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DEVELOPMENT OF THE SYSTEM OF A GAME ARTIFICIAL INTELLIGENCE BASED ON CONCEPTS OF FINITE STATE MACHINES

Article is devoted to the development of the system of an artificial intelligence intended for creation of the game project in a genre of role-playing game (RPG). The features of the main development stages and component necessary for interaction with the game environment are considered. Implementation of system for creation of games is described. Discussion of different development approaches of a game artificial intelligence is carried out

Keywords
software, software product, computer game, types of computer games, game artificial intelligence, finite state machines, C# language, Unity game engine, program architecture

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1. Introduction

In traditional researches in the field of the artificial intelligence (AI) the purpose consists to train the computer to elements of a human thought (Artificial intelligence, 2016), (Drozdova, 2016), (Drozdova, 2017). In the project Kismet (Massachusetts Institute of Technology) becomes attempt to create AI with such properties as, learning capability, social interaction, expression of emotions.

In computer games, the artificial intelligence is not used in the true sense of the word (Bachurina, 2016), (Ryabova, 2016). Unlike the full-fledged systems of an artificial intelligence, the game intelligence does not possess simulation of "consciousness" and its analytical skills are not so developed. The game artificial intelligence solves problems only in the game environment, and, as a rule, represents a set of behavioral algorithms. Further the artificial intelligence will be considered only in this sense.

The Game Artificial Intelligence (GAI) performs several functions.

1) Creation of illusion of a game against the living person — as a rule, in the majority of games GAI undertakes a role of control of "bots" — characters of a game whom the

player cannot control. Bots can behave hostilely, friendly, and, in certain cases, ignore the player. Depending on the purposes of function of bots vary from a simple pursuit of the player to simulation of life in game conditions.

It is important to mark that working according to the program, bots will not make tactical mistakes. For example, when firing from weapon, strike accuracy will be absolute. To avoid a similar superiority, bots often project with defects. It creates to the player more comfortable conditions.

2) Control of events. In addition to control of bots, GAI is responsible for the events, which are taking place in the game environment. Such as accidental events, changes of weather conditions, control of interaction between the player and objects, etc. In process of growth of complexity of the game project, more and more extend obligations of GAI.

For execution of the role, GAI shall interact with substance (entities) in a game. There are two basic approaches to this interaction:

• From GAI to substance — such approach means that GAI is permanently active, and calculates decisions for finding of an optimal solution in the given situation.

It allows GAI "to think" globally, and mostly is suitable for complex strategic games.

• From a substance to GAI— in this approach, GAI is active only when it is necessary "to consider" the decision. Such approach is effective in games with a large number of substances, which do not need to update the status permanently.

It is obvious that in order that GAI could make intelligent decisions, it needs to perceive the game environment and to have the structure corresponding to complexity of tasks. The game is more difficult, the GAI shall process bigger quantity of objects and events.

In simple games, check of location of the player can be the single function. In difficult projects tasks of intelligence can include search of a way in a dynamic surrounding, team operation, ability to foresee actions of the player. All this will be based on the put knowledge or the got experience.

The basic principle, which is the cornerstone of GAI operation, is decision-making. The game system shall influence objects by means of GAI. In this article, implementation of GAI on the basis of finite-state state machines is offered. It is used as a method of simulation and implementation of the object possessing different statuses during the life. Each "status" represents physical conditions in which there is an object, for example, a set of emotions. Emotional statuses have no relation to emotions of AI, they treat the behavioral models corresponding to a game context.

In Saint Petersburg State University of Industrial Technologies and Design at department of the information and controlling systems, the researches in the field of the game artificial intelligence (GAI) are conducted. These researches are based on the finite-element method. They are applied during creation of the game project in a genre of role-playing game. This game is written in the C# language in the Unity environment.

2. Methods of carrying out experiment

We will consider features of the main stages of operation over the project.

2.1. Development of a GAI method within a genre of three-dimensional role-playing game

In a figure 1 the general diagram of the GAI system and the accompanying components is provided.

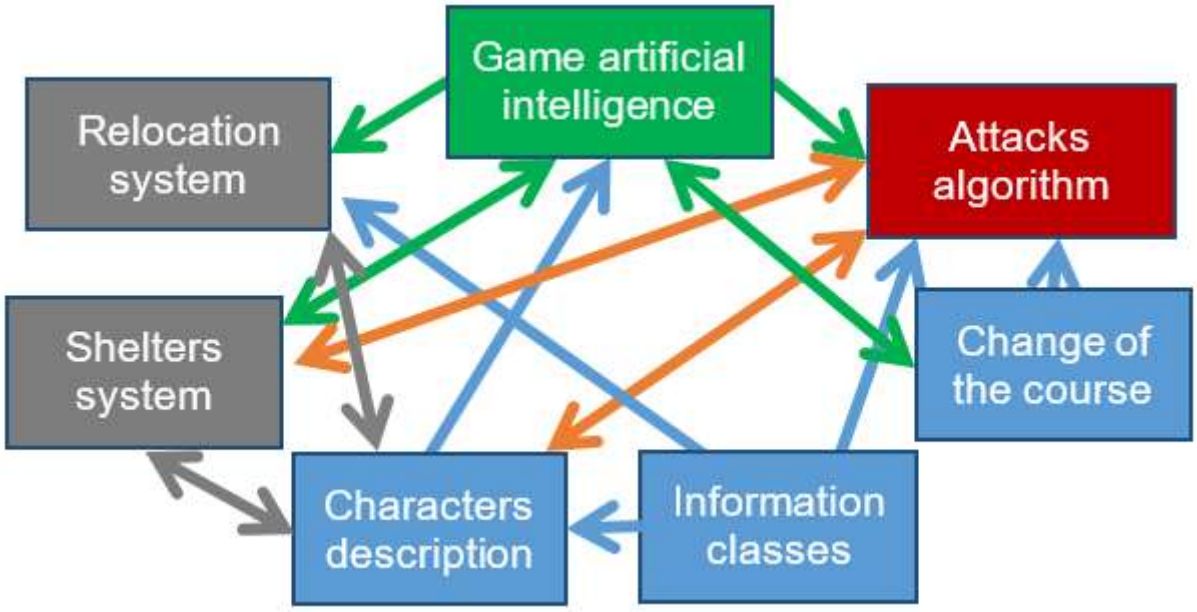

FIGURE 1 — THE GENERAL DIAGRAM OF THE GAI SYSTEM AND THE ACCOMPANYING COMPONENTS

Further we will consider features of the main development stages of GAI and components necessary for interaction with the game environment.

2.1.1. Fight process description

In the majority of games, fight is one of the most important components. Therefore careful premeditation of system of fight is necessary during creation of a computer game of this type. It was decided to use the step-by-step system of the description of events which is typical for tactical games. In this case, the player can control several characters at the same time. Such approach allows to use fully the tactical potential of a game, gives to the player the chance to evaluate a situation and to make the reasonable decision.

Fight is conditionally the infinite loop consisting of two phases: course of the player and course of the computer. Fight stops if characters of the player or the computer are destroyed. During fight the player carries control of group of characters. Each character can possess a unique set of characteristics (different types of arms, ability to conduct a battle, ability to survive, etc.). At the same time, the number of actions of each of characters is restricted to points, which are filled at the beginning of each course.

2.1.2. Change of the course

As it was mentioned above, fight takes place in a step mode. The class which is consisting of conditionally infinite loop and including two phases was developed. It is the course of the player and the opponent's (computer) course.

Alternation of phases is one of key factors, it directly influences a possibility of making by the character of any actions.

2.1.3. Characters description

Game characters are dynamic objects, that is, have a row of characteristics and properties which change during the game. For tracing and change of characteristics of each of characters, their interaction and interaction between characters and a game surrounding, the class Stats was developed.

This component stores important variables and changes them in compliance the set conditions, for example, recovers points of actions at the beginning of each course.

2.1.4. Information classes

In the course of the game, the player can find new equipment and also use different types of the attacks. Characteristics of equipment and the attacks need to be stored as they are used when calculating efficiency of the attack.

For a solution of the problem of storage, by means of the C# language, the constructions representing simple tables of databases were created. In total three information classes were realized: arms, armor, types of the attacks.

2.1.5. Relocation system

Process of relocation consists of two stages.

1. Search of a way — process of finding of a way in three-dimensional space.

2. Relocation on the constructed way — relocation of a three-dimensional object on the way which was constructed at the first stage.

Search of a way. Search of a way means process of finding of a route between two points of space, which allows to bypass hindrances. For implementation of search of a way the algorithm A* was selected. It is necessary for use of this algorithm that a field of a game it was broken into points. The ray with a step 1 virtual meter perpendicular to a game field is for this purpose built. With its help the array from a set of points in space is created. The set of these points form the undirected graph.

This method allows to collect the position information of each object in space and to set "impassable" places,

After creation of a graph, the algorithm A * allows to find the shortest way from one point to another by viewing of possible ways which can bring into an ending point. In the course of search, the algorithm appropriates to each adjacent point of weights which is used for determination of a priority of transition to the following point. Thus, creation of a way does not require search of all available points as the algorithm will select only the best options.

Relocation on the constructed way. When using an algorithm A*, the required option of a way will be presented in the form of an array of points in space. Before relocation, the system graphically displays a way of relocation in order that the user could see the direction of movement of objects. Along with it relocation cost is calculated. For implementation of movement the normalized vector towards the following point is

created. Further the model of the character moves until the distance between a point and the character does not become zero.

2.1.6. Shelters system

For introduction of realness into game process and also for extension of tactical opportunities, it was developed the system of shelters.

Shelters were designed in such a way that each of them is a separate independent substance with the simple principle of operation. Shelters were designed so that each of them was a separate independent entity, and the principle of operation with them was simple. Depending on whether the current course is the course of the player or the computer, the algorithm of operation of the shelter uses an array of either characters of the player group, or characters of the computer group. When checking the shelter on safety, from the central point of the shelter the rays directed to each character in turn are issued. If at least one of rays gets to any of characters, (that designates absence of hindrances on the way of a ray) that shelter is considered dangerous.

Two types of shelters are now realized: complete and incomplete. If the character is behind the complete shelter, then such character cannot be attacked. The incomplete shelter, in turn, reduces probability of hit in the character by 50%.

2.1.7. Attack algorithm

For completion of a game, it is necessary that one of the sides destroyed characters of other side. For extermination of the character, it is necessary that his index of health as a result of the attack became equal to zero. Process of the attack can be divided into three main stages.

Obtaining information on characters. For attack making, it is necessary to obtain data on characteristics of the attacking character, and the characteristic of the purpose. Existence of the purpose is a necessary condition. The character and the purpose are selected by the player by means of the system of a choice of the purposes, or they are selected by GAI (depending on the one who controls the character).

Check of conditions of the attack (PreAttack method);

Calculation and plotting of a loss (AttackEnemy method).

PreAttack method. In a computer game there is a set of situations in which it is impossible to make the attack. For example, if the attacking character does not have enough points of actions for attack making. The algorithm in the Figure 2 checks characteristics of characters and existence of hindrances (shelters) between characters and the purpose. If at least one of conditions is not observed, the attack is cancelled.

```
PlayerWeapon=WeaponInitializer.Weapons.FirstOrDefault(s=>s.Id==SelectedPlayer._WeaponId);
PlayerSkill = SkillInitializer.Skills.FirstOrDefault(s => s.Id ==SelectedPlayer._SkillId);
EnemyArmor = ArmorInitializer.Armors.FirstOrDefault(s => s.Id == SelectedPlayer._ArmorId);

if (!Enemy._Alive || Enemy == null || !SelectedPlayer._Alive || hit.collider.tag != _currentTag)
{
    return false;
}

if (!PlayerWeapon.Ranged)
{
    _attackRange = 4.1f;
}
else
{
    _attackRange = PlayerWeapon.Distance+PlayerSkill.Distance;
}

if (_distance < _attackRange)
{
   return false;
}
```

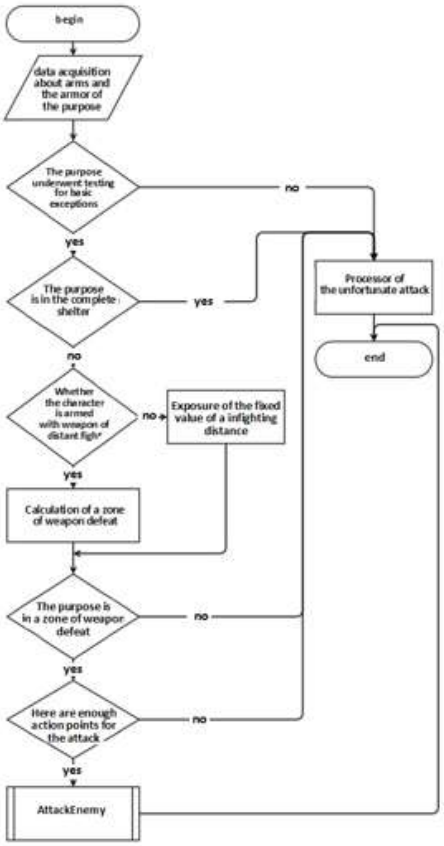

FIGURE 2 – AN ATTACK ALGORITHM IN THE PREATTACK METHOD

AttackEnemy method. This method is executed if attack conditions in the PreAttack method were successfully checked. In an algorithm in the Figure 3 there is a calculation of chance of hit, calculation of a loss and also calculation of the remained health of the character by which the attack was carried.

