the academic year and educational qualification levels.

Scientists identify the mandatory components of the blended learning environment [6,8,19] as:

1) traditional direct personal interaction between students;

2) interactive interaction mediated by information and computer technologies and electronic educational resources on-line;

3) self-education.

The percentage ratio of the presence of each component depends on the specifics of the university, specialty, orientation, individual characteristics.

The most frequent models for organizing training activities in the blended learning environment are «Rotation», «Personal Choice», «Autonomous Group», «Flip-the-classroom technique» and others.

One of the most suitable models for working with students is «Flip-the-classroom technique» that is based on the American concept [5]. This model is based on the principles of the availability of an interactive dialogue. The essence of the technology is determined by the fact that the teacher prepares a video for the theoretical part of the lesson (for example, an explanation of the basic rules, constructions, dates, etc.) and uploads it to a local or global network. After gaining the access to this network, students work with the material and the next lesson starts with consolidation of the new knowledge and skills. Problematic discussions, role-playing games, situational games are the main possible methods used here [5]. This technology helps to save time for interactive interaction with students during a practical lesson, to increase their motivation and intellectual self-development.

Another model, «Autonomous group», is good for students with different level of motivation, training, competence and individual characteristics, including pathologies. This model involves dividing the group into subgroups. One group uses on-line forms of studying while other groups use off-line forms and then they change positions.

The model «Personal Choice» is relevant for a group where students have a high level of motivation, of formation of the ICT competence and personal skills. Organizing the work in this way, it is assumed that the learning activity and responsibility for its results is the learner's responsibility. The use of this model is possible:

− for groups of the same course with a fixed set of disciplines for studying on-line;

− for the same faculty with a different set of courses for studying on-line;

− for one university to study a specific on-line course that is common for all faculties.

None of the above mentioned models is possible without the creation of a special electronic educational and methodological complex that contains the training material and tasks for studying and control.

The electronic educational and methodical complex is an informational educational resource that is used to present structured educational material of the discipline. It provides control, manages cognitive activity of students in the process of implementing educational programs of universities [15].

The main goal of creating an electronic educational and methodical complex is to provide students with a full range of teaching materials for independent individual study.

An electronic educational and methodical complex is designed for studying the discipline in accordance with the curriculum; it provides all types of educational activities: obtaining information, practical exercises, monitoring the knowledge of students, etc. Every electronic educational and methodical complex is designed as a separate web site. Various software is used to create such products.

Discussion and conclusions

Summing up the information above, it should be noted that blended learning as an instrument of modernization of modern education, as it creates the new pedagogical opportunities. The result of introducing blended learning technology into the process of university education is a deeper interaction between teachers and students; the growth of the rate of assimilation of professional knowledge, skills and abilities.

In general, the creation of such type of environment will positively affect the motivation to learning, suggest various types of activities and increase the level of knowledge and skills.

We see the prospects for the further research in introducing modern software products and network services into the educational process of universities. It will improve the educational process due to interactivity, multimedia, and adaptability to students' needs.

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TEACHING PROFESSIONAL TERMINOLOGY TO STUDENTS OF TECHNICAL SPECIALTIES

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Abstract

The research aims at finding effective and adequate methods of presenting, understanding meaning, memorizing and proper using professional terms in oral and written communication of English learners. On the basis of theoretical analysis of the above-mentioned problem the paper provides implications for applying interactive forms of work to enhance the quality of teaching students economic terminology in English.

Keywords: lexical competence, economic terminology, non-linguistic learners of English, methodology of

Learning terminology from different fields of science and technology, acquiring knowledge of special vocabulary, and mastering the ability to use it in communication has long been proved to be the necessary prerequisite of mastering ESP by non-linguistic students.

Forming of the lexical competence as an integral part of communicative competence is impossible without learning professional terminology by the students of the technical educational establishments. The methodology of teaching students professional terminology is based on the teaching manuals of such scholars as I.Bermann, V. Korostylov, O. Tarnopolsky. They provided us with a number of techniques for disclosing the meaning of terms, offered ways of translation and contextual explanation of new words, worked out numerous exercises for learning new vocabulary and fixing it in the student' memory. Scientists and methodologists have focused their on making the process of learning/teaching vocabulary purposeful, communicative and effective. Learning vocabulary "functionally" students form their verbal "networks"[1,c.3] which is necessary as a basis for keeping words in their

memory, and as a condition of their reproduction in speech. Having acquired reproductive skills, students move on to forming and producing their own patterns of speech, offering creative, original solutions, thus involving not only memory but their thinking[2,c.3].

Scientists: O.Tarnapovsky, D.Bubnova, I.Lipska have also formed the methodological basis for further research in the field of teaching terminology in the frameworks of ESP.

In particular, they described the principles of selecting terminology and suggested lists of terms to be acquired by students of different specialties, offered methodology of learning terms in different types of speaking activities, paid attention to the ways of translating and disclosing meanings of such lexical units, analyzed different strategies for memorizing and applying terms in oral and written communication, made complexes of exercises for learning and brushing up terminological vocabulary while reading or listening to different authentic professionally-oriented texts[3,c.4]. All these inferences help teachers of ESP organize the process of teaching special vocabulary, play a significant role in the classroom activity and especially in the independent or self-study work of students, because according to H.G.Widdowson [4,c.3], "Learning is now seen as a self-generating process by learners themselves".