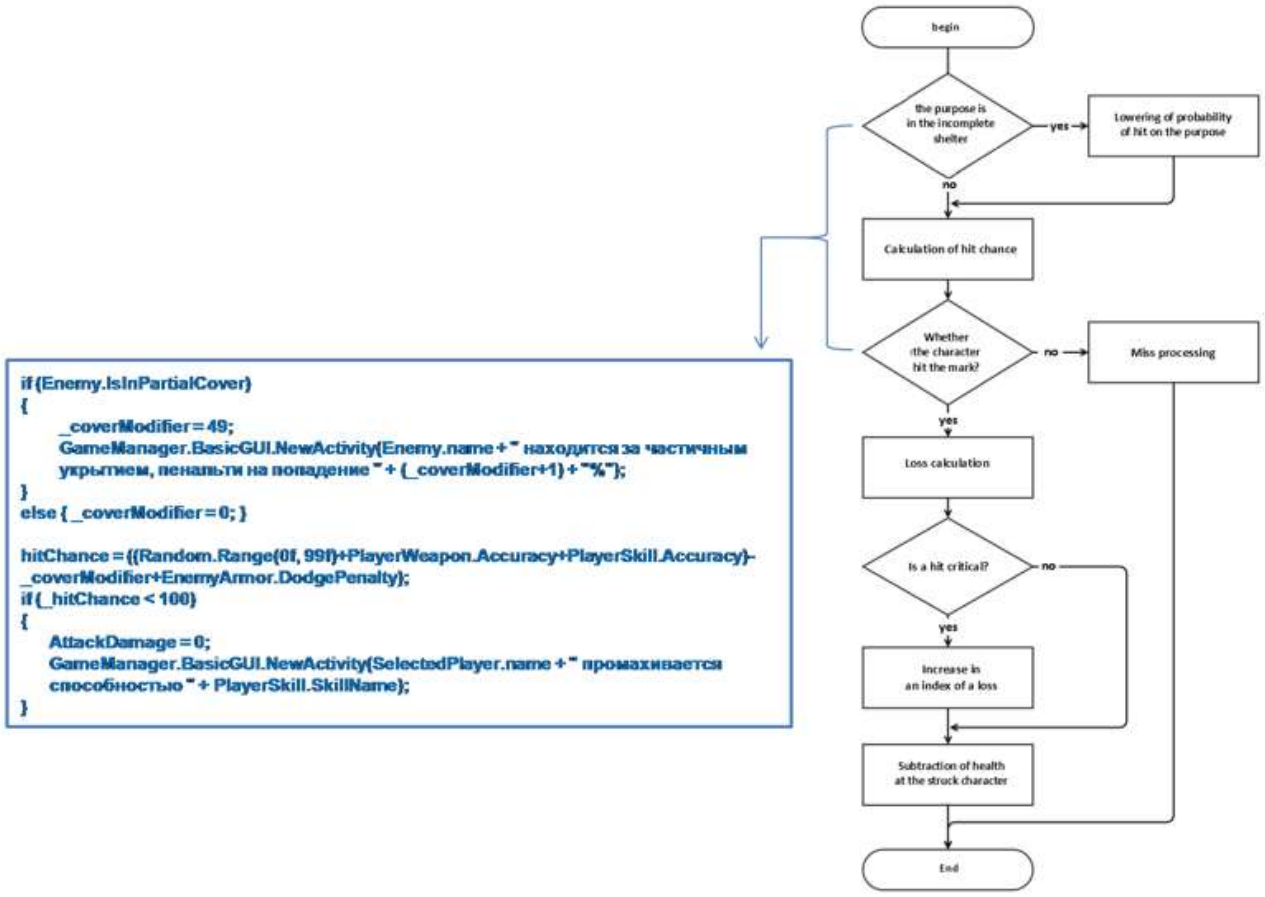

FIGURE 3 – AN ATTACK ALGORITHM:IN ATTACKENEMY METHOD

2.2. Implementation of system of a Game Artificial Intelligence

2.2.1. General algorithm of operation of GAI

One of the main objectives of GAI is simulation of behavior of the person. Implementation of system that in details recreates behavior of the person will be too expensive, and its development will occupy a large number of time. However, in many games the high level of realism is not required. In this regard, finite state machines are quite often used to creation of GAI.

Structure of the finite state machine such is that transitions depend on the changing environment (inputs) and a current status of the automatic machine. Thus, the finite-state state machine will transform a chain of characters of an input to a chain of characters of an output. Structure of the finite state machine is such that transitions depend on the changing environment (inputs) and of a current status of the automatic machine. Thus, the finite state machine will transform a chain of symbols of an input to a chain of symbols of an output.

During the GAI-operations serial control of each of characters available to it is executed. The main method of the GAI system is the StateSelectionAndExecution procedure (the Figure 4). It is possible to select two main stages:

- check and choice of a status (SelectState method);
- execution of instructions of this status.

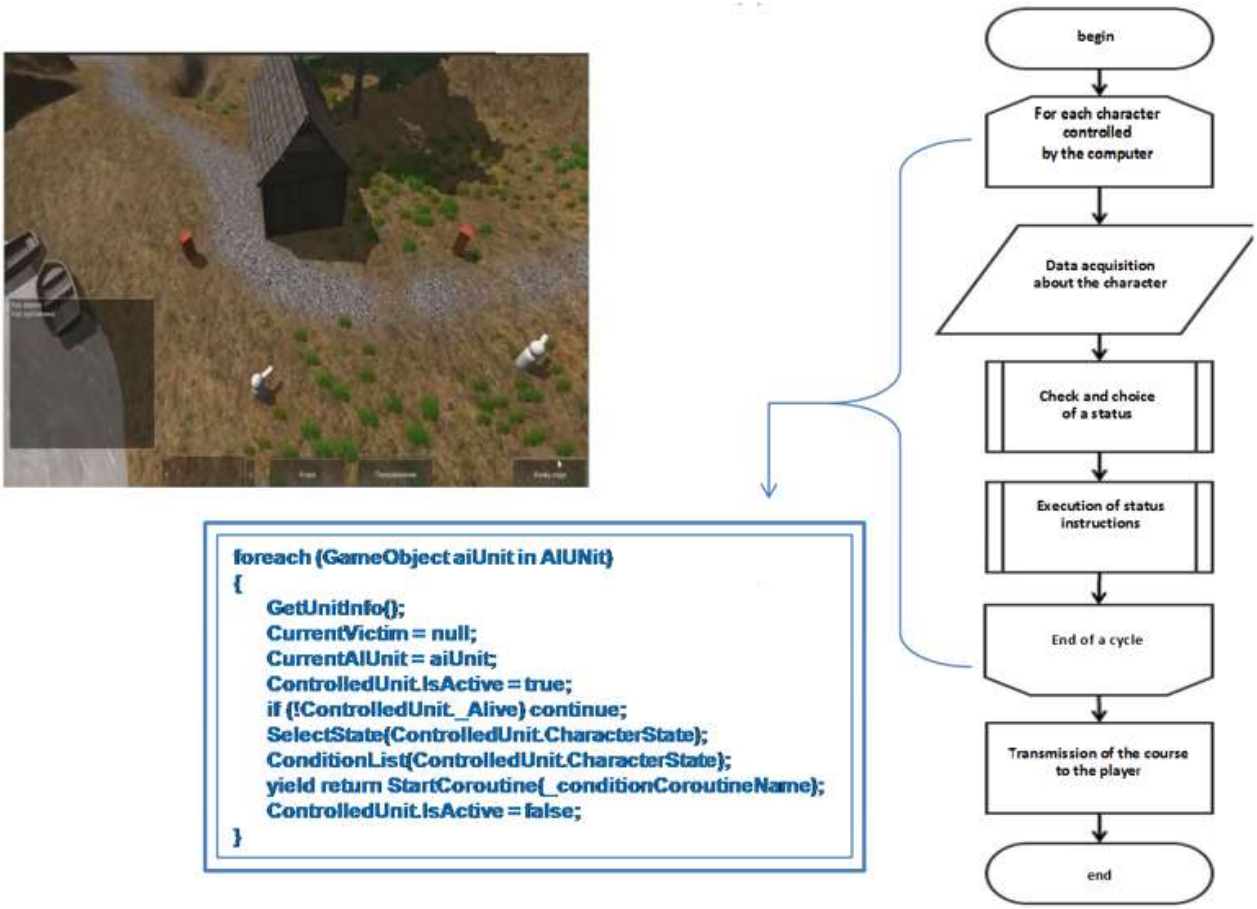

FIGURE 4 – THE GENERAL ALGORITHM OF GAI OPERATIONS

SelectState method. This method is responsible for a choice of a certain states. In total in a game six states are developed: readiness, aggression, approach, rage, retreat. An output of states is the algorithm of behavior of the character, and the inputs leading to change of a state are its characteristics. They are specified in the table in the Figure 5

Вход X	Описание
e (enemy)	In a visibility range of the character there is an opponent
i (injured)	Health of the character is lower than 50%
r (ranged)	The character uses weapon of distant fight
s (scared)	The quantity of points of health of the opponent are three times higher, than at the character
c (cover)	The character is in the complete shelter

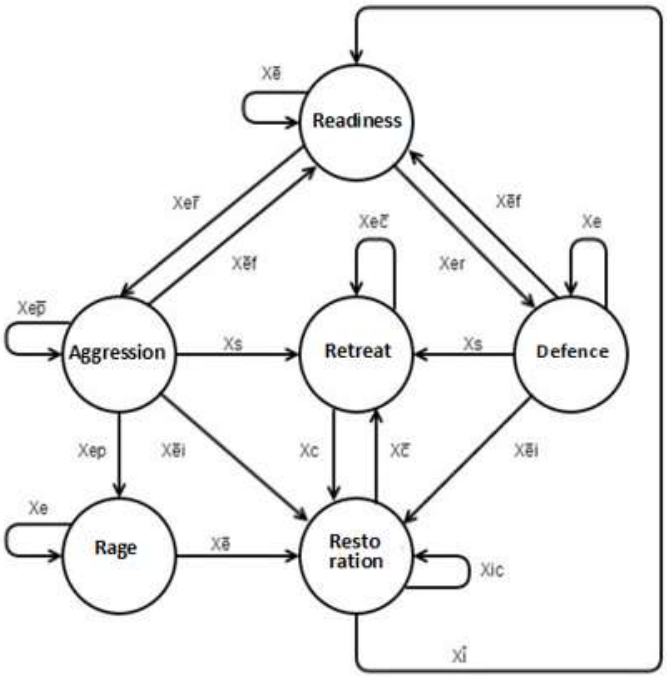

FIGURE 5 – THE STATE DIAGRAM

2.2.2. States for characters controlled by the computer

Readiness. Readiness is start state for all characters. The character who is in a ready condition has enough points of health for fight guiding. If the opponent is found, transition to a status "aggression" or "approach" is made. It becomes depending on the current weapon. Otherwise, the character will remain in this state and will move in the accidental direction to accidental distance, imitating terrain patrol.

Restoration. According to the name, being in this state the character recovers a part of points of health. However, an indispensable condition for transition to this state from aggression, approach, retreat and rage is absence of direct threat. In other words, the character shall be in the complete shelter, or in a zone of its visibility there shall not be hostile fighting units.

Aggression. This state is the main fighting state for characters, who are run by the computer. Being in this state, the character will aim to approach on distance sufficient for defeat of the purpose. Characters only with a close combat weapon can pass into this state. But it is possible to expand game conditions, and then this algorithm can be executed also in case of weapon of distant fight.

In a figure 6 the situation is shown when the character controlled by the computer is in the attack radius, but as on its way there is a building (the complete shelter), he cannot make the attack. In this case GAI reduces the radius of the attack to a certain value that the character controlled by it approached closer the purpose. As the algorithm A* guarantees finding of a way which carries to the purpose (if such way exists), then, gradually reducing the radius of the attack, GAI brings the character controlled by it in a zone of direct visibility to the purpose.

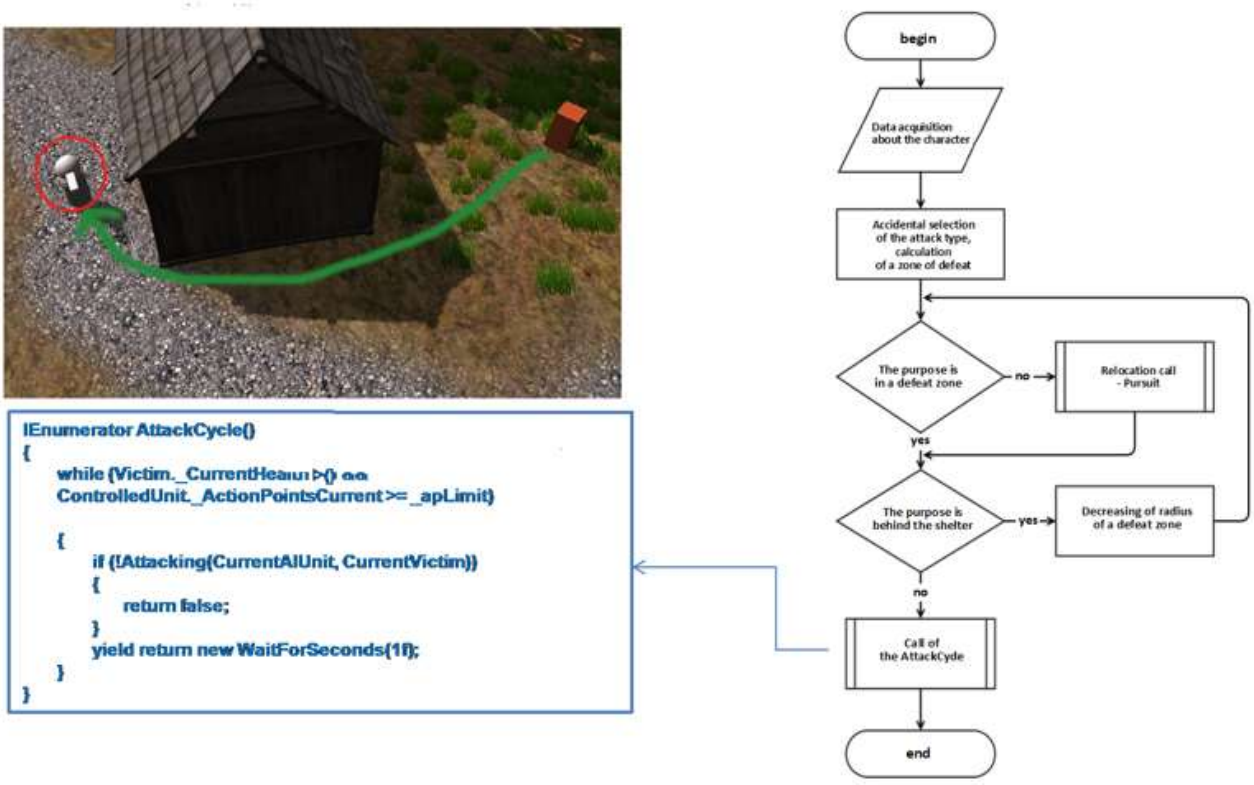

FIGURE 6 – THE ALGORITHM OF A STATE "AGGRESSION"

Approach. This state is the main for characters who use weapon of distant fight. In general, the approach algorithm (the Figure 7) can be described as follows:

1. To run for search of the next incomplete shelter which will allow the character to attack the opponent. If such shelter is not found, then to run for search of the next incomplete shelter within one course;

2. To make attack attempt if attack conditions are met.

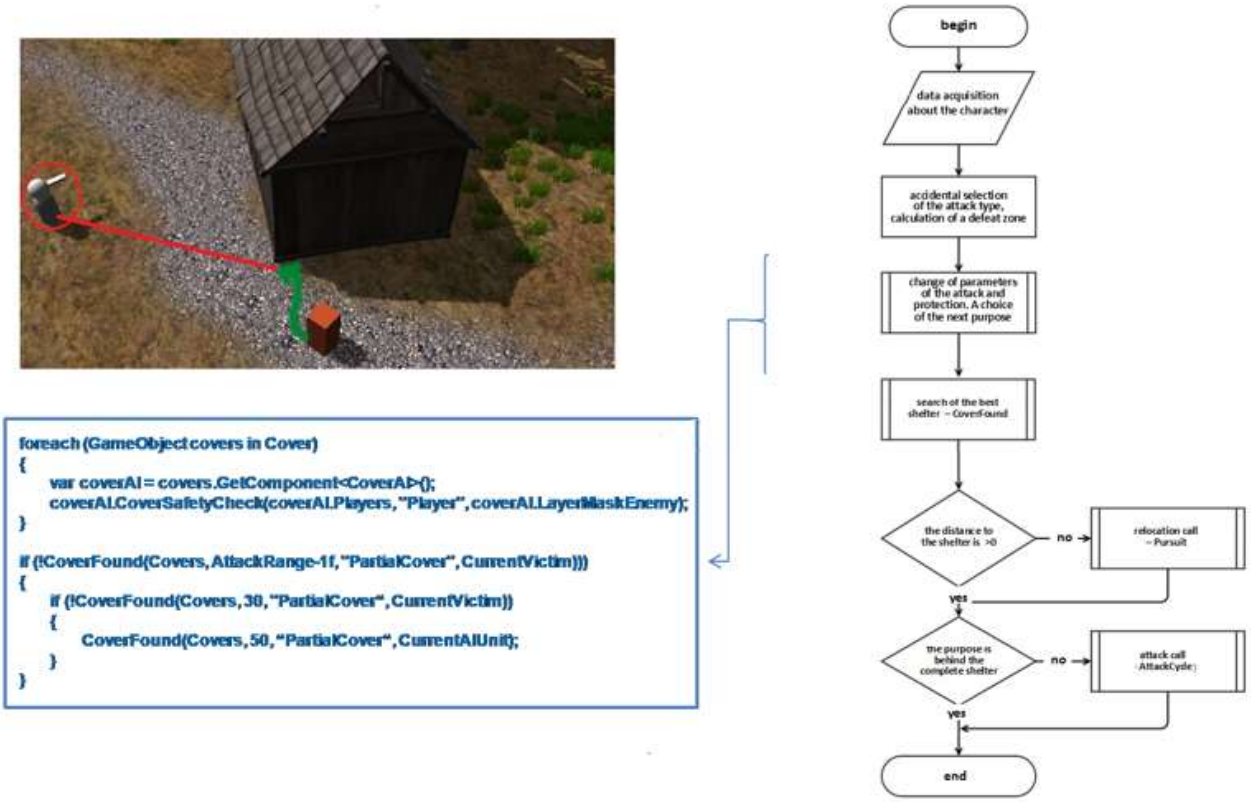

FIGURE 7 – THE ALGORITHM OF A STATE "APPROACH"

Rage. The rage is a status analog "aggression", however the character who fell into rage loses over himself monitoring, and will attack any character who followed at it ways whether regardless of that this character is an ally or the opponent. Transition to a state "rage" is carried out from a state "aggression". A condition of transition is the given probability, which that is higher, than health of characters is lower.