Thus applying the above mentioned results in the field of methodology of teaching terms, teachers support students' motivation to learn such lexical units, help them acquire practical skills of proper using terms in different types of discourse.

Consequently, having acquired a linguistic competence, students get the ability and power to apply their knowledge of special vocabulary into practice and form their communicative competence as their utmost goal of ESP course.

N. Schmitt [5,c.3] determined and described vocabulary learning strategies and also proved the necessity of using them concurrently by good learners to structure their vocabulary learning, review and practice target words, but also on enhancing learners' knowledge of previously-presented words. J. Nattinger stresses that comprehension of vocabulary relies of strategies that permit learners to understand words and store them, to commit them to memory, while production concerns strategies that activate one's storage by retrieving these words from memory, and using them in appropriate situations.

It is evident that vocabulary development may take place and be conducted in all types of speaking activity aimed at language acquisition, namely, reading, writing, speaking, and listening. In our paper we highlight and stress the importance of using interactive activity as a powerful means of stimulating learning vocabulary through

communication. Different kinds of interactive activity ensure «learning by doing» principle and are crucial in trigging the speaking mechanism of the learners, when they start producing their own pieces of speech, crammed with the active vocabulary. A willingness to use the language in a given situation, as many researchers (D.Norman, U.Levihn, J.A.Hedenquist) write, can often be of greater importance for understanding and communication than grammatical correctness. Thus we can assume that despite possible language mistakes in utterances (such as incorrect grammar forms, mispronunciation, etc., which do not hinder, or distort effective communication), learners in their interactive forms of work can experiment with building word-combinations and «word families,» prepare lists of collocations and transform words using derivatives. Also they can expand their vocabulary storage when expressing their own judgments as to the problem described in the before-read authentic professionally oriented text or participate in the whole class post-reading discussion, based on the ideas from that text. It is worth saying that learners in such and the like activities do not learn single words, do not memorize texts as speech patterns, but create their own texts, mobilizing their efforts aimed at retrieving necessary words from their long-term memory, processing and transforming lexical units, organizing their speech patterns into meaningful communication. Different activities promote a desire of students for interaction with each other, with the teacher, with the textbook or computer.

We can also single out plenty of other activities, such as discussions in pairs or small groups of three or four students, presentations and disputes, simulations of negotiations, case studies, etc. For example, to organize a post-reading discussion, students can do the following exercise: What can motivate people in their career? What can make jobs more challenging? Do you know how to motivate others? Read the text and explain which factors cause job satisfaction and which lead to dissatisfaction at work. As a topic for a debate we can suggest the following: Do employees like performance appraisals? One group supports the necessity of carrying out appraisals; another group thinks that evaluating a person's performance at work is useless. Also for a discussion either in small groups or in the whole class we can propose such a problem: Are women well represented in higher management? What or who prevents women from getting right to the top? What are the invisible barriers and prejudices that women have to overcome to be promoted? Discuss these and other urgent problems women face at work. Express your attitude to each problem. No doubt, all these activities proved to be useful and must be practiced in classroom as they promote communication which in its turn enhances learning vocabulary as the major building material of any language. Such an approach to interactive

teaching/learning vocabulary concentrates less on the words and sentence models, but pays a considerable attention to communication, to doing things with language elements, to carrying out communicative functions, such as asking and rejecting, agreeing and denying, and the like. Participating in a meaningful communication, students choose activities that best satisfy their needs as communicators in different social and professional (or rather quasi-professional) roles.

Consequently we should emphasize the meaningfulness and necessity of using interactive forms in learning the vocabulary, acquire professional terminology, and thus enhancing their communicative competence.

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KARAKALPAK FOLK TRADITIONS IN FAMILY EDUCATION OF YOUNG GENERATION

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Abstract
This article shows the special role of folklore in moral education of growing generation, including the history, culture and traditions of the Karakalpak nation. The various genres of folklore are defined, which not only contribute to the formation of moral-aesthetic outlook on life, but also, develop the fantasy of children, their creative imagination, quick wits, expand their horizons and sphere of interests, enrich their speech.
Keywords: education, traditions, family, folklore, moral qualities.

Familiarizing the younger generation with the spiritual and cultural values of the nation is currently a priority basis of the policy of the Republic of Uzbekistan. The National program of the Republic of Uzbekistan for training personnel indicates the leading direction in the field of education and upbringing of the younger generation, which is "the development of spiritual and moral qualities of students at all levels and stages of education based on the principles of national independence and the priority of the rich intellectual heritage of the people and universal values". Consequently, new requirements are being put forward for moral education, which should be closely linked to all the cultural achievements of the people, including national traditions. The development of methods of moral education based on traditions should be based on the identification of their moral and ethical value.

The Karakalpak, like other peoples of Central Asia, have their own pedagogical traditions, highly moral customs and rituals that are

inherent in the whole Eastern culture. In the process of historical development, they have always maintained unity with the fraternal Uzbek people. The origin and formation of family rituals and traditions is a long and complex socio - historical process, in which religious views, folk wisdom, norms of morality and ethics, the hierarchical code of relations between family members, the range of their concerns and interests find their concentrated expression.

The system of rites and traditions of family education includes many practical tips, recommendations and life attitudes of authoritative representatives of the people and parents, who embody the views on the need to raise children on the basis of a set of moral values. As in other folk customs and traditions, the history of the people, the conditions of their life, the way of life, their past, present and future find their vivid embodiment in family rituals.

Karakalpak traditions can be divided into everyday and solemn ones.

Everyday traditions occupy a significant place in the life of the family and are manifested more often than solemn ones. The process of teaching children to family traditions begins at an early age and continues for many years. In the course of interpersonal intra-family communication, children from the first years of life are accustomed to order, discipline, observance of certain rituals and traditions, which first appear as elements of behavior, and then develop into stable habits and positive moral qualities - such as friendliness, goodwill, politeness, hospitality, respect and unquestioning obedience to elders, assistance to the elderly and needy, love for children, etc.

Everyday traditions include observing the rules of personal hygiene, maintaining order in the house and in the yard, caring for green spaces, etc.

Festive or solemn traditions are of a state and family nature.

State traditions include all official national celebrations legalized by the government: "The Constitution day", "The Independence Day", "The Defender of the Motherland Day", "Navruz", etc. Special anniversaries dedicated to the life and work of famous statesmen, such as, Amir Temur, al-Khorezmi, Beruni, Ibn Sino, Ulugbek, religious figures-Imam Bukhari, At-Termezi, Haji Ahmad Yassavi are marked.

The history and pedagogy of the Karakalpak people cannot be imagined without labor education of the younger generation. The correct choice of profession and the ability to achieve the desired results have always been considered the source of a happy life among the Karakalpak. The condition for achieving this goal is to master the perfection of a certain type of work. There is a figurative saying of folk pedagogy about this:

"The one who picks up the key to labor,
finds happiness itself".

As a rule, knowledgeable, worldly-wise people-mentors, who had special respect among the people, were involved in the labor education of children. Regarding the acquisition of labor skills and professions, folk pedagogy has preserved many proverbs and sayings, for example: "A Father's occupation is a legacy for children", "A Skilful (person) swims against the current", "Seven skills are not enough for a man", etc. They show the great importance and continuity of professional activities.

The formation the humane and moral feelings and actions in the youth have been contributed not only on the experience of life of the Karakalpak people, but the works of folklore, in which moral qualities and noble deeds were highly valued. For example:

Priceless treasure is
Morality, that more precious than gold.

In folk songs, fairy tales, riddles, proverbs and sayings, folk poetry, wise sayings, etc. preserved in human memory, all spheres of people's life, customs, rituals and traditions related to them are reflected, which contain educational guidelines and moral rules applied in everyday life. The works of oral folk art have a deep pedagogical content and great educational potential.

The history of the formation of Karakalpak science shows that all genres of oral folk art reflect the close relationship of the people's life with national customs and traditions, which served as an unwritten pedagogical culture. These genres include everyday (lullabies, labor), ritual (holiday, wedding), historical folk songs, as well as fairy tales, riddles, proverbs, and sayings. The largest genre of oral folk art, containing valuable thoughts and statements about the education of positive moral qualities of a person is the epic.

The most striking example in this regard can serve as a lullaby. By singing a lullaby to a child before laying him to bed, the mother also brings hope for the good fate of the baby, thus awakening the beginnings of love for their close people and others:

"Haiyu, Haiyu, my white, \ \ My hat made of lamb's wool,
Let people love you, \ \ My white, my favorite.
Haiyu, Haiyu, my sweet child, \ \ Who to be - it's your will,
Become only a man".

In this lullaby, the mother in a heartfelt form expresses the hope that the child, growing up, will determine who he should be, but there is also a reminder that he should not forget humanity.

Another song, "Ramazan" (ritual) originated under the influence of Islam. It is usually performed in the month of Ramadan, in connection

with the holiday in honor of the beginning and end of the Muslim fast - Oraza. It celebrates all the best that is available in a particular family. In cases where a newborn is in the family, it is customary to address the infant with wishes of happiness, a good future, and good health:

> The door of this Yurt is wobbling,
> In the very heart of it the gold cradle is swinging,
> There is a pretty aunty in this Yurt,
> What a dainty tea-bag she has.
> What will be presented to the performers of Ramazan.

In this song, the good traits and properties of the members of the family to which the performer addresses are jokingly sung, it expresses feelings of mutual trust, goodwill and mutual respect between people. The sincerity and kindness of wishes is evidenced by the line: "Let the baby with the size of a ram will be in your cradle".

One of the Karakalpak folk rites that have educational significance is "Betashar" - the ceremony of removing the veil from the bride's face, accompanied by a humorous ritual song under the same name. The content of this ritual song is briefly reduced to familiarizing the newly arrived person in the village - the daughter - in-law with the local residents, with their good deeds and shortcomings, with her peers living nearby and far away, in whose behavior or character positive and negative features are noted. A young girl who becomes a hostess in a new family is given benevolent wishes of friendship from others and advice on adapting to the customs and traditions of the new village. In Betashar, the joke and the serious are intricately intertwined. The song "Betashar" is imbued with the spirit of devotion to the rites and traditions of the ancestors and is performed by a poet or other eloquent person in front of the audience in an edifying and humorous form:

> Oh, people, people. \\ Daughter-in-law has arrived,
> Let's look at her with curiosity, \ \ not clamoring, not making a noise at once.
> Let's listen to the words, \ \ Let this daughter-in-law become worthy of our village, \ \ Let she will not have bad habits, \ \ Let the family, where (she) will enter with a bow, \ \ (she) will not plunge into sadness, \\ Let the oil boil in her cauldron, \\ Let her smile always happily, \\ Let the baby play in the heart of the Yurt.