The player and two characters controlled by the computer (1, 2) are figured in the Figure 8. The character 2 fell into rage, and the character 1 will become his purpose as he is the next purpose. Other differences of a state of rage from a state of aggression are gain of the attacks and weakening of the armor of the character. Also, the character who fell into rage becomes fearless therefore transition to a state "retreat" is impossible.

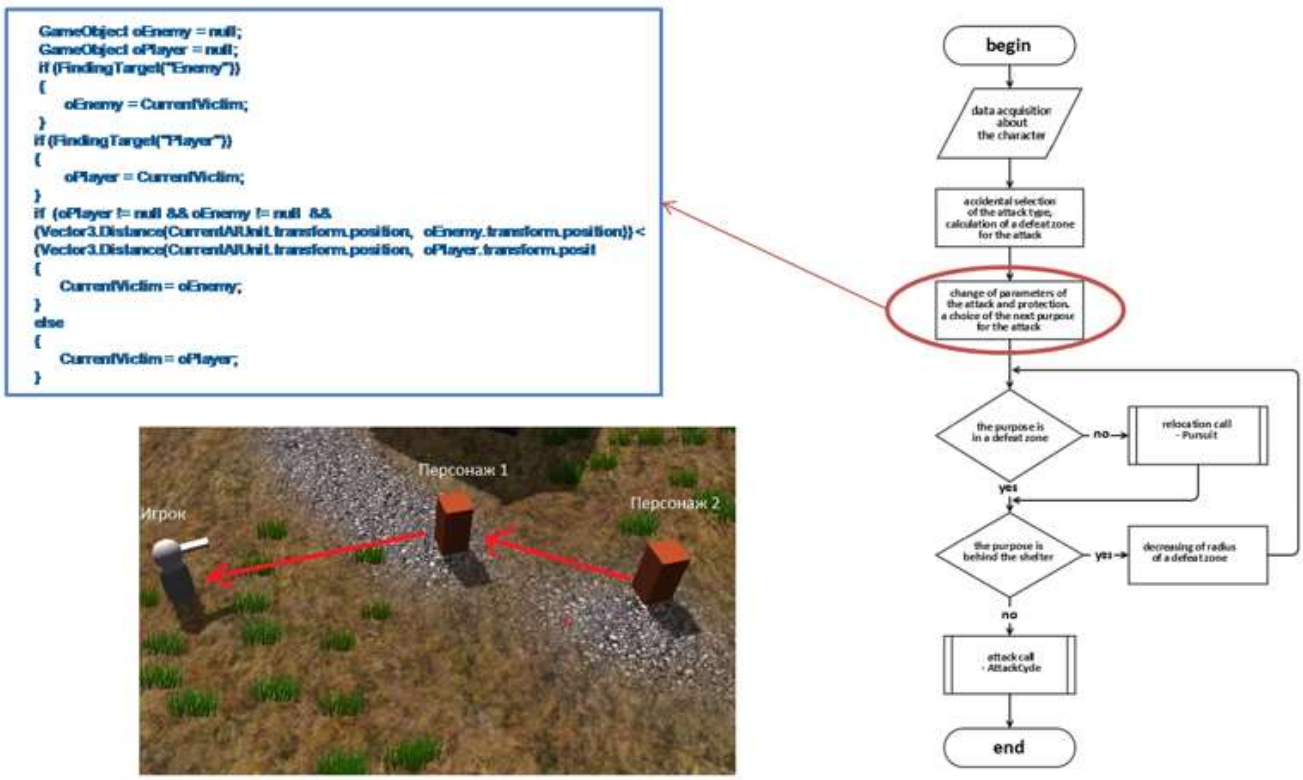

FIGURE 8 – TO ALGORITHM OF A STATE "RAGE"

Retreat. The character who passed into this state will try to disappear from the opponent (the Figure 9). Transition to this state comes from states "aggression" or "approach" if the quantity of points of health of the character are two and a half times less, than at his opponent. Also, the character will pass into a state "retreat" from a state "restoration" if the shelter in which he is stopped being safe.

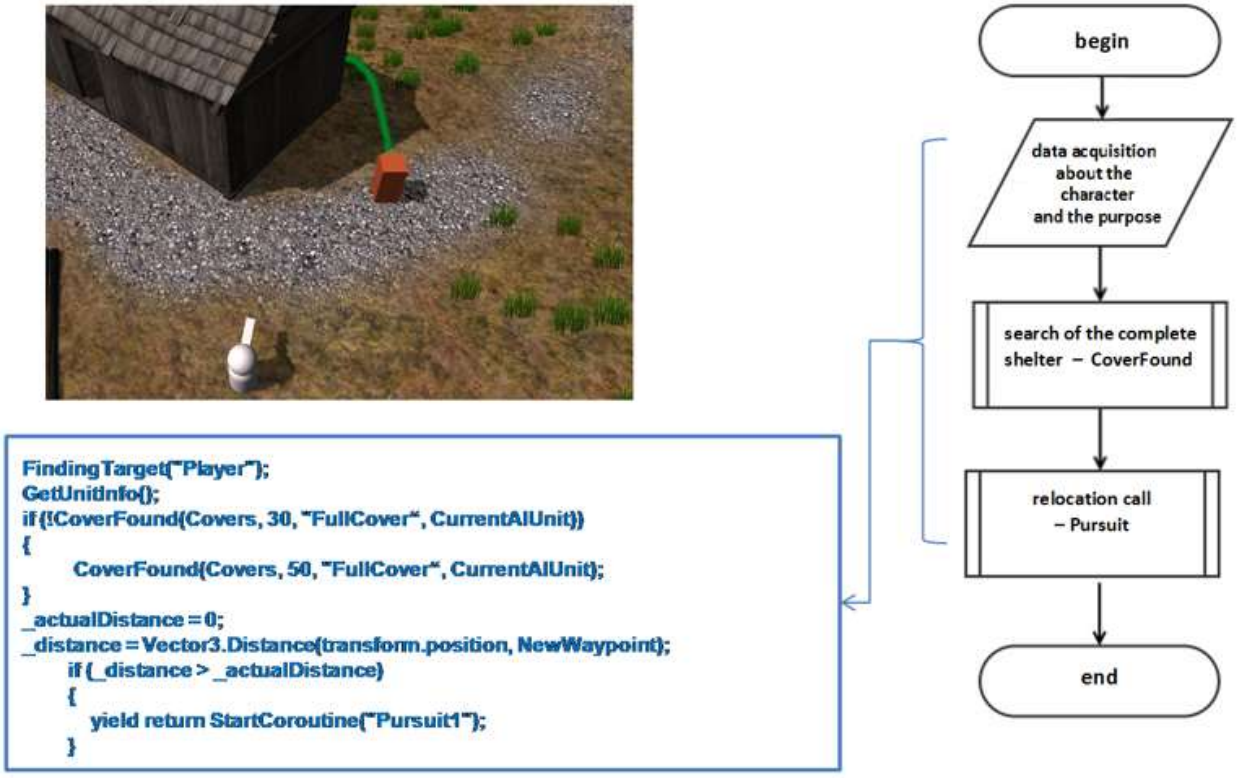

FIGURE 9 – TO ALGORITHM OF A STATE "RETREAT"

2.3. Other GAI methods

Also in the GAI system the methods realizing the following support functions are used.

FindingTarget method. The FindingTarget method is called every time when check of a status of the character is necessary for finding of the purpose. Around the controlled character the invisible sphere with the given radius is created (visibility range), and all characters of the player who got to this sphere are added to a special array. Further, there is a sorting of an array according to two criteria: on distance from the character to the purpose and by amount of health of characters who by means of coefficients are brought to a general meaning. As a result of sorting, the character with the highest general meaning becomes a main objective.

Pursuit method. This method is the intermediate between GAI and a component of relocation. The method transfers coordinates to a relocation component, the link to the moved character and also comprises basic checks on a distance. These data are necessary for calculation of relocation, count of quantity of points of action, etc.

AttackCycle method and Attacking method. Similar to the Pursuit method, these two methods serve as an interlayer between GAI and a component of the attack.

CoverFound method. This method is called when the character needs the shelter. The method defines: the maximum distance from the desirable shelter, shelter type, and the purpose from which the distance will be calculated. The method by comparing selects shelters in the given parameters. When finding the shelter, the method appropriates shelter coordinates to the intermediate variables

3. Results

As a result of this research the system of a game artificial intelligence (GAI) on the basis of finite state machines is developed. It includes the following components:

– the component which is responsible for change of the courses;

– information classes (databases);

– the classes which are responsible for basic mechanics of game characters: relocation, attack, etc.;

– system of a choice of the purposes;

– the component of an artificial intelligence capable to perform the following operations:

• change of statuses;

• a purpose choice on the basis of priorities;

• search and creation of a way;

• relocation on the constructed way;

• choice and attack of the character of the opponent.

The developed system of a game artificial intelligence is intended for creation of the game project in a genre of classical RPG.

4. Discussion

We will discuss different development approaches of a game artificial intelligence.

a) GAI founded on a rule set. Such approach is used when from an artificial intelligence nothing is required except a set of rather simple actions (Kehoe, 2009). In this approach of the substances (characters) work according to the ordered behavior, in fact it is just a set of triggers and scripts. Despite simplicity, the correct distribution of rules and substances creates illusion of intelligent behavior of characters.

b) Approach based on finite state machines. In this case statuses are peaks of directed graph. Each status has the rule set and also conditions for transition to other status. Finite state machines are development of system of "rule set".

c) GAI based on a behavioral tree. This method is modification of a method of finite state machines. Instructions, which are described in statuses are responsible for all executed actions (Decision Tree vs Behavior Tree, 2013), (Lim, 2009). Unlike finite state machines, transition conditions between statuses are carried out in a separate element of architecture of GAI.

d) GAI based on the scheduler. This approach also uses statuses, but approach to their change changes. Achievement of a specific goal is result of operation of the scheduler. It is reached, serial change of statuses. At the beginning of a cycle of operation of the scheduler some purpose is created - statuses which will allow to reach it shall be described. After receiving the purpose, the scheduler builds a circuit from the actions necessary for its achievement. Important feature of a method is that process goes upside-down. First, those statuses which allow to achieve an ultimate goal are defined. If the subsistence cannot reach these statuses, then the way for transition to these statuses is defined. As a result of this process the scheduler builds a circuit from the statuses carrying to the end result. In some situations to the purpose can carry several circuits. Shorter circuit or a circuit, which is more adequate to a request, is in that case selected.

e) GAI based on the usefulness evaluation. In this approach the status of the character is defined according to his usefulness at the moment. It is the best for situations when GAI on hand has a large number of possible statuses, which the character can enter. When using this method there is no need to build the full action plan. It can accelerate

process. However, such algorithm can take away GAI from the scheduled purpose, or to be not the best.

In table 1 results of the comparative analysis of the GAI design approaches are provided.

TABLE 1 – ANALYSIS OF THE GAI DESIGN APPROACHES

Design approaches	*Design complexity*	*Speed development*	*Change of statuses*	*Architecture complexity*
Rule set	Low	High	Is absent	Low
Finite state machines	Average	High	Is present	Low
Behavioral tree	Average	High	Is present	Average
Scheduler	High	Average	Is present	High
Usefulness evaluation	High	Low	Is present	High

On the basis of the carried-out analysis it is possible to formulate the following requirements to a design method of games in RPG genre

1. Simplicity of design — for implementation of a goal of operation is not required the artificial intelligence highly imitating behavior of the person. Respectively, according to the principle of design of KISS ("do not complicate"), it is necessary to select the simplest of available decisions.

2. High speed of development — in connection with existence of periods of delivery.

3. The possibility of change of statuses of characters — this point is key as he directly is responsible for the interest of the player in the events on the screen. GAI shall assess accurately a game situation and transfer characters to a necessary status.

4. Absence of need to develop additional elements of architecture. Such elements complicate and decelerate development and also considerably decelerate testing of programs.

To the listed criteria most there corresponds GAI designed on architecture of finite state machines. The specified architecture gives an opportunity to create the systems of the average level of complexity, without additional expenses of the temporal or other resources connected to project development. The method of finite state machines gives sufficient opportunities for development of a game in a genre of "RPG" the small number of developers.

5. Conclusion

The system of a game artificial intelligence on the basis of finite state machines is developed and realized in the form of a programs set.

This system is capable to execute change of statuses, a purpose choice on the basis of priorities, search and creation of a way, relocation in the constructed way, a choice and the attack of the character of the opponent.

The system can be used during creation of the game project. If necessary, the system can be modified or added for the solution of specific objectives

6. Recommendations

The provided research will be useful for developers of systems of a game artificial intelligence. Also this development can be interesting to a wide range of the experts who are interested in problems in the field of intellectual systems.

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MODEL OF MILITARY CADETS' RESEARCH ACTIVITIES ORGANIZATION

Abstract

The relevance of the research topic is conditioned by the growing state and society demands of a military specialist personality and his professional competence. An analysis of future officers' preparation condition in a military higher school convinces us that insufficient attention is paid to this problem. The purpose of this work is to develop a model for organizing the research activity of cadets in a military higher school, built on the basis of a whole complex of system, activity, competence and axiological approaches. The main structural components of the developed model are the motivation-value, content-informational, process-activity and diagnostic-reflexive components, the characteristics of which are revealed in the article. Cadets acquire skills in research activity in several stages: motivational, training, reproductive and transformative, the stage of experience formation and creative one, which contributes to the formation of their learning and research skills, the development of military-professional thinking, scientific intuition, individual abilities, positive motivation and cognitive interest, the ability to transform reality creatively.

Keywords

research activities, learning and research skills,
scientific research skills, research activities organization model,
methodological approaches, principles

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The development of higher military education in Russia requires a new approach to the organization of military and professional training of military cadets.