According to popular custom, the newly arrived daughter-in-law, before entering the house, touched the threshold with her hand, and then touches her forehead, makes a deep bow to the parents, relatives of the groom and all present.

The song "Betashar", is a musical and poetic expression of the folk rite, has a pronounced educational character, rare vitality, thanks to which it is transmitted from generation to generation for many centuries.

The most popular genre of folklore among the Karakalpak, as well as among many other peoples, is a fairy tale. This long-established genre is considered one of the most effective means of educating children, because they praise the bright qualities of a person-kindness and honesty, bravery and honesty, intelligence and resourcefulness, loyalty and justice, love for the Motherland. Fairy tales have great allegorical content, when using images of flora and fauna, abstract concepts reveals the victory of man over many difficulties, tells of the struggle between good and evil, light and darkness, as, for example, in the story called "Good and Evil".

No less significant is the educational role of such a folk genre as the riddle. Since ancient times, people have attached great importance to the development of such qualities of the youth as intelligence, resourcefulness, inquisitiveness. Therefore, riddles were considered a valuable educational material, contributing to the development of the abilities and talents of the younger generation, expanding its horizons.

According to Karakalpak folk traditions, riddles were asked at parties or in the family circle to children in order to test their level of logical thinking, development of imagination, and skills of abstract thinking.

The importance of educational functions of proverbs and sayings is also obvious. Proverbs as an aphoristically compressed figurative utterance with an instructive meaning, embodying a rich life experience, people's worldviews, their spiritual level, dreams and hopes, attitudes to social life of the past and present, are widely spread in Karakalpak folklore. For example:

The son grows looking at his father,
The daughter grows looking at his mother.
Be a human's son, not a father's.
Morality, honor, shame are signs of humanity,
Rudeness, absurd behavior are signs of ignorance.

Pictures from the life of the Karakalpak people, the educational content of their customs and traditions are embodied in folk epics such as, "Kyrk Kyz" ("Forty girls"), "Sharyar", "Koblan", "Yusuf and Akhmed", "Edige", "Gorogly" and others.

Among the large number of monuments of Karakalpak folk art, the heroic epic "Kyrk Kyz"("Forty girls"), as a true treasure of folk poetry, occupies a special place. This poem has won wide recognition. It has been translated into Russian, Uzbek, Kazakh, Turkmen, Kyrgyz, and Lithuanian.

The heroic epic "Kyrk Kyz" reflects the events of ancient times and closer to us, the military clashes that took place in the Khorezm oasis and in Turkestan in the 18th century. The main characters of the epic "Kyrk Kyz" are girls warriors who came out with a sword in their hands

to protect their native land from the invaders. In this poem, the ideas of patriotism, justice, and friendship of people were vividly expressed.

The rich moral potential of Karakalpak folk traditions allows us to draw a conclusion about their undoubted pedagogical value and the need to develop effective tools and methods for the integrated use of finds of folk pedagogy, national traditions and works of folklore in the process of moral education of young people.

Thus, based on the above material, we can conclude that the rich moral potential of Karakalpak folk traditions and folk pedagogy, the brightness and imagery of folk literary genres that reflect the main moral precepts of science, their close connection with spiritual and cultural values of the past and present have retained their social significance and today are an invaluable help in solving the problems of modern pedagogy.

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Suhorukova L.M., Fokin N.I., Shestakova T.N., Melnikova L.A., Demidenko T.I.

TO THE QUESTION ABOUT EDUCATION OF SPECIALISTS IN THE FIELD OF THE COUNTER-PROTECTION OF MONEY LAUNDERING AND TERRORISM FINANCING IN THE RUSSIAN FEDERATION

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Abstract
The paper considers the training system in the field of AML/CFT in the Russian Federation, its features and approaches using the network

form of implementation of educational programs and new forms of associations of scientific and educational organizations. Financial monitoring and counteraction to illegal financial transactions is a new direction in the development of higher education in order to ensure financial security and transparency of the state financial system.

Keywords: financial monitoring, combating money laundering and combating the financing of terrorism (AML / CFT), financial intelligence, staff training, educational programs, higher education.

The growth of international geopolitical and economic tensions, cross-border crime, the expansion of offshore jurisdictions and the increasing struggle for financial markets contribute to the spread of criminal practices in the field of laundering of criminal proceeds and the financing of terrorism (ML / FT), giving rise to new forms of illegal financial transactions and mechanisms for the illegal withdrawal of capital abroad and their concealment.

Globalization and integration processes in the development of the digital economy, the financial IT industry, new payment systems, the rapid evolution of financial products, technologies and services are accompanied by increasing risks and the emergence of new challenges and threats to economic and national security. Money laundering has become a global problem and is associated with a large number of economic, tax, customs and other crimes. This criminal phenomenon has a special connection with corruption, drugs, human trafficking, weapons, precious metals, stones, etc.

In response to this, the states have created the legal framework for combating ML / FT - the international and national AML / CFT systems, and are trying to take legal, regulatory and operational, including preventive, measures to combat these phenomena, using the existing various international organizations and forming new specialized associations and working bodies.

The AML / CFT system is designed to ensure the financial security of countries at the international, regional and national levels, to prevent the development of the shadow economy, to block terrorists from funding sources and to confiscate illegal property and the proceeds of criminals. Russia is a member of a number of international structures that counteract money laundering and the financing of terrorism: FATF (Group for the Development of Financial Measures to Combat Money Laundering), EAG (Eurasian Group for Combating Money Laundering and the Financing of Terrorism), MONEYVAL (Council of Europe Committee of Experts on the Assessment of Measures anti-money laundering), Egmont Group (association of financial intelligence units), SRPFR (Council of Heads of CIS Financial Intelligence Units), etc.

The fundamental document containing a comprehensive and consistent system of measures to combat money laundering and the financing of terrorism and the proliferation of weapons of mass destruction are the FATF international standards - 40 basic recommendations.[1] Based on these standards and their adaptation, taking into account national characteristics of the financial system, legislation and practical experience in regulating various spheres and sectors of the economy, each country builds state policy and creates an AML / CFT system, in which financial intelligence units have a special place.

In Russia, this is the Federal Service for Financial Monitoring - Rosfinmonitoring. The basic law in the field of AML / CFT is Federal Law No. 115-ФЗ "On Counteracting the Legalization (Laundering) of Criminally Received Incomes and the Financing of Terrorism". For the purpose of its implementation and effective practical implementation, a whole range of by-laws has been adopted.

Currently, the Russian AML / CFT system is a multi-institutional structure with a variety of elements and their relationships. Its main links are: Rosfinmonitoring, supervisory and law enforcement agencies, banks, insurance, leasing, microfinance companies, corporations and other organizations of the financial and non-financial sectors (lawyers, notaries, intermediary lawyers) that implement AML / CFT measures.

At the same time, one of the most important components of the effective operation of this system is human potential and its development. The staffing issues of state bodies implementing AML / CFT measures are noted in the FATF Recommendations. The importance and necessity of providing the bodies responsible for mutual legal assistance in the field of AML / CFT (including the central authority) with adequate human, financial and technical resources is noted.

Also, according to the FATF methodology, the states must have procedures in place that ensure the appropriate qualifications of employees of such bodies and maintain high professional standards.

Given the special role of private sector organizations in financial monitoring and the anti-money laundering system as a whole, the international community urges considerable attention to be paid to the training of personnel of organizations in operations with cash or other property and the implementation of AML / CFT measures. The FATF Recommendations indicate that the programs of financial organizations to combat money laundering and the financing of terrorism should contain not only the development of internal measures, procedures and means of control, but also a program of continuous staff training [2, p. 114].

In the Concept of the National Strategy for Combating the Legalization (Laundering) of Criminally Obtained Incomes and the

Financing of Terrorism, the improvement of professional training for AML / CFT purposes is recognized as one of the main tasks for improving the activities of the national anti-money laundering system [3].

Moreover, in the national AML / CFT system, there is a shortage of personnel of the necessary qualifications with specialized education, special knowledge and competencies in the field of financial monitoring. And the absence of such specialists carries significant risks for ensuring economic security and the effective implementation of anti-money laundering policies, organizing internal control, taking measures for AML / CFT purposes and complying with applicable laws.

With this in mind, high professional requirements are imposed on such employees. Not only government agencies, but also the financial sector of the economy, primarily banks, insurance, leasing and microfinance organizations, professional participants in the securities market and established non-financial enterprises and persons of certain professions are interested in training specialists in financial monitoring. The creation of a modern system of training and retraining personnel for financial intelligence is dictated not only by the requirements of international standards, but is also an important condition for increasing the efficiency of work in the field of AML / CFT.

A special place is given to the higher education system as a complete educational cycle according to university quality standards with the receipt of a ready-made specialist in financial intelligence of a qualitatively new type, with professional interdisciplinary competencies, special, functional knowledge in the field of AML / CFT and information technology. The International Network Institute in the field of AML / CFT created 5 years ago is aimed at solving these problems. It currently unites 35 leading educational and scientific organizations from 7 countries - Belarus, Kazakhstan, China, Kyrgyzstan, Russia, Tajikistan and Uzbekistan.

The main goal of cooperation between universities is to combine efforts, experience, the best educational and scientific potential, as well as personnel, information, educational, methodological and other resources of participants for training personnel with new industry specifics on international AML / CFT. High quality education is achieved due to the synergistic effect of the interaction of educational organizations with scientific institutions, with government bodies and the trade union.

Participants of the International Network Institute for AML / CFT:

- form a single educational space;
- develop common approaches and methodological tools for the training of modern financial intelligence specialists using new electronic educational technologies;

- create opportunities for building individual educational navigation of students and learning paths in different universities with the issuance of "double" diplomas;
- expand partnerships with scientists and involve the academic community and expert practitioners in the educational process;
- organize student competitions, competitions in the field of AML / CFT;
- ensure the interconnection and correlation of educational and professional standards for the training of specialists demanded by the labor market.

On the basis of MSI universities, specialized units (centers, departments, laboratories) were opened; an integrated specialized training base was created, and videoconferencing (VKS) between the participants was organized. Educational institutions and modules have also been developed and are being implemented at the universities participating in the MSI. These programs were developed and updated taking into account the provisions of the professional standard "Financial Monitoring Specialist", which ensures the relationship between the professional training of personnel in the field of AML / CFT and the requirements for them of state bodies and private organizations working in this system [4]. The developed professional standard is one of the links in the created qualification assessment system for such specialists.