A military specialist must skillfully use the achievements of military science and practice, modern sources of information, participate in research activities, understand and solve independently urgent military and professional tasks. Obviously, the needs of society in military specialists who are able to use the methodology of scientific research will constantly increase. Investigating the problem of the military-professional training of cadets, we concluded that in the process of cadets training, it is necessary not only occasional inclusion of research work in educational practice, but purposeful work on the establishment and development of a methodological culture.

Complex military equipment and armament require from the specialist a high level of professionalism, independence, ability to think non-typically, make balanced and responsible decisions, have the ability to creativity. And, consequently, at their academic stage already, cadets should develop research thinking, acquire strong and profound knowledge and professional competences, be able to generate new ideas; know the

methods of scientific research and organization of experimental work, apply methods and means of research.

The organization and implementation of research activities contributes to the development of scientific intuition, cognitive interest, individual abilities, positive motivation, and upbringing of competitive, creative personality of the future officer.

In the opinion of scientists and educators, research activity is a prerequisite for personal development, professional growth, the acquisition of an authoritative highly educated specialist status, as well as an indicator of his professional abilities and professional competence (Ivanova, 2012; Kiseleva and Rzaeva, 2014; Natyrova, 2013; Poddyakov, 2006).

We consider research activity as a special kind of intellectual, creative activity, manifestations of which are searching activity and investigative behavior of a cadet. It includes learning research and scientific research activities, different in nature and content. So, under learning research activity we mean the activity, as a result of which cadets acquire the necessary skills of creative activity. We consider scientific research activity as research activity of scientific nature aimed at solving problems with an unknown result (Elagina, Kovaleva, 2014).

Analysis of psychological and pedagogical literature, dissertation research, as well as the condition of cadets training in a military higher school convinces us that this problem of organizing research activities of cadets in a military academy is not paid enough attention.

In our opinion, the urgency of the problem of organizing cadets' research activity in a military higher school, the development of research skills by cadets, is conditioned by: 1) growing state and society demands of a military specialist personality and his professional competence; and 2) the need to develop a model aimed at involving cadets in research activities, the development of their learning and research skills and abilities.

As a theoretical and methodological basis for constructing the model, we used a combination of system, activity, competence and axiological approaches.

In developing the pedagogical model for organizing the research activity of cadets in the academy, we took into account such principles of the system approach as:

1. The principle of integrity, according to which the organization of research activities should be regarded as an integral pedagogical system in the educational process of a military higher school. This, in its turn, assumes the definition of system properties, manifested in the irreducibility of the system properties to the sum of its elements properties, to its dependence on the functions of an element in the system.

2. The principle of structuring is defined and described through the structure of the model, that is, through the links and relations between its elements: goals and objectives, objects and subjects of control and self-control, forms and methods of organization, results (products) of the system. The relations between the individual components create the properties of the system, reveal its essence and basic characteristics. In addition, the properties of individual structural elements explain the behavior and properties of the entire system.

3. The principle of hierarchy, the essence of which lies in the fact that the model developed by us for organizing the research activity of cadets is a part of an integrated system of future military specialists professional training. This principle reflects the nature of the relationship between the subjects of these two systems, their subordination and control.

The implementation of activity and competence approaches to the study of our problem was determined by the following provisions:

- Research activity is one of the cadets' military-professional training components in a military higher educational institution; its organization is carried out on the basis of the general methodological principles and features of military cadets' professional training;
- The research activity of cadets is purposeful, creative, it is determined by the individual features of cadets, their orientation and the conditions of educational environment of the academy;
- Organization of joint activities with the instructor to determine the educational trajectory of cadets, is aimed at the formation of military professional competence in general, and research one, in particular;
- Development of independent and responsible attitude to learning; increase motivation and encourage cadets to develop and improve themselves;
- The result of cadets' research activity is provided by their knowledge and skills, mastering of theoretical and empirical methods, skills of independent organization and conducting of experimental work, practical experience of research work.

The axiological approach in the context of a cadet's personality development assumes learning of general and professional culture; integration of all value systems, active assimilation of fundamental knowledge and technologies.

Research skills are of great importance for successful implementation of research activities.

Research skills as a way of carrying out research work include the ability to see the problem, find contradictions, put forward a hypothesis, compare, generalize and systematize, formulate the goal and structure the material, conduct experimental work independently, observe, explain and draw conclusions.

In our study, we distinguish three groups of research skills:

- Ability to select the material necessary for research, structuring and presenting it in the form of a report, article, message, etc.;
- Ability to develop methodological research apparatus (to determine the object and subject of the research, to justify its urgency, to identify contradictions, to formulate the problem, to put forward a hypothesis, etc.);
- Abilities, including mastering theoretical (analysis, comparison, concretization, abstraction, induction and deduction, systematization and generalization, etc.) and empirical knowledge (observation, testing, questioning, generalization of advanced pedagogical experience, etc.) by research methods. We include in this group skills of independent experimental work, interpretation of the obtained results, work design (Elagina, Pichugova and Vedenyeva, 2013).

It should be noted that cadets engaged in research work are characterized by cognitive activity; special sensitivity to problems; ability to search for solutions to identified problems divergently; wish to participate in scientific conferences, competitions, the work of the military scientific society of cadets, scientific circles and communities.

The process of organizing cadets' research activity as a subsystem of military-professional training of future officers in a military higher educational institution includes the following components: motivational-value, content-informational, process-activity and diagnostic-reflexive, which are of cross-cutting nature. Let us consider in more detail the content of each component.

The motivational-value component contributes to 1) establishment of positive attitude to research activity in cadets, the motivation for developing research skills and competences, personality qualities characteristic for a researcher; 2) development of

value attitude to the future military professional activity, identification of individual targets in this type of activity, aim at socially significant activities.

For this purpose, methods and means of training are used that encourage cadets to research activity. Among them are the following: example, clarification of features and tasks of research activity, appeal to personal values and interests, characterization of prospects (participation in competitions of scientific works at the academy level, other military schools, the Ministry of Defense, etc.), organization of communication with scientists, cadets of senior courses, with the purpose of experience exchange, demonstration of scientific achievements. Such creative interaction helps cadets to clarify the field of scientific interests, determine the direction of scientific search and compare their capabilities to the volume and complexity of the forthcoming research activities.

The content-informational component included the purposeful formation of research skills in the process of research activity within the framework of a complex interdisciplinary research related to topographical exploration of archeological artefacts and their subsequent shooting; realization of cadets' military scientific community potentialities, their theoretical, sociocultural, research aspects for the establishment of research skills through the selection of research activities content and the implementation of educational technologies; integrity of the research activities organization, combination of active methods and forms of training, various forms of academic, extracurricular and field work, as well as participation in scientific conferences and subsequent publication of their research results in scientific journals and conference collected articles.

The great potential in the formation of research skills and research organization have academic disciplines, which are realized through:

- Inclusion in the content of educational disciplines of information devoted to various researches in this field;
- Use of different types of training sessions;
- Development of research subjects of various orientations, together with interdisciplinary complex studies included in the independent research activity of cadets;
- Organization of training sessions aimed at developing research skills.

As the practice of training cadets in a military higher education institution has shown, essential potential for developing research skills is the use of practice-oriented tasks of a heuristic and research nature.

The process-activity component includes a system of methods, forms and means of teaching that contribute to the formation of research skills that are the basis for carrying out research work.

The choice of methods, forms and means used in this component is determined by: 1) the content of the interdisciplinary circle program developed by us, the academic work on the subject, research activities directly related to the implementation of the research project; 2) the features of research activities organization - on the one hand, and the logic of developing research skills process - on the other hand.

We consider the research activity as a process for which a certain logic of its development is characteristic. A gradual transition from learning research to scientific research activity is possible due to a purposeful change in the level of learning and scientific research skills formation.

There are several stages in the process of mastering the skills of research activities:

1. Motivational stage, which function is to inform cadets about the features of research activities, let them know about the need for the formation and development of research skills, understand their role and significance for developing a research project, conducting experimental work. At this stage cadets become aware of the right choice of their development direction, satisfy their cognitive and professional interest. The result

of this stage is manifested in the formation of the motive as a moving force for further mastering of research activity.

2. The training stage, its purpose is to generate knowledge about the characteristics of research activities, as well as knowledge about research skills, their kinds, content and ways of implementation. Learning the necessary information, the cadet accepts the content of this type of activity, develops primary ideas about learning and research skills, works them out while solving various tasks (compiling a bibliographic list, writing abstracts, preparing messages, conducting small research work with the development of individual components of the research methodological apparatus, etc.).

3. Reproductive and transformative stage, aimed at further development of research skills, development of research activities with the direct controlling by the instructor. At this stage cadets transfer their knowledge to practical actions, actively participating in research activity, applying the acquired skills in practice.

4. Stage of research activities experience formation. The formed research skills acquire generalized character that allows a cadet to participate in various activities: carry out research projects, speak at scientific conferences and seminars with reports on the results of his research, participate in expeditions and in the scientific community of cadets.

5. The creative stage, which function is to engage cadets in the work on complex interdisciplinary projects, to show independence in making responsible decisions. At this stage, a cadet does not only reproduces the actions familiar to him, but also introduces his own vision of the problem into his research, determines the ways of solving the problem, develops a methodological research apparatus and a plan for experimental work, chooses theoretical and empirical methods of research, determines the methods for presenting the results of the work. The results of the completed research project are offered in the form of presentation, publication of scientific articles and reports, through participation in competitions and exhibitions of scientific works. Wide approbation of the formed skills, active participation in research activity testify to rather high methodological culture of a cadet.

Thus, progress on the considered stages promotes qualitative change in the research activity of a cadet.

The diagnostic-reflexive component is aimed at determining cadets' readiness for independent research activities, establishing the level of research skills development, their evaluation and correction.

The basis of this component is pedagogical diagnosis (preliminary, intermediate, final), which allows you to receive timely information about the degree of research skills development and the ability to carry out research work. Through penetrating into the whole process of developing research skills and organizing research activities, pedagogical diagnostics determines the transition from one process-activity stage to another and the level of cadets’ personal achievements.

The information received in the course of diagnostic implementation about the results achieved by cadets in mastering research skills or methods of research activity is the basis for determining and organizing corrective actions. The work to correct detected difficulties or shortcomings is done using such methods as briefing, individual or group consultations by an instructor, methodological recommendations, pedagogical assistance and support or assistance of successful cadets studying similar problems. When organizing corrective measures, one should not forget about the individual approach to each cadet, taking into consideration his psychological characteristics. Correcting the mistakes made in research or experimental work is important to maintain cognitive interest, confidence in achieving success, retain high motivation for this type of activity.

The reflexive aspect of this component ensures the subject's appeal to himself, his activity, products of his own activity.

The functional components of the research activities organization model for military cadets are closely and organically interrelated, forming a single integrated system. The construction of the model for organizing cadets' research work was carried out taking into account the set of principles as the initial normative provisions.

The principle of facilitation, aimed at implementing the requirements of mutual activity, responsibility, cooperation, exercising initiative, manifestation of empathy from both instructor and cadets.

The principle of military-professional orientation: the establishment and development of sustainable and effective military-professional orientation, along with the formation of knowledge system, skills, professionally significant and important qualities, constant accumulation of independent, creative military professional tasks solution experience, raising the level of cognitive and organizational independence in learning activity, as well as in the process of self-education, is one of the most significant directions in the training of future officers.

The principle of professional values personification, which assumes their transformation into personal values, actualizes the professional and personal development of a cadet as a subject of the free conscious choice of military education, ways of solving the problems of military professional development, awareness of own uniqueness and self-worth.

It should be noted that the model developed by us for organizing the research activity of military cadets has a number of universal properties: integrity, openness, structure, purposefulness, functionality and controllability. At the same time, the model as a pedagogical system is distinguished by openness (the possibility of making changes without serious and dramatic changes in its structure), dynamism (adaptation to the changing external conditions of research activities organization, and the ability to develop and improve), integration (interdisciplinary content, interrelation of theory and practice).

Thus, efficient functioning and development of the worked out model of cadets' research activity organization is due to connection and interaction of its structural and functional components.

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CORE CORPORATE CULTURE VALUES AND INNOVATIVE TENDENCIES IN UNIVERSITY CORPORATE CULTURE DEVELOPMENT

Abstract

The novelty and rationale for the research paper is on the one hand, the utmost importance of culture in the development of an educational institution, and on the other hand, lack of theoretical and practical evidence for cultural impact on the maintenance and development of corporate culture in an educational institution. The article covers the importance and relevance of corporate culture and its components in the contemporary university as well as corporate culture link to historical roots. The article is aimed at identifying the areas of cultural impact on corporate development of an educational institution, revealing the current rate of corporate culture awareness among university students, suggesting efficient mechanisms to enhance the level of corporate culture awareness among the students. The authors focus on the study of the current state of corporate culture at university based on such criteria as knowledge of the mission and corporate culture values, and define innovative tendencies contributing to corporate culture development. The main research method, empirical, enabled to process and analyze data collected in the study that was conducted among university students, and revealed lack of corporate culture awareness. The research embraced university students of all faculties and years of study. The results of the research revealed that only half of the respondents appeared to be aware of core corporate culture components, and half proved to be completely ignorant of the regulatory documents as the main source of information on the rules for corporate culture maintenance and development. Practical value of the research is the designed tools and mechanisms that might be implemented in similar research projects to identify and assess corporate culture awareness rate. The article also provides recommendations for educational institutions of how to raise the level of corporate culture awareness among students, which would help to maintain university image.

Keywords

university corporate culture, higher education, historical roots, mission, image, principles, values

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1. Introduction

At all times the status of any institution of higher education required significant efforts for the maintenance and organization of educational process, research work, assets, and maintenance base. Therefore, the evaluation of any educational institution is based on such criteria as accessibility, quality and effectiveness of education, as well as a refined image of the university, which in recent years has received a closer consideration. Corporate culture plays a vital role in these processes. Therefore, it is necessary to develop in students a substantial level of cultural competence that would be sufficient for accurate perception and analysis of cultural dimensions, and the skills of interaction. There are two basic approaches to learning about culture: the cognitive and the experiential. It is important to combine the two approaches in order to enable enhanced level of cultural awareness and competence among university students. Core cultural dimensions – languages, physical factor, and psychological factor (Gesteland, 2002; Hofstede, 1994) - contribute to the development of cultural competence in university students, and consequently, help to raise their awareness of university corporate culture.

1.1. Background to the issue

Plekhanov Russian University of Economics (former Moscow Commercial Institute) is the oldest and one of the largest economic universities in Russia. Core cultural dimensions have significantly influenced its image, mission, principles, structure, and organizational behavioural patterns (Table 1). The language dimension used as a verbal/nonverbal code to convey the idea (or meaning) is influenced by cultural peculiarities, shaped and transformed psychologically. The psychological dimension relates to our knowledge, beliefs, and mental activities, and can therefore be categorized to implicit cultural layer. The language and the psychological dimensions are reflected in a person's behaviour within a certain environment – the physical dimension.