The NOC system is a tool for continuous assessment of personnel qualifications and their training, which guarantees the qualifications of specialists and a constant desire for professional development, compliance with the requirements and expectations of the employer and the labor market as a whole.

The network form also creates the conditions for the development of interdisciplinary areas of training in the field of AML / CFT, the combination of training modules from different areas of mathematics, computer science, economics, law, while retaining their specialization in the field of AML / CFT.

Currently, MSI universities not only train specialists in the full educational cycle, but also special courses and disciplines on AML / CFT are taught that are integrated in different areas of training: "Applied Informatics", "Customs", "Organization of work with youth ", Which meets the country's development priorities in improving the financial literacy of the population. So, on September 25, 2017, the "Strategy for increasing the financial literacy of the population in the Russian Federation for 2017-2023" was adopted [five]. Moreover, in the "Strategy for the development of the financial market of the Russian Federation for the period until 2020" (Order of the Government of the Russian Federation of December 29, 2008 No. 2043-r) improving financial

literacy is considered as one of the strategic factors for ensuring the competitiveness of the Russian financial market [6]. And in the Concept of long-term socio-economic development of the Russian Federation for the period until 2020 (Order of the Government of the Russian Federation of November 17, 2008 No. 1662-r), it is noted that encouraging the population to save money, including through the development of financial literacy , should be one of the main directions of the formation of an investment resource.

Financial literacy is a broad concept that includes issues related to combating money laundering and the financing of terrorism. Therefore, it is important to cover and draw attention to the problems of AML / CFT and create opportunities for self-study and study of scientific research and its results, existing experience and developments. For this purpose, the participants of the Network Institute create an electronic educational space:
- video conferencing (VKS);
- e-learning courses;
- video lectures;
- electronic library.

The development of education and practice in any field is inextricably linked with science. Therefore, a special place in the International Network Institute is occupied by scientific research on topical AML / CFT issues. One of the tasks of these studies is the search for scientifically sound solutions and effective mechanisms aimed at risk management, ensuring transparency of the economy and protecting the financial system, developing hardware and software systems and information technologies and products for operational financial monitoring.

Scientists of universities and research centers of the Moscow Institute of Information and Science consider and study the AML / CFT problems in various aspects and planes, taking into account Russian and international experience, using a set of various scientific methods, wide economic, legal, sociological, and mathematical analysis. At the sites of participants, research thematic laboratories are created and their own scientific schools are formed. Thus, at present, the International Network Institute is an established modern scientific and educational system for training personnel in the field of AML / CFT, integrated into the existing labor market and demanded by it. The International Network Institute forms for the AML / CFT system a professional community of financial intelligence specialists of high qualification and motivation, and also ensures through the training system the maintenance of a high level of their training, the development and acquisition of new competencies and knowledge.

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Milyutina A.A., Fortygina S.N., Akankina T.S.

USE OF THE POSSIBILITIES OF THE MEDIA MEDIA IN THE PROCESS OF REALIZATION OF REMOTE LEARNING AS AN ACTUAL THE PROBLEM OF MODERN EDUCATION

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Abstract
This work is devoted to the problem of using the capabilities of the media in the process of implementing distance learning. In the work, the changes and transformations that have arisen in the modern education system are highlighted, the theory is reviewed and analyzed, and specific features of the organization of distance learning in the higher education system are highlighted. Also identified are ways to solve the problems of implementing distance learning using the media.
Keywords: media environment, distance learning, students, modern education.

Currently, the key components of the educational process are changing: learning the basics of working with a media environment (using multimedia editors in lessons, programming, interacting in the Internet space, etc.), working with the Russian Electronic School platform [5], modernizing additional professional education for teachers, the implementation of the Digital Economy project [1], as well as the use of distance learning elements. The platform "Russian Electronic School" provides for the massive use of didactic and methodological resources by all participants in the educational process. The platform contains lessons, courses, contests, a catalog of museums, educational projects, etc. It can be noted that within the framework of this Internet resource, a large

amount of additional material has already been presented for the student to work at different levels of education. There are practically no data platforms for working at the higher education level, although the requirements of the Digital Economy project reflect the need for each specialist in his field to work with a media environment. In addition, the situation in which all spheres of human activity for the period of 2020 turned out to set the educational system the task of organizing work with participants in the educational process without direct communication. Therefore, the use of the capabilities of the media in the implementation of distance learning is an urgent problem of modern education.

The media environment can be considered from the point of view of a wide and narrow understanding of this concept. In broad terms, this is the aggregate of global media of communication available to various target audiences in a certain period of time. In the narrow sense, this is the totality of the media messages of a particular person [4]. The media environment of the higher education system should be considered in a broad and narrow sense, since within the framework of the implementation of the elements of distance education, public resources should be present, as well as the organization of individual interaction of participants in the educational process.

Currently, many higher educational institutions have organized work with the media: the official website of the university, internal resources of the electronic library, cloud portals, the creation of virtual rooms for teachers, the electronic format of schedules, online receptions, etc. However, all these resources are auxiliary for the organization and implementation of educational process, therefore, the interaction of teachers and students in the media is an urgent issue in the organization of distance learning. This work is specific in nature, since when it is implemented, there is no direct contact with the teacher.