TABLE 1. - MCI (1907) COMPARED TO PRUE (2018)

Comparison issue	Moscow Commercial Institute	Plekhanov Russian University of Economics
University image		
The main purpose	Assistance to the development of the system of economic education in Russia	Training enlightened people who love their country, believe in its inexhaustible strength and are able to perform their great duty in their everyday lives
Principles of university activities	• Providing solid foundation for higher education • Maximum closeness to practical activities • Emphasis on the education of socially responsible specialists	• Leadership in the education of comprehensively advanced professionals • Educating enlightened, competent professionals
Students' dress code		

Faculties	Total 2: 1. Commercial and economic 2.Commercial and technical	Total 12: 1. Finance faculty 2. Faculty of Mathematical Economics, Statistics and Informatics 3. Faculty of Marketing 4. Faculty of Management 5. Faculty of Hotel, Restaurant, Tourism and Sport Industry 6. Faculty of Trade Economics and Commodity Science 7. Faculty of Economics and Law 8. Faculty of E-learning 9. Plekhanov IBS and global economics faculty 10. Faculty of Business "Captains" 11. Distance Learning faculty 12. Faculty of Additional Professional Education

Source: compiled by the authors on the basis of the websites www.rea.ru and www.um.mos.ru

1.2. Budding corporate culture values and principles of Plekhanov University

Culture is dynamic and there are many interesting identities and experiences that influence an individual's culture. Each culture consists of implicit and explicit components. Explicit layer includes man-made material objects, rituals and etiquette, art, symbols, practices and habits, behaviour. Implicit layer has norms, values and preferences, beliefs, assumptions. Culture can be studied from two different perspectives: by people who live in this culture ("insider perspective") or by those who encounter it through language learning ("outsider perspective") (Borden, 1991).

Appeal to historical roots, awareness and understanding of the original views of professors of the Moscow Commercial Institute (former name of Plekhanov Russian University of Economics - PRUE) is the most important source that feeds the age-old tree of Plekhanov corporate culture (Guseynov, 2017). Changes in the sphere of higher education are the reason for the growth of traditional academic culture of the university, as a result, a new, more complex corporate culture of the university emerges (Prokhorov, 2011). As part of Plekhanov corporate culture project implementation it is realized that cultural borrowing and orientation to fundamental worldviews and the ultimate goals set by the first leaders and professors of the University for all subsequent generations of students and teachers are solid foundation for the entire Plekhanov corporate culture. Provisions on "the education of enlightened and competent personalities" are published in the corporate code of Plekhanov Russian University of Economics, adopted in 2012 in the section "Mission of the University". This statement reflects the views of the first Rector of Moscow Commercial Institute P.I. Novgorodtsev, which now constitute the core principle of corporate culture of Plekhanov Russian University of Economics. The basic corporate culture principles that should be guided in practice in the university community were formulated

By P.I. Novgorodtsev: "To prepare for the future enlightened people who love their country, believe in its inexhaustible forces and are able to see the ways of implementing a great duty in the most of their everyday work" (University History In official PRUE website, 2018)).

2. Materials and methods

Flexibility, adaptability and readiness for constant development became the main factors for the success of higher education in general and PRUE in particular ensuring its competitiveness and profitability. However, if the programs of changes do not have an effect on the fundamental principles of corporate culture like the system of values, management style, and job performance, the anticipated result may not be achieved. The conducted research appeared to provide solid evidence supporting this idea.

It is scientifically widely accepted that cultural study and development is best achieved sequentially, through a number of consequent stages. The first stage appears to be the perception stage when students get familiar with cultural diversity and values. They find out how well they are aware of cultural diversity and what is yet to be learned. At this stage it is important to present the information on intercultural dimensions in comparison, giving room for cognitive processes and skill development. At the second, interaction, stage we emerge in communication situations with cultural dilemma, which requires from students sufficiently developed skills integrated into cultural competence.

In terms of raising university corporate culture awareness, it may prove to be more successful if there is a number of appropriate, relevant, and carefully planned activities regularly arranged at universities and based on a ‘recognize, understand, and adjust approach’ to cultural studies (Byram, 1995). Such approach would help to develop skills of perception, cognition and interaction in university students, which could later on ensure complex and solid development of corporate cultural awareness and competence.

2.1. Aims of the research

The research was aimed at 1) identifying the impact of culture on corporate development of an educational institution, 2) revealing the current rate of corporate culture awareness among university students, 3) suggesting efficient mechanisms to enhance the level of corporate culture awareness among the students.

2.2. Research methods

The research is based on the literature study including analysis of regulations and provisions concerning corporate culture as well as empirical methods of questionnaires, surveying, data analysis. The research was conducted in Plekhanov Russian University of Economics within the period October-December 2017.

2.3. Research stages

Having acknowledged the acute importance of corporate culture in the development of an educational institution, we conducted a study aimed at revealing the level of students’ awareness of our university corporate culture. A remote survey was chosen as a method for it being the most expeditious and accessible. Three main stages were selected to check the level of university corporate culture awareness:

awareness of the term "corporate culture", the main provisions of PRUE corporate culture, and the list of documents containing these provisions.

2.4. Research findings

77 students took part in the survey. The majority of respondents are second year students - 32 (41.6%). There were 28 first-year students (36.4%), the ratio of students of the third and fourth year was 13 (16.9%) and 4 (5.2%), respectively.

Among the respondents there are students of almost all faculties of the university. The largest number of students is of Finance Faculty (FF) - 26 (33.8%). Students of the Faculty of Management (FME) - 20 (26%), students of the Faculty of Economics and Law (FEL) - 8 (10.4%), students of the Faculty of Marketing (FMA) - 7 (9.1%), students of the tourism and hospitality faculty (HRTSI) and the International Business School (IBS) - 5 (6.5%), students of the Faculty of Mathematical Economics, Statistics and Informatics (FMESI) - 4 (5, 2%) and students of the Faculty of Trade Economics and Commodity Science (FETT) - 2 (2.6%).

According to the consolidated results of the study, 54 students (70.1%) answered positively the question of whether they know what corporate culture is, the other 23 students (29.9%) admitted lack of such awareness. Among all the interviewed students (Pic. 1), 50 students (64.9%) appeared to know what corporate culture includes and mark all available options, while the rest chose one, two or three options related to corporate culture.

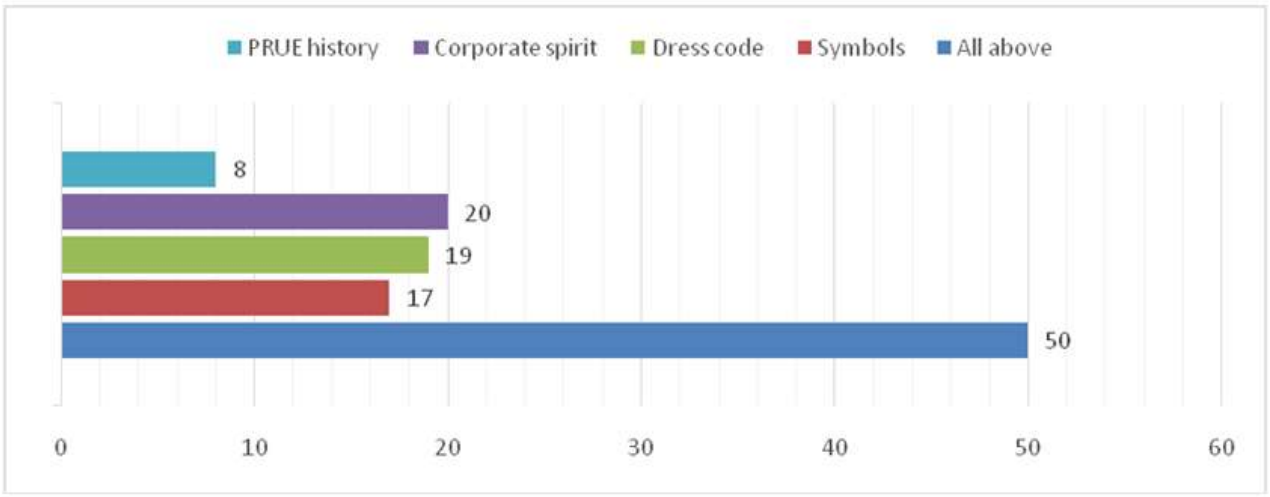

FIGURE 1 - WHAT DOES CORPORATE CULTURE OF PRUE INCLUDE?

Source: compiled by the authors on the basis of survey results

Answers to the question regarding the source for the main provisions of PRUE corporate culture proved to be of the utmost interest (Pic. 2). Only 3 students answered correctly while 16 students (20.8%) considered that the provisions can be found in the University Charter and 50 students (64.9%) admitted that they did not know the answer to this question.

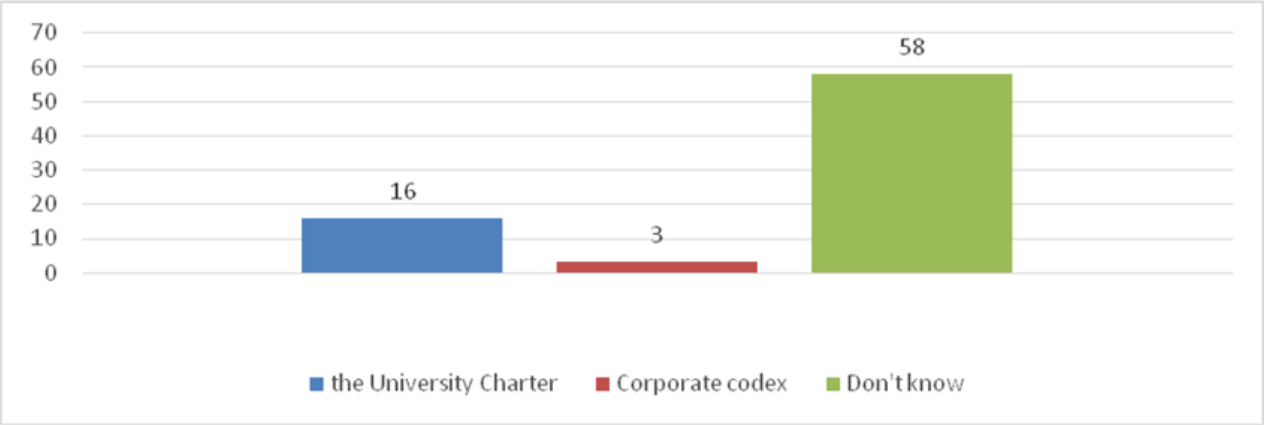

FIGURE 2 - WHICH DOCUMENT CONTAINS THE MAIN PROVISIONS OF PRUE CORPORATE CULTURE?

Source: compiled by the authors on the basis of survey results

3. Results

An important role of corporate culture is reflected in the fact that it enforces the following (Boykova, 2011):

- gives an opportunity to successfully adapt to the system of norms and values of the university,
- forms the standards of people's behavior and responsibility for their observance,
- ensures more efficient activity of the organization,
- is aimed at the disclosure and development of intellectual and creative potential.

Corporate codex and Provision on the corporate culture of the University are two main documents that guide each member of PRUE throw its activities and establish binding rules of human relations. The codex consists of the following parts: mission of the university, corporate values, principles of corporate activity, principles of activities and behavior of University staff, principles of activities of students, relationship with partners and competitors, and corporate responsibility. Provision gives definitions of basic concepts such as corporate culture of the University, corporate history, values, norms and ethics, symbols, standards, style, events, and corporate dress code.

Analyzing the image of our university we cannot but highlight positive influence of university corporate culture, such as:

- fame and recognition which the university has acquired due to its uniqueness,
- promotion of the university brand in the world and in national ratings as well as in news agencies,
- improvements to the university facilities and premises for the benefit of university community,
- image events - Day of Knowledge, University Birthday, open days, days of institutes and faculties,
- traditions of the University - creative holidays, sports and social events,
- scientific events and intellectual competitions - scientific conferences, forums.

4. Discussion

Based on the survey results, we can conclude that the students are not sufficiently informed about the main provisions of PRUE corporate culture. Accordingly, students cannot comply with the provisions of the corporate code, and therefore its value is minimized.

Clarity and unity of norms of behavior and standards of work and study in all departmental units PRUE as well as respect for the staff and students of the University, contribute to the fulfillment of University mission implementation in accordance to the main directions of University development, strengthening its prestige.

Nevertheless, the study detected the drawbacks of the existing University corporate culture:

- lack of the smooth system to familiarize with the University corporate culture - 29-30% of respondents have no idea of the mission and goals of the University or they do not care about its importance;
- more than half of the students are not familiar with documents containing and disclosing corporate culture;
- rules of behavior, dress code and safety measures are not considered as constituting elements of corporate culture.

All the mentioned above drawbacks relate to each other and become consequences bringing about the lack of students' enlightenments.

Thus, there is an urge to develop an effective system of informing students and raising in them awareness of and interest in University corporate culture.

5. Conclusion

Summing up, we could suggest introducing a number of steps aimed at raising university corporate culture awareness among students:

1. Organize a special all-university event – Day of PRUE Corporate Culture, which will include theme activities, competitions, etc. aimed at involving students in this issue. An example of such an event can be the days of the faculties, which always attract a lot of interest.
2. Create a regular event, which will be aimed at discussing the ways of interaction among teachers and students, including aspects of corporate culture. The purpose of this event is to increase the level of interaction between students and teachers as the main element of the university social relations.
3. Establish an interactive board that would show the history of the university and including the main elements of its corporate culture. We believe that this format can be of interest to both students and incoming applicants to PRUE.
4. Involve students in the process of goal-setting and university management. The involvement of students in such a process will encourage them to strive to achieve the university corporate culture goal as they would perceive this goal as their own. For this purpose, it is necessary to arrange regular meetings of the university rector and administration with students. It is also important to allow students self-management in order to make decisions that will be developed by students and promoted at the level of university administration. This will become a trigger for constant cultural training and raising the level of cultural competence in the field of social activity and students' corporate cultural competence as a whole.

Thus, the main thing in the development of corporate culture of the university is understanding that this is an integral phenomenon, consequently, an integrated approach to the process of its development and change would be the most effective.

Wide system of measures for planning and organizing this process will make it possible to ensure a sense of involvement in the common activity among all the members of the university corporation, which, in its turn, will lead to the strength, durability and quality of the organizational structure, the effectiveness of its activities, and enhanced level of corporate culture development.

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CONCEPTUAL MATRIX OF SOCIALIZATION: EXPERIENCE OF PRELIMINARY SYSTEMATIZATION

Abstract

This article provides a conceptual framework for thinking about socialization as a system of sociological categories, such as crisis points of socialization, functions and dysfunctions of socialization, deviance as a necessary sign of socialization, cultural diversity and political regime as the context of socialization, acceptance of roles and training in cultural norms, picture of the world, education, enculturation, assimilation, the formation of personality, institutions and agents of socialization, strong and weak ties M. Granovetter in the process of socialization, lifestyle, life career, life plans, life experience, stratification and inequality in the process of socialization, married socialization, levels of consideration and barriers of socialization, socialization and adaptation, and history of the study of socialization. The author tries to consider socialization from the point of view of modern theories, since from the point of view of the classics the problem has already been considered. To prepare the chapter, the author applied the methods of primary (author's research of 1979-1991) and secondary analysis, comparative historical and cross-cultural analysis, document analysis (Russian and foreign publications for the period 1980-2017).

Keywords

desocialization, resocialization, agents, institutions and types of socialization, life cycle, inculturation and education, two-career socialization, socialization and adaptation

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History of the study of socialization

The roots of the study of the problem of socialization go deep into the history of social thought. In the teachings of Plato, the main mechanism for the transformation of man into a social being is socialization (in the narrow sense - education): every Greek had to start training in early childhood and finish in old age. You can learn everything literally, above all, moral virtues, and then school subjects: astronomy, biology, mathematics, political science and philosophy. Neuchi falls to the very bottom of society - in the undergraduate: slaves, runaway, beggars, drunkards, corrupt and homeless. The underdogs settle in the lower class, replenishing the ranks of artisans and peasants. Horoshisty fall into the knightly stratum of the soldiers, who at all times belonged to the aristocracy. And, at last, round honors pupils, and always their minority, grew up in wise rulers.

The Roman philosopher Severin Boethius belongs to the division of scientific knowledge into "trivium" (grammar, rhetoric, dialectics) and "quadrivium" (geometry,

arithmetic, astronomy and music). Boethius posed the main problem - self-reproduction - self-learning and education throughout life. And this is the core of the process of socialization.

Herbert Spencer believed that man by nature is antisocial, he becomes a social being through the passage through the crucible of social institutions: domestic, ritual, political, ecclesiastical, etc., which are mechanisms of self-organization of people's joint activities. The mechanism for the evolution of society is the struggle for survival. Conflicts are the crucible through which the process of socio-anthropogenesis of mankind (phylogeny) as a whole and a separate individual (ontogeny) in particular has passed. Spencer interpreted education as a broad social phenomenon, and education as one of the most important social institutions.

E. Durkheim first separated socialization from education. The three most important categories - education, socialization and education - are closely related, and the backbone of this system is socialization. He understood socialization as a means of reproducing the conditions of his existence by society. He wrote that with the further development of the social division of labor and the unification of the working people into professional corporations, society will be more and more rallying, i.e. there will come a process of progressive socialization, bringing it closer to the realization of a moral socialist ideal (Durkheim, 1950).

In the concept of E.G. Erickson stages of socialization are associated with life cycles. Its author knew socialization not only as an individual, but also to a large extent as a collective process, which is formed, including, and through a process of identification of the individual with his group, the people, the community. Erickson identified eight socialization phases: infancy, early childhood, gaming age, school age, adolescence, early adulthood, adulthood, maturity (Erikson, 1968).

In turn, A. Adler argued that in the course of socialization the child under the disciplining influence of parents develops an inferiority complex, the overcoming of which gives rise to a person's desire for power, which leads to aggression. Jean Piaget explored socialization as a cognitive development or learning process of thinking (Adler, 1938).

Representatives of symbolic interactionism made an important contribution to the development of the theory of socialization. In particular, G. Mead interpreted the formation of the personality at the same time as "becoming oneself" and "opening the society for oneself." (Mead, 1934). The child discovers who he is, comprehending that there is a society. He is trained in the appropriate roles, i.e. Learns to "take on the role of another", and through this, he forms the representation of a "generalized other". Based on observations of the behavior of C. Cooley children I came to the conclusion that man finds his self, imagining how he is perceived by others. Cooley called this image "a mirror image." In the theory of socialization of G. Mead, two sides or two aspects of personality are distinguished: I and Me. I is the natural matrix of man, the pantry of all sorts of instincts, impulses, feelings and needs, to which society has not been touched. On the contrary, Me is the whole result of socialization, an artifact made by society. It is formed due to "a look at oneself from the side". Other people do not just look at us, but also look after us. In other words, not only socialize, but also control us.

C. Cooley and G. Mead argue that the child learns to understand himself when they take on the role of others. A person imagines what he sees as an observer, ascribing a definite judgment to him, and reacts - with joy or with resentment - to this judgment prescribed to another (Cooley, 1964). The child realizes other people as objects before he realizes himself as an object; he uses the names of others before he learns his own. At first the child learns to distinguish people from things and only after that is able to catch the difference between individuals. The behavior of people for him seems much more messy than the interaction of physical objects. The same person not only behaves

differently in different circumstances, but also contradicts himself. Therefore, to approach human behavior with the same requirements, for example, logical inconsistency, as to the world of natural phenomena, is illegitimate. This is the secret of the art of communication and collective interaction.

According to G. Mead, the process of socialization includes three stages. The first is imitation. At this stage, children copy the behavior of adults without understanding it. Then follows the game stage, when children understand behavior as the performance of certain roles: doctor, fireman, racing driver, etc.; in the process of playing they reproduce these roles. The transition from one role to another develops in children the ability to attach to their thoughts and actions the meaning that other members of society attach to them - this is the next important step in the process of creating their "I". The third stage, according to Mead, is the stage of collective games, when children learn to realize the expectations of not only one person, but the whole group.

According to George Mead, the conscious "I" grows out of the social process. Socialization and growing up of a person is understood as "finding a role". The objects surrounding the person become carriers of meaning, they are connected with what we call symbols. Mead believed that the most important thing for a person is his language skills. The ability to speak makes him a social being. He wanted to root psychology in social reality, therefore it is believed that interactivity emerged as part of social psychology (Mead, 1934).

Many of Mead's ideas coincided with those of the so-called cultural school, whose leader was the Soviet psychologist Vygotsky, who believed that if the child was deprived of the variety of roles he performed, he lost both his intellect and the ability to develop self-awareness (Vygotsky, 1978).

Social interaction in symbolic interactionism is conceived as the fulfillment of various roles by a person. Depending on what kind of social mask a person puts on himself, so he becomes at the moment. In a world-famous experiment, P.G. Zimbardo was turned into a prisoner and warden for just two weeks, but they got so involved in their roles, they began to pursue, beat and hate each other so much that the experiment that took place in a real prison ended in a week's time (Zimbardo,2009).

Thus, the students participated in a kind of role-playing game, the purpose of which was to find out how the played role will affect the behavior and experiences of people. The game was planned so that the participants did not suspect anything. They were taken at night, they did not know where they were, the experiment was continuous every day and night, the subjects had no contact with the outside world. In the experiment, some students turned into real overseers not because they so wanted. They stopped playing for fun and became supervisors essentially because another group of students looked and treated them exactly like supervisors. "Total Institute", as the prison in 1961 called one of the leaders of interactivity, Irving Goffman, completely absorbed the subjects. They forgot the old habits, stereotypes and norms of behavior. They are completely reincarnated. In other words, in their experiences and actions, students turned into prisoners and supervisors.

The most detailed sociological theory describing the integration of the individual into the social system was proposed by T. Parsons. According to Parsons, it occurs through the internalization (internal acceptance) of generally accepted norms based on the identification of the individual with significant figures (for example, in childhood - with the figure of the father or mother, in adolescence - with the figure of the leader, etc.). In the process of internalization, social norms become internal to the individual, external sanctions (external regulation) are replaced by internal control, there is a need to meet social norms. The basis of the process of socialization "is genetically this plasticity of the human body and its ability to learn. The early stages of this process take place everywhere

within related groups, and especially in the nuclear family. Although socialization occurs in all social groups, but outside the family, it is, of course, the most concentrated in collectives engaged in formal education, whose importance in the progressive degree increases with the course of social evolution."

The process of socialization lasts a lifetime, because a person for his life learns a lot of social roles. It is divided into various stages - the initial (socialization of the child, predominantly in the family), the secondary (schooling) and the final (the socialization of the adult person mastering new roles - spouse, parent, grandfather, etc.). In addition, primary socialization is singled out, which is carried out by the closest informal environment, primarily by the family (and also by other relatives, friends, teachers, doctors, etc.), and secondary socialization, which takes place at a more formal, institutionalized level. Here a man is waited by a school, high school, mass media, army, production and many others. The process of assimilation of cultural norms was called internalization, and the development of social roles - socialization.

P. Berger and T. Luckmann singled out the two main forms of socialization primary and secondary, believing that the primary socialization is crucial for the fate of the individual and the functioning of society. It they called quasi-automatic, because the identification of a child with meaningful others occurs in addition to his free choice. "Secondary socialization is the acquisition of specific role knowledge, when the roles are directly or indirectly related to the division of labor." Socialization is not limited to children's experience. It never stops, it lasts a lifetime. P. Berger and T. Luckmann showed that education implies the mandatory assimilation of a system of legitimations in culture, that is, explanations and justifications of the institutional order. Symbolic universes are the matrix of all socially objectified and subjectively real meanings; they classify phenomena in certain categories of the hierarchy of being (Berger; Lukman, 1995).

For P. Bourdieu, socialization and adaptation are some fields of efforts applied by individuals or people, another sphere of struggle between classes and parties. The system of education, the state, religion, politics, sport, language, art, unemployment, church, political parties, trade unions are not machines or institutions, and especially not organizations, but fields. The field consists of mutually related positions, objectively existing opportunities to manifest themselves - roles or niches in the struggle for the prizes being played in this field. The social field, according to Bourdieu, can describe a multidimensional space of positions in which any position, in turn, again represents a multidimensional coordinate system whose values correlate with the corresponding variables. Variables can be various types of capital - economic, social, and symbolic or some other. Many years of studying the field of higher education, the field of literature, the field of science, the field of religion and the field of economics convinced P. Bourdieu that there are almost the same laws as on the football field, namely, competition and open struggle between equal rivals, monopoly and Domination by a strong rival, a flexible system of supply and demand, played out among co-workers (social exchange, exchange of passes, moving to a vacant place, etc.). That is why the field, including the educational one, can be likened to the market. Any field in this sense is a market where specific capital is produced and traded (Bourdieu, 1996).

American psychologist Laurence Kohlberg spent several decades on longitudinal and cross-cultural studies of the "child as a moral philosopher". In 1981, Colberg suggested that children undergo six stages in the ability of moral problems. Social psychologist Carol Gillian proposed to expand the scope of moral behavior and include responsibility and care for loved ones. Gillian discovered that the value system of girls and women in the process of socialization is different from men.

Russian scientists showed great interest in problems. L.S. Vygotsky saw in socialization the process of transforming the interpsychic into intrapsychic, and it is

carried out only in the course of joint activity and communication. In the works of L.S. Vygotsky, A.L. Leontiev, S.L. Rubinshtein, and A.R. Luria, an analysis of the correlation between the biological and social in a man is given, where socio-cultural factors are given priority. In other words, socialization, in the opinion of Soviet scientists, is the process of transforming an individual with his natural talents and potential opportunities for social development into a full-fledged member of society.

In the 1960s and 1970s, works by B.G. Ananiev "On the psychological effects of socialization" (1971), V.S. Merlin "Formation of individuality and socialization of the individual" (1970), E.S. Kuzmina "Fundamentals of social psychology" (1967), B.D. Parygin "Social psychology as a science" (1967). I.S. Kon defined socialization as the assimilation by an individual of social experience, during which a specific person is created. B.D. Parygin believed that the process of socialization is an entry into the social environment, adaptation to it, the development of certain roles and functions, which, following their predecessors, each individual repeats throughout his life. G.M. Andreeva highlights several stages depending on the attitude to work. The system of socialization is aimed at shaping the personality of the "new formation", which combines a high level of culture, education, and intelligence.

According to A.V. Petrovsky, socialization is the process and result of the assimilation and active reproduction of the individual social experience, carried out in communication and activity (Petrovsky, 1989). At the same time, socialization can occur both under conditions of spontaneous influence on the personality of various circumstances of life in society, sometimes having the character of differently directed factors, and under conditions of upbringing. Socialization is the process of personal acceptance of values, norms and culture of the society, development of necessary social skills, social interactions (Kuzmin E.S., Semenov V.E.). In the process of socialization comes the transformation of social experience into one's own attitudes, values and orientations, the assimilation of social norms and roles. The process of socialization includes the formation of social ties, social attitudes and relations. Interest in socialization, or rather, desocialisation and resocialization, is actively manifested in criminologists, lawyers, in particular in the works of Yu. M. Antonin, B.N. Kudryavtsev, N.A. Struchkov, A.R. Ratinov, A.M. Yakovlev and others.

The results of D. Bollinger, S. Paffer, E. Jones, G.U. Soldatova, N.M. Lebedeva testify to the intermediate position of Russia on the scale of individualism - collectivism. The authors note changes in the culture of Russia, recorded on the scales of cultural measurements. At the present time, there has been a shift in Russian culture from the collectivist pole to the individualist; In the former Soviet republics, Russians are less collectivist than the titular population. In contact with collectivist cultures, Russians celebrate individualistic traits, and with individualistic cultures - features of collectivism. Although Russia has traditionally been referred to feminine cultures (N.A. Berdyaev, V.V. Rozanov), the masculinity index is currently increasing. According to the data of S. Paffer and A.I. Naumova (a sample of 250 people), in the mid-1990s, the average level of individualism, muscularity and power distance was revealed in the minds of Russians, moderately high - paternalism and avoidance of uncertainty. The young generation of Russians, which entered the industrial life in the era of perestroika, has high scores on the scale of muscularity and low on the scale of paternalism. If before NA. Berdyaev, V.O. Klyuchevsky and G.P. Fedotov noted a great distance of power in Russia, but now its rate is decreasing.

In the 21st century, the efforts of scientists from the United States, Europe, Russia and other countries are aimed at applying the general theory of socialization created in the previous period to practical problems and situations. Today, such issues as socialization in orphanages, foster families, home schooling, army units, prisons and

places of detention are actively studied. The amount of empirical data obtained in different countries exceeds that required for the creation of new theories of socialization. In the past 20-30 years, according to the author, not a single holistic theory of socialization has been created, which can be compared with what was done by the classics of world sociology.

The exception is the teaching of M. Granovetter, consisting of several parts. Two of them are of particular interest: the theory of embeddedness and the theory of strong and weak connections (Granovetter, 1983). Mark Granovetter argued that economic behavior is built into the social relations and network structures of modern society. Social ties in these structures are divided into two types - strong and weak. Strong ties consist of closest friends, relatives and acquaintances. They will help in a difficult moment of life and serve as a reliable support. But often friends are not experts on topics for which you urgently need information, for example, how to better employ yourself. To help with their advice and knowledge come familiar acquaintances and strangers, found on the Internet. Weak links are an excellent source of information, and strong links are a reserve of help. Paul Adams in the study found that people usually have 4-6 different groups of friends. People usually have fewer than ten strong bonds that consume most of the attention of their lives. Usually they have no more than 150 weak links. I think that the theory of M. Granovetter, created not to study socialization, but to study economic relations, should be more actively connected to the problems of socialization.

The author's task is to attempt to generalize the old and new data on socialization, on the basis of which to formulate some general theoretical framework for understanding socialization today. It is necessary to generalize empirical data and theoretical ideas into a logical whole in order to try to build on this foundation new sociological theories of socialization. In the second part of the article the author in the abstract form outlines possible contours of the theoretical paradigm of socialization for today.

Agents, institutions and types of socialization

Socialization is the assimilation by a person independently or through a purposeful influence (upbringing) of a certain system of values, social norms and patterns of behavior necessary for the emergence of the individual, finding a social position in society; Beginning in infancy and ending in a very old age, the process of mastering social roles and cultural norms. Socialization must be considered in the unity of two factors - the mechanism of socialization and the process of socialization. The basis of the mechanism of socialization are agents and institutions of socialization. Agents of socialization are specific people responsible for teaching cultural norms and mastering social roles. Institutes of socialization are institutions that influence the process of socialization and direct it.