Distance learning is a new form of organization of the educational process, which combines traditional and new teaching technologies. It involves working with educational material and communication using the media [3]. This form in the university should be implemented taking into account the legal framework of the university and the technical capabilities of students. To solve the problem of using the capabilities of the media in the process of implementing distance learning, it is necessary to take into account the specific features inherent in it. We believe that one of these features of distance learning students is the transformation of the work program of the discipline. As part of distance learning, it is impossible to work with students on a full-time study plan. The number of hours allocated to lectures, practical and laboratory classes, independent work requires change, taking into account

the requirements, goals and objectives of the Federal State Educational Standards of Higher Education (GEF HE) [6]. We offer the teacher to adjust the hours for the student's work in such a way that he would not have any difficulties with independent tasks. This adjustment should be made taking into account the formed competencies and within the framework of the legal documents of the university.

The next feature of distance learning is the interaction format of the participants in the educational process. Using the capabilities of the media, the teacher can indicate the time of lectures and consultations (in accordance with the schedule and technical capabilities of the participants in this process) by creating a virtual room on the university's internal resources or various platforms and applications for online video communication, group video chat, and messaging. The most common of them are Zoom, Skype, Microsoft Teams. In addition, there are online platforms for instant information exchange, where you can organize your community or conversation within the discipline studied by students for online counseling and working with the material being studied (Vkontakte social network).

Another feature is the way students check assignments. The solution to the problem is possible by posting and checking completed assignments on the university's internal resources or e-mail services (Yandex.Mail, Gmail, Outlook, Mail.ru, etc.). Working with it, the student can send files for verification (in electronic format) so that the teacher can mark the mistakes made and the necessary corrections in the work, and then send the checked file back.

In addition, the teacher can create test papers and tests using online survey services. Simple platforms with instant feedback are: Testograf.ru, Survio, Google Forms, etc.

The work noted the specific features of the organization of distance learning and possible ways to solve them and implement the participants of the educational process using the capabilities of the media. The problem of distance learning is relevant for modern education, its implementation requires the adjustment of teaching methods, the format of interaction between teachers and students, changing the process of completing and checking assignments, converting educational material into an electronic version and presenting it to students [2]. Using the capabilities of the media, it is possible to solve the questions arising from the implementation of distance learning: organize work at an individual pace, make accessible lecture and advisory training material, create effective interaction between participants in the educational process, realize mobility in working on discipline, etc. It is worth noting that distance learning cannot replace the direct direct interaction of students

and teachers, it is only an auxiliary element to solve the difficulties encountered in the modern world and the education system.

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PHILOLOGY/ LINGUISTICS

Erdyneeva D.D.

STYLISTIC PECULIARITIES OF W.B. YEATS' POEM 'LEDA AND THE SWAN' AND W.H. AUDEN'S POEM 'MUSÉE DES BEAUX ARTS'

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Abstract

The present article provides the stylistic analysis of two poems written by the outstanding English poets W.B. Yeats and W.H. Auden. In W.B. Yeats' poem 'Leda and the Swan' the author uses numerous expressive means and stylistic devices to depict the passion and corporal reality of love scene between Zeus and Leda. On the contrary, in W.H. Auden's poem 'Musée des Beaux Arts', Icarus' death (in Brueghel's picture) is ridiculed by the people's indifference to this tragedy. This contrast between the dramatic and the dull, the divine and the routine is also shown by the author via the number of stylistic markers of different levels. Besides, the structural and semantic organization of the text and the author's idiosyncrasy are also of great importance. However, despite the different ways of characterization both poems have some common features as reference to Greek mythology, fatalism, dramatic plot, the authors' reflections on human nature.

Keywords: myth, expressive means, stylistic devices, stanza, Icarus, idiosyncrasy.

Both poems are full of charm due their beauty, dramatization, energy, tension and mystery. The first poem "Leda and The Swan" written by the famous English poet W.B. Yeats [3] appeals to the well known myth. As the philosopher A. Losev said about the myths: "Myth is … vitally felt and created bodily reality and a corporal, to the point of

animality, corporal reality [2:400]. In this poem the atmosphere is the reality felt by flesh – fleshliness is in the air. We are transported into the possible world. The latter could be sensed. The myth is reanimated and the readers are seized by Zeus' primitive passion. Apparently the erotic theme is a central one. The vocabulary chosen by the author proves it: *her thighs, loosening thighs*, *body*, *the loins engenders*.

Zeus is a chief God and nobody could resist his might no matter he looks like a human being or a non-human. At this very moment Zeus is a swan. Yeats depicts him via the numerous expressive means and stylistic devices: *the great wings* (metonymy), *feathered glory* (epithet), *the indifferent beak* (metonymy). His superiority and vigour are emphasized: *the great wings beating*, *By the dark webs, her nape caught in his bill*, *the strange heart beating*, *The feathered glory*, *with his power, the brute blood of the air*. The repetition of the word *beating* implies an erotic overtone. The words *dark*, *brute blood* manifest his animal instinct, his lust.

Here the rhythm plays a very important role in creating a tense and energetic atmosphere – the alliteration of [b]: *broken, burning, Being, by, brute blood, Before, beak* contributes to it. Besides the rhyme maintains the air of the primal passion.