Since socialization is divided into two types - primary and secondary, the agents and institutions of socialization are divided into primary and secondary. Primary socialization agents - parents, brothers, sisters, grandmothers, grandfathers, close and distant relatives, babysitters, family friends, peers, teachers, trainers, doctors, leaders of youth groups. Briefly, there are three primary socialization agents - family, school and peers. The most important act of primary socialization is breastfeeding. Breastfeeding is a subtle emotional relationship between mother and child, the same level as a gentle gesture or kiss. It helps the successful implementation of socialization at an early age. Breastfeeding is an intimate sphere of life for every family, protected and revered by the stronger sex. People erected this act of primary socialization to the level of high culture and religious veneration, it is enough to recall the feeding Madonna. It is known that in the northern

countries women often breast-feed for a very long time, up to a year or two. These children grow well, and these women feel great.

The term "primary socialization" has two meanings in sociology. It means a) parents, relatives and friends, i.e. primary group or immediate environment; b) the earliest stage of socialization in infancy and virginity. Secondary socialization, respectively, refers to secondary groups (social institutions and institutions) and continues throughout the rest of life.

For agents of primary socialization, who are in interpersonal relations and a system of mutual dependence, so-called reciprocal socialization (reciprocal socialization) is characteristic. Reciprocal socialization is the process of mutual socialization by parents of children and children - their parents. Parents coordinate their words and actions in the presence of children, because they are very receptive to everything that comes from these most authoritative agents of socialization for them. In this way, parents educate themselves. To bi-directional processes of influence of agents of socialization it is necessary to include marital socialization, during which the husband influences his wife, and the wife - on her husband.

Secondary socialization agents - representatives of the administration of the school, university, enterprise, army, police, church, state, employees of television, radio, press, parties, courts, etc. Secondary groups, and this will be discussed further, in sociology are called formal organizations, official institutions and their employees: enterprise, state, media, army, court, church, etc.

Primary socialization occurs most intensively in the first half of life, although, in decreasing order, it persists in the second half. Primary socialization is the sphere of interpersonal relations, the secondary one is the sphere of social relations. One and the same person can be an agent of both primary and secondary socialization. The teacher, if there is a trusting relationship between him and the student, will be among the agents of primary socialization. But if he only fulfills his formal role, he will be an agent of secondary socialization. Primary socialization agents perform every set of functions (father - guardian, administrator, educator, teacher, friend), and secondary - one or two.

The adolescent period and adolescence represent an age when the agents of primary socialization (with the exception of the peer group) begin to play a smaller role, and the agents of secondary socialization are larger. In adulthood, secondary socialization agents come to the fore or are equalized in terms of the degree of influence with agents of secondary socialization. Youth completes the active period of socialization. Young people are usually referred to as adolescents and young people between 13 and 19 years of age. During this period, the attitude towards the opposite sex begins to form, aggressiveness, aspiration to risk, independence and independence grows.

Among the primary socialization agents, not all play the same role and have equal status. In relation to the child passing through socialization, parents are in a superior position. On the contrary, peers are equal to him. They forgive him a lot of things that parents do not forgive: erroneous decisions, violation of moral principles and social norms, impudence, etc.

In a sense, coevals and parents act on the child in opposite directions, and the former negate the efforts of the latter. In other words, in adults, a child learns how to be an adult, and in peers - how to be a child: to be able to fight, cunning, treat the opposite sex, be friends and be just. Therefore, parents often look at their peers as their competitors in the struggle for influence on the child.

A small group of peers performs the most important social function - facilitates the transition from a state of dependence to independence, from childhood to adulthood. Parents are unlikely to teach how to be a leader or to gain dominance over others.

The functions of the primary socialization agents are interchangeable, and the secondary one is not. This is explained by the fact that the first are universal, and the latter are specialized. For example, the functions of parents and peers are interchangeable. The latter often replace the former, performing their functions of socialization. And vice versa. Interchangeable functions of parents and relatives, the latter can replace the former.

But the same cannot be said about secondary socialization agents, since they are narrowly specialized: a judge cannot replace a foreman or teacher. Agents of primary socialization, on the contrary, are universal. But only, unlike parents who lay down basic values and long-term goals, peers have more influence on momentary behavior, appearance, choice of sexual partner and places of leisure. The difference between the two types of socialization agents is also that secondary socialization agents receive money for fulfilling their role, and agents of primary socialization do not receive. Primary socialization is mainly the domain of attributed statuses, the secondary one is the sphere of attainment.

Agents and leaders of socialization - those people, who call for a change in valuesor behavior, submit samples of moral or immoral behavior, etc. Hitler, Mahatma Gandhi, Stalin - leaders and agents of socialization. Mendicant monks and holy fools are leaders and heroes of socialization. In general, the charismatic personality is a typical socializer, as well as other authoritative personalities; it can become a courtyard guy, a karate coach, a telegraph, a pop star, a school teacher.

Agents of primary and secondary socialization have on the personality of a person sometimes a coincident, unidirectional impact, and sometimes - contradictory, multidirectional. And the contradiction characterizes the disharmony between

- Primary socialization agents
- Secondary socialization agents
- Agents of primary and secondary socialization.

If, for example, a family teaches a teenager one values, and a peer group is completely different, then not only competition but also a contradiction forms between the agents of primary socialization. Another example is the difference between religious values and business values. Religion teaches us such moral norms as helping our relatives, teaches us not to deceive, to be modest in our desires and needs, and to devote our time to resolving spiritual matters. Business requires the opposite qualities: often it is built on deception, the pursuit of material values, and the desire to stand out, to make a career. He forces a professional businessman to shine all his free time to solve only material issues, while the church calls on a person to think about the eternal, immaterial.

In a sense, peers and parents act on the child in opposite directions and the first ones bring to nothing the efforts of the latter. Parents often look at their peers as their competitors in the struggle for influence on the child.

The two other institutions of socialization-education and the army-are entering into a profound contradiction. The call of young men to the army for two years immediately after graduation is often a barrier to education. After 2 years of service in the army, the knowledge gained at school disappears. There is a reassessment of values, and the motivation for learning may also be lost. The greater the gap between two stable periods (school and university), the deeper the crisis and the irreversible process.

It is best for the graduate to enter the university in the first year. Between two phases, the break should not exceed two months. It is worthwhile to tighten it from two months to two years, which leave for service in the army, you can forget about entering the university without serious additional training. Explanation should be sought in the features of motivation for learning. Schoolchildren have not yet developed into a stable vital need. Children, as you know, study for their parents. All that is not strengthened

easily lost. Even the year of the gap between school and university is difficult for many to overcome. They simply lose interest in learning.

In the former USSR, for those who served in the army, there were workers' faculties (preparatory faculties), where the final exams were equated with the entrance to the university. For the demobilized there were numerous benefits, which are now virtually gone. Nevertheless, even then the army turned into a serious barrier to further education. In many ways, therefore, the girls dominated the student body.

The main institution of secondary socialization is the school, and then the university. They are called upon to give the child what the family cannot give him, namely, a set of systematized scientific knowledge. Prior to joining the school, the child spent all of his time in informal small groups - in the family, in friendly peer groups. For all those around him, he (she) was a unique and unique person. Sitting at his desk, he (she) becomes one of many, acquiring the formal status of a pupil, a pupil. In this sense, it can be argued that secondary socialization begins before the school - for those children who are brought to a kindergarten or even a nursery school. And orphans - inmates of orphanages - find themselves altogether deprived of primary socialization, starting their lives almost immediately with the secondary.

Preparing for an independent life today is not only more prolonged than in a traditional society, but also an expensive event. Give a full-fledged education to all comers, i.e. representatives of all social strata, human society was able only in the XX century. Tens of thousands of years, it accumulated for these material resources. Universal secondary education is a serious achievement of our time.

Parents understand that higher education should be a basic one. But now the level of knowledge that the school gives is very different from the requirements set by the university. There is a gap that has now become catastrophic. Mediators appear: tutors, preparatory courses.

The school does not perform the function of socializer because the level of training in it is constantly decreasing, and the level of requirements in the current university is constantly growing. There are scissors, which are cut down by numerous mediators: tutors, preparatory faculties and courses. For 3000-5000 dollars they will prepare your child to the university. They fill the gap in knowledge and reduce the gap in requirements.

The cultural function of education is the use of previously accumulated knowledge and values, the regulation of the relationship between the generations: the older generation acts as teachers, the younger generation - the pupils.

The school is able not only to change the social structure of society by allowing the prepared young people from the bottom up on the upper steps, but also to consolidate and stabilize it. Privileged classes have their own, as a rule, private schools, where the quality of education is higher and where access is limited to representatives of other layers. The managerial and political elite, the business class and the intelligentsia are usually replenished with graduates of elite schools.

As shown by sociological research and statistics, the modern general education school does not fully fulfill any of its tasks: the level of deviant behavior of underage youth, including crime, alcoholism, drug addiction, prostitution, etc., is increasing. The school does not solve the problem of professional self-determination. She is unable to prepare entrants for entrance examinations to the university.

According to the forecast, the proportion of applicants entering the university only on the basis of school knowledge, even in the 21st century, will not exceed 40%, so that 60% of secondary school graduates will be forced to seek additional forms of preparation for the university. Apparently, there is a significant gap in the understanding of basic knowledge between teachers of secondary schools and university professors. Sociological data show that 42.2% of university teachers in regional and republican centers and 32.8%

of teachers in Moscow and St. Petersburg have noted a sharp decline in the last years of the level of preparation of applicants for competitive examinations to universities. And a significant reduction in the quality of preparation of the abortion is typical for those who apply to all faculties.

Desocialization and resocialization

Continued socialization, as well as social adaptation, should be distinguished from the processes of desocialization and resocialization. These processes belong to the stage of adult socialization; their subject is already a socialized individual. With regard to the child, it is more accurate to talk about successful or unsuccessful socialization.

Resocialization is not only retraining in extreme, but also in normal conditions. The pace of society's life has changed dramatically today. New generations of technology are ahead of the succession of generations of people. A person has to learn and retrain all his life, adapting to constantly changing conditions. Adaptation is the whole period of constant adaptation, resocialization within this process as an adaptive social practice. These practices include: continuing education, adult education, and second higher education.

Entry into any social institution abroad is associated with resocialization. But meeting with such total institutions that require complete "forging", like a prison or army barracks, can be called an extreme resocialization. These include ghettos and reservations, mental hospitals, correctional facilities, prisoners of war camps, boarding houses for the elderly, monasteries, boarding schools and orphanages, juvenile educational colleges, correctional labor colonies, totalitarian sects

It is a system of closed forced relations and imposed morals. The way of life is planned through strict regulation and petty supervision; routine exercises form a twilight consciousness. It is impossible to build life plans and think about prospects. The famous prison experiment, conducted by Professor Philip Zimbardo and his colleagues in 1971, serves as a vivid example of desocialization and resocialization. Randomly, they were divided into two groups. The first group was given the form of guards and sunglasses, and the second group was given out the robes of the prisoners and put in cells. The experimenters explained to the subjects that 12 students (9 basic and 3 for replacement) will play the role of guards, and the same number of prisoners. The distribution of roles took place randomly (they tossed a coin). Nobody picked up fierce sadists in guards, and prisoners - prone to obedience and conformism. Prisoners and guards were randomly leveled by their physical and spiritual qualities. Although the students voluntarily could stop the experiment and leave it at any time, most of them seemed to forget about it, deeply immersed in the imaginary situation. In particular, they complained to each other about the intolerable situation, the feeling of despair and loneliness. As a result, six days later Philip Zimbardo stopped the experiment, which really began to threaten the health of participants. In his report, he wrote that the experiment showed that roles and "orders of superiors" can turn a good person into a sadist. Moreover, according to other scientists, this experiment shows that in any American city there would be enough people who could work as guards of concentration camps. Psychological testing showed that the most and least offensive students-guards were slightly different from each other on the scale of authoritarianism and Machiavellianism. Insulting behavior of guards, most likely, was caused by the peculiarities of the situation, rather than personal qualities.

Socialization and life cycles

Socialization goes through stages that coincide with the so-called life cycles. They mark important milestones in a person's biography, which can perfectly serve as qualitative stages in the formation of the social self: admission to the university (cycle of student life), marriage (family life cycle), career choice and employment (labor cycle), military service (army cycle) , Retirement (pension cycle).

Life cycles are associated with the change of social roles, the acquisition of a new status, with a change in old habits, social environment, with a change in the way of life. Stages of the life cycle - a change in the types of resocialization. The entire process of socialization throughout life is in fact a sequence of time in the phases of resocialization. The transition from one stage of the life cycle to another is often experienced as a psychological crisis, during which a person has to comprehend the path he has traveled, change his ideas about himself and about the world, and correct further goals and plans. Each time, entering a new cycle, a person has to learn a lot or re-learn, adapt to new conditions.

During the life cycle, the individual passes through three crisis points (phases) associated with critical events in socialization:

- from 1 year to 17 years - the completion of schooling and preparation for an active work period,
- from 18 to 60 years - an active labor period, the formation of professional roles,
- from 60 years and older - exit from the active labor period.

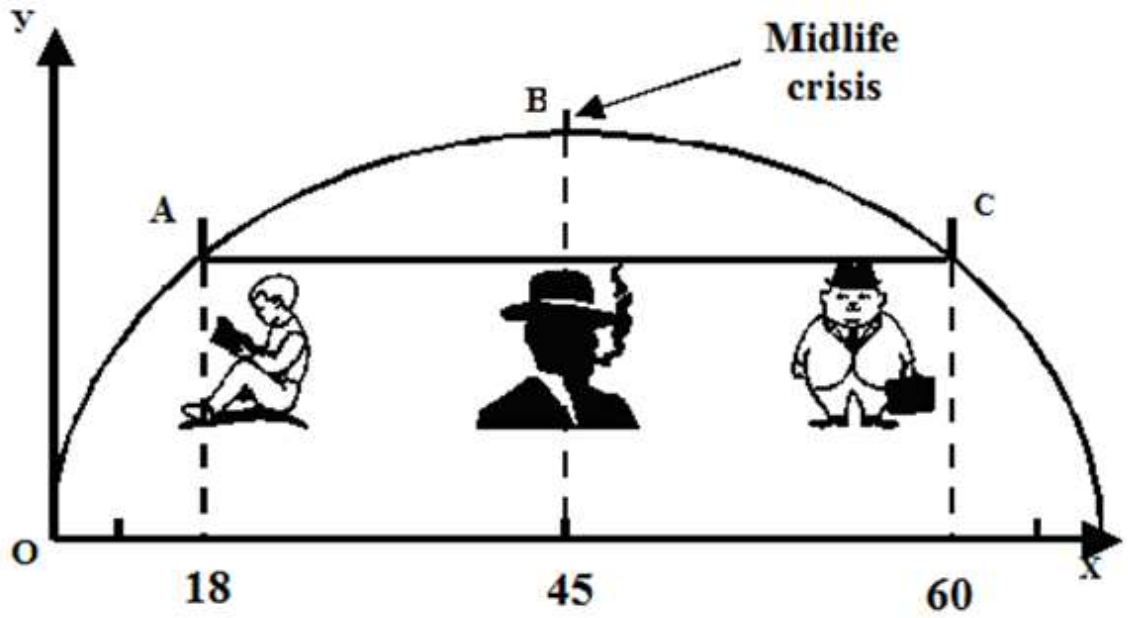

FIGURE 1 - CRISIS POINTS OF THE LIFE CYCLE OF SOCIALIZATION © AUTHOR, 2003

The period of active socialization of ABC is indicated by three points of the crisis. A - the end of the school (university) and the beginning of the labor activity; B - midlife crisis; With - the termination of a labor career and an exit on pension. Each point is the concentration of negative motivation, uncertainty in connection with the expected future. The transition from A to B, from B to C is an alternative, in which two points are connected - desocialization and resocialization.