In the first stanza an alliteration of consonant cluster [st] conveys an idea of an aggression (it sounds a bit of roughly) - **st**ill, **st**aggering, care**ss**ed, brea**st** upon his brea**st**.

Leda couldn't resist this savage attack, so the following epithets depict her image: *the staggering girl*, *helpless breast*, *those terrified vague fingers*, *her loosening thighs*. Reconciling herself to fate her female nature complies the call of the wild. She has been conquered. In the second stanza two rhetorical questions are followed to prove this as well:

The feathered glory from her loosening thighs?...
But feel the strange heart beating where it lies?

Apparently an idea of fleshliness is also conveyed via the alliteration of the sound [f]: **f**eel, **f**ingers, **f**eathered.

The second theme is in the background: the consequences of Zeus' love affair. In fact it is one of the most relevant themes. The culmination seems to happen in the first line of the third stanza:

A shudder in the loins engenders there

This phrase combines two ideas due to the pun (*shudder*): the climax of love and ominous implications of it.

The third stanza arranged as a septet is given in a very tragic, dark tone. The author anticipates the misfortunes, catastrophe - the following semantic field is represented via a number of expressive means and stylistic devices: *A shudder*, *The broken wall, the burning roof and*

tower, *And Agamemnon dead*. There is the allusion to the Trojan War. Fair Helen, a daughter of Leda, will provoke the latter. Her second daughter will contribute to her husband Agamemnon's death.

The graphical arrangement of the phrases maintains the terse and solemn narration:

And Agamemnon dead.
Being so caught up.

However in the outcome we see a banal end - after satisfying his passion Zeus became uninterested in Leda and lost her: *the indifferent beak could let her drop*.

The epithet *indifferent* shows the transience of Zeus's love. As we have mentioned above the latter caused dire consequences.

Furthermore the second poem "Musée des Beaux Arts" written by a well known poet W.H. Auden [1] is also referred to the Greek mythology - the myth about Icarus, Daedalus's son.

Compositionally the poem consists of two parts. In the first part the poet speculates about the Old Masters - how they treated suffering. The second part describes Breughel's picture representing Icarus who fell into water. It is also a dramatic moment although the bystanders ignore this fact.

Without a doubt **suffering** is a philosophical, religious concept. No matter what religion a person believes, the theme of human suffering is a central one in every religion. While suffering people seek for comfort and explanation in religion. We fully agree with the author that suffering is the substance of mankind (*Its human position*). The inversion (*About suffering they were never wrong*) emphasizes this word.

All human life is full of suffering. This is a reason why a human being concerned with his routine deeds turns his back upon the things including the miracle. Apparently the theme of suffering is interwoven into the fiber of narrative. There is an allusion to Jesus Christ (*the miraculous birth*) who suffered much and sacrificed his life for the sake of humanity. However this motive sometimes borders on the absurd. Actually the routine actions worked as the arguments (*While someone else is eating or opening a window or just walking dully along*) make a dissonance with the thesis about suffering.

Obviously much is based on a such principle of foregrounding as the contrast, e,g. an opposition of an unusual event: (*miraculous birth*; *Something amazing a boy falling out of the sky*), on the one hand and the routine (*skating On a pond at the edge of the wood*; *the sun shone; the ploughman*), on the other one. The antithesis maintains this principle:

1. *the aged, Children;*
2. *everything turns away*
Quite leisurely from the disaster;

3. *the <u>torturer's</u> horse*
Scratches its <u>innocent</u>).

Besides, the expression "*it was not an <u>important failure</u>*" sounds like an oxymoron and it is also contradictory.

In this poem the tragic coexists with the comic, the pathos gives way to the dullness and vice versa. This rotation seems to symbolize the dialectics of human life where the divine coexists with the routine, the lofty gets along with the vile, the beauty agrees with the ugliness, the generosity is adjacent to the vanity etc. It's a way how Auden's idiosyncrasy is maintained: a bizarre mixture of the contrast concepts, the deliberate irregular arrangement of the sentences, his challenge to the classic poetry anyway. With this regard we could claim that the tone of the considered poem is mostly ironical.

The central image is a youth named Icarus who is about to drown. Icarus is a contradictory figure as well. This character is a symbol like the majority of the mythological characters. He is a symbol of human conceit, frivolity, disobedience. Icarus is an allusion to a well known myth about a dangerous adventure. Both the father (Dedalus) and the son (Icarus) managed to escape from the prison due to the wings. While flying Icarus inspired by the flight ignored his father's advice not to come close to the sun. The latter melt wax that the wings had been glued with. So the end is tragic.

We wonder why people do pay no attention to Icarus when he needs help. We wonder whether the people are indifferent or evil-willed. There are more questions than answers. The author figures out this dilemma using anaphora *how*: *<u>how</u> well, <u>How</u>, when the aged, <u>how</u> everything turns away.*

Apparently a way of narration (mostly in the first stanza) and description (in the second stanza) seem to be very unusual. On the one hand, it complies the rhyme and the rhythm, but on the other hand, it looks like a prose. Perhaps it is also an evidence of the fact that our world is a many-faced, heterogeneous one.

In conclusion we must say that irrespective of the differences (the theme, the composition, the author's idiosyncrasy, etc.) these two poems have some common features: 1. allusions to the Greek myths; 2. fatalism (tragic end); 3. dramatic plot; 4. the authors' speculations on the issue of human nature.

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