The disintegration of the USSR in 1991 fell on the middle of the generation X generation, from 1963 to 1983 (the upbringing and maturing took place before 1993).

When democratic reforms failed in Russia in the mid-1990s and it became much harder to live, most Russians began to feel nostalgia for the Soviet era. By that time, the initial euphoria associated with the first years of the establishment of capitalism had passed; the positive motivation had been replaced by a negative one. A decade earlier, another generation of Soviet people in the mid-1980s expected the collapse of the communist system and the onset of democracy.

In Fig. 1. the period between the three points, indicated by the figure ABC, represents the time of maximum creative and labor activity of a person. It is preceded by a period of maximum educational activity - 10-11-year-old schooling. Age from 16 to 18 years is at the end of the school and the professional self-determination of the young man. The first crisis point of 16-18 years means such a turning point in the life of a young man, when the old model of socially and economically incompetent life (under the care of parents) collapsed, and a new model of independent behavior and lifestyle has not yet developed. Formally, during this period a person becomes labor-active.

A person has to choose the future profession and career at an age when he is least ready for it. He does not have enough knowledge and life experience. That's why after graduating from university more than 30% of young people in modern Russia work not in their specialty. To the advice of older relatives - parents, grandparents - she does not listen because they lived in another historical era and with a different generation of technology and technology. Elder relatives, advising young people, serve as agents of socialization, but not always successfully.

The intelligentsia, which fills three layers of the middle class-the lower, middle and upper levels-independently of their income orientates children only to higher education. Parents, even severely limited in their material capacities, invest the last money in the education of children. The formula "the best investment is the education of our children" is the leitmotif of all the life of the middle class, which itself is formed of representatives of the educated part of society. Children grow up in a constant focus on higher education. They always have the right socializers, capable of giving the right advice, all family incomes are mobilized for them, and a favorable spiritual environment is created during the training.

There is nothing like this in the families of workers and peasants, the bulk of which belongs to the lower class, regardless of income. Children here are little oriented towards university education. A living example of a highly educated specialist engaged in prestigious and creative work, they do not see in their immediate surroundings: their parents, relatives and acquaintances, as a rule, are representatives of the same class. True, in the Soviet society, where the way up was open to representatives of all strata and classes, a so-called non-class model of socialization was formed. Everyone aspired to higher education in the USSR: the children of workers, peasants and intellectuals. Moreover, the first to admit even preferred. The university was a dream for all Soviet youth.

The investment of all the capital in the education of intellectuals 'children is helped by parents' orientation toward higher education and strong motivation for the achievement raised in their children by their parents. Even with the same material opportunities for workers and intellectuals, their children have unequal chances of enrolling in an institution of higher learning. Often the free capitals of the family of workers and peasants can not properly apply: they do not know good repeaters, they do not have acquaintances among the university teachers, they fail the first thing they do when they fail. But more often the situation is different: families from the lower class are unable to accumulate the necessary funds because of an incorrect, wasteful way of life.

Inculturation and education

From socialization, it is necessary to distinguish between learning - the cognitive process, encompassing the acquisition of new knowledge, as well as education - the purposeful impact of socialization agents on the spiritual sphere and the behavior of the individual, and the mastering of roles - the practical mastery of the rights and duties prescribed in this status.

Socialization is a two-part process, which includes two parts: the assimilation of cultural norms and the mastering of social roles. Cultural norms we learn - through literature, television, communication with people, parental instructions and, of course, schooling. But to master social roles is possible only in practice, playing the role of a buyer in a store, a pupil at school, a worker in production. The first part is called a special term - inculturation. The two parts have different results and levels of mastering the norms.

Due to socialization, the individual acquires such features that can be considered universal for all cultures, namely language, statuses, roles. Thanks to the inculturation, the individual acquires such traits as are inherent only in this national culture, but, above all, moral and moral values. The second component of the process of socialization - inculturation - means, including, but not exclusively, the process of education. Education is an integral part of the process of socialization and represents a purposeful transfer of ethical norms and rules of decent behavior to the older generation of the younger. It includes a system of pedagogical practices. The society has invented a lot of pedagogical practices (methods, methods, techniques) - methods of social training that allow a person to learn the rules of behavior firmly. The essence of education is the moral perfection of man, increment in cultural and social terms.

Inculturation involves the assimilation of cultural norms - traditions, customs and values - of one's own society. Closely related to it, the concept of acculturation implies a partial assimilation of cultural norms of another's society, which occurs after emigration. Assimilation indicates the complete assimilation of cultural norms of another's society, dissolution in it. In this situation, the old picture of the world and the former hierarchy of values are completely superseded by new entities. When the inner man completely changes, Alter Ego forms. The process of profound transformation of the personality, which occurs, among other things, in the transition from one religion to another, P. Bergman proposed to call an alternative. It is closely connected with two other processes - desocialization and resocialization.

Socialization is the assimilation of universal human social norms and roles. Russian in Germany becomes a German, in England - an Englishman and so on. Especially socialization visible in young people: young English, Germans, Russians quickly find a common language and understanding. The sooner a Russian tourist begins to orient in an unfamiliar country, the deeper becomes the process of socialization and inculturation.

A superficial adaptation to the external environment that does not require radical changes in the structure of value orientations, style of thinking and lifestyle, but only behavioral models, is called adaptation. Adaptation represents an element, an integral part of socialization. When an adult comes to another country for a while as a tourist, he has to adapt to unusual traditions, norms, language. When he moves permanently to another country, he has to socialize. The ability to adapt with age fades.

Parenting is a directed process of influence of one person on another in order to impart to him the necessary rules of behavior and / or ethical norms. In contrast, socialization is not a planned, unregulated, not purposeful process of interaction of people with people or people with a material environment. Education - part or form of socialization - is limited by the number of subjects, and socialization - no.

It is possible to carry out socialization without engaging in upbringing. Parents, usually poorly educated, feed children, drink, bring money (often not all) to the family, leave for their six-hundred square meters on the weekend, arrange friendly companies and drinking bouts, but they do not engage in the purposeful education of their children. Nobody takes them to museums, reads books, does not conduct soul-saving talks, etc. There is socialization, but there is no upbringing. Apparently, there is no inculturation. Therefore, it is possible to carry out socialization. But do not have upbringing and inculturation.

Education - it is necessary to study, but learning is not anything, but only the laws of life, wisdom of life. This is a deeply moral process. Wherever there is a moral impact, there is upbringing. But not everywhere, where there is education, is education. Learning new knowledge is not education. In school, education and training are shared. Many Russian teachers are willing to take on the function of transferring new knowledge, but do not agree to take on the status of educator. Although in the Soviet school the teacher was literally charged with being a mentor of life and a teacher. Today, such facilities are obsolete.

Socialization is a continuous and spontaneous process. People constantly interact with the surrounding society. Parenting is a discrete (discontinuous) and purposeful process, since it is carried out in a certain place, at a certain time, by certain people. Training is also discrete. It occurs at a given time, in a given place under the supervision of specialists. A person can not study for life. After graduating from school, he enters the university, and after his graduation goes to work. Once the firm will send it to the refresher courses or he will have to do it at the expense of the labor exchange.

There are innumerable examples of acculturation. In the nineteenth century, Russia added to its borders many new cultural regions: Poland, the Caucasus, Central Asia. The Russians who moved there took over local customs and traditions, while retaining their own. But the local population has already become acquainted with Russian culture and has borrowed much from it. This is an example of acculturation, which was the result of territorial conquests and annexations.

The alternative of "accommodation or assimilation" is now very acute for ethnic migrants in the United States - Chinese, Japanese, Mexicans, Europeans, etc. They are becoming more and more, and so many millions of ethnic communities are forming in the country, which is a small skulk of the corresponding culture. Here you can talk all your life in your native language, completely not dissolving in American society. An example is the famous Brighton Beach area in New York, inhabited entirely by immigrants from the former USSR. Brighton Beach is a relatively remote area of New York, where many emigrants from Russia and other Soviet republics live. It is located on the Atlantic coast. Brighton Beach in the Russian translation sounds like "Brighton beach", because it is located on the Atlantic coast. He is also called "Little Odessa". Here, as before, the atmosphere of the 1970s-80s of the Soviet era, which was transferred to America, prevails. The spirit of that time is felt in the manner of dressing, talking, in posters and decorating stores. At the ocean - quay. Although it is wooden, it looks like a wave to us: a cafe, strolling couples, benches overlooking the sandy beach and the ocean. This is a cultural enclave created in America by immigrants from the Soviet Union, who do not want to fully integrate into the American system. The older generation did not learn English and did not get used to the old traditions. Naturally, parents are in favor of accommodation, i.e. partial integration into American society and preservation of Russian traditions. On the contrary, the children themselves seek assimilation, complete dissolution among Americans, the achievement of being practically no different from them. Only this way will allow fully socializing in another’s society and making a successful career. The second and third generations of migrants form a new identity, representing a mixture of two or

more cultures. Migrant students and those who come to another country on contracts prefer the accommodation model of socialization instead of assimilation or isolation.

When an adult arrives in another country, he has to socialize, and not just adapt yet, because when acquiring citizenship and working in another country, a person develops new social roles and acquires and acquires new statuses, and this is the process of socialization.

Levels of consideration and Barriers of socialization

The generalization of the literature allows us to conclude that socialization over the last 150 years has been considered at eight levels:

The first level - transhistoric - anthroposociogenesis: 1) first there was the formation of man (anthropogenesis), and then people began to socialize themselves, while creating a society from the primitive herd - sociogenesis. How did they create? The first - introduced a number of rules: the taboo on incest, the murder of blood relatives, the murder of the children of the other father, the burial of the deceased, communication with spirits. Second - practical cases - the construction of houses instead of caves, the making of tools with the tools, the transfer of knowledge, the division of labor and specialization, and the norms of separation of production.

The second level is historical: two areas of analysis - 1) the change of socio-economic formations according to Marx and the emergence of socialization in the meaning of socialization, collectivization; 2) each era has its own forms and types of socialization in different countries, for example, historically vestigial must be attributed to infanticide, patriarchy, etc.

The third level - global, occurs today, its main features that have affected socialization: to study in any country, cosmopolitanism, information technologies of learning and communication

The fourth level - regional-national - the methods of socialization among the peoples of the Balkan countries clearly differ from those of the Latin American peoples, etc.

The fifth level is religious and confessional

The sixth level is the institutional, secondary socialization agents

The seventh level is small groups: reference, significant others, family, primary socialization

Eighth level - individual - change of value orientations, cognitive processes, world picture, attitudes, behavior, social action

According to different levels, the definition of socialization changes: 1 (socialization as socialization, 2) socialization as a life-time process; 3) socialization as a communication of people.

In the USSR, socialization has long been understood as the upbringing (formation, creation) of a new type of person - Homo soveticus. In the West, socialization is understood in two meanings - broad and narrow. In the broad sense (socialization) it is a lifelong process of inclusion in new social roles and training in new social norms. In the narrow sense (socializing) - as the practice of communication, meetings, collective get-togethers, joint spending time, dating, including through the Internet.

At all levels, barriers to socialization include, in particular, discrimination, sexual violence, slavery, serfdom, gender inequality, glass ceiling, disability, homelessness, boarding, divorce, incomplete family, disability, schizophrenia, social disorder (anomie), social isolation People), parents' refusal from their educational functions (drunkenness), getting children into extreme conditions (violence, including sexual and physical abuse by parents, selling into slavery), wandering and leaving the school, prison , The army, the bandit environment. This also applies to adults - illegal residence in a foreign country,

captivity, slavery, drug addiction, loss of memory and personality, participation in a totalitarian sect. Communicative barriers caused by the peculiarities of living in a boarding school are overcome by the arrival of health-improving groups of children from other boarding schools. Joint competitions, business, living conditions develop friendly relations, generate affection, correspondence and phone calls.

Living in a boarding school and orphanage is a serious barrier to socialization.

Barriers of socialization are a) personal and b) social factors. The first include deafness, dumbness, blindness, mental retardation, disability, character traits (isolation, aggression), acquired skills (slander), moral shortcomings (treachery) that prevent one individual from fully communicating with others, the child began to speak late . The resulting injury may be a barrier - physical, mental, cultural. The death of parents for children, a deep crisis, shocking scenes of violence, cultural trauma in P. Sztompka, etc.

Two-career socialization

Learning is a period of active accumulation of knowledge as a basis for acquiring qualifications in the next period (maturity). Full secondary education sets the foundation on which the building of higher education is built. School education is polyprofessional and multivariate. A graduate of a school can get a job at any job, having received a special training beforehand. A secondary school should not give a narrow-minded education. A person must choose the future profession consciously; he must learn all the pros and cons of this profession and put up with them. And from the schoolboy to demand an informed choice of profession is impossible, because. He had not tried it in himself yet. If the school gives a clearly directed professional orientation, it deprives a person of youth when he finds out what profession is right for him.

The schoolboy, having graduated from 11 classes, understands that he should choose a new launching pad, he must make a qualitative transition to the level of knowledge that the university gives. In the university there is a deepening of knowledge in some limited spectrum. That's why we can say that the basis of general vocational training is laid by the school, and not by the university. He only continues the work that she started in one of the fields of knowledge. After school, a person can go both into the sphere of physical and mental labor. But the university, whether it is technical or humanitarian, prepares only for the occupations of predominantly mental work. The university gives a limited set of knowledge, does not prepare for all professions, it is specialized.

Between the university and the school wedged the system of special education: vocational schools, technical schools, colleges. They complete the school education, improve their qualifications in the area of predominantly manual labor,

The period from 17 to 23 years - for many it is study in high school. Completion of high school education, as well as the end of secondary school, is a crisis point. It is associated with the transition from education to productive work, this is a belated entry into work (not in 17, as after school, but at age 23), as a result of which the employer receives a socially more mature and professionally more prepared workforce.

Young age - from 17 to 30 years - continued active socialization. It is allotted to "social experiments," frequent changes of places of work, the search for one's place in life, the accumulation of life experience. You learn so many norms and roles that later allows you to work with the greatest impact. Some begin to work at an early age, but all their lives have low qualifications. Others study for a long time, do not give anything to society, but only take from him (the state's expenses for training students). But later they make up for everything, since higher qualification means more labor contribution to social production. This is the socialization model optimal for post-industrial society.

Employers behave differently. Those who enter the labor life at 17 years old without a high qualification, employers offer a low-skilled occupation, and those who start working at the age of 23, the employer offers a more qualified and more paid place, as a rule, this work is more responsible, independent and Interesting, for example, the position of manager.

Socialization and adaptation

The process of adaptation is the first phase of the socialization of the individual. The second phase, interiorization, is the process of incorporating social norms and values into the inner human world. According to some sociologists, in the process of adaptation it is necessary to distinguish two sides: assimilation - adaptation of the situation through changing conditions to a person, his individual style of mental activity and accommodation - the adaptation of a person to a changing situation through the restructuring of the thinking style. As a result of assimilation, members of one ethnic group lose their culture and acquire the culture of another people with whom they are in direct contact. This process can occur spontaneously, and can be managed administratively. For example, during the years of Soviet power, Russians and Latvians lived side by side and no one thought about the cultural dissolution of one people in another. After the collapse of the Soviet Union, the Russians turned into a national minority, and they were forced to be expelled from the country, and the remainder to assimilate such a policy contradicts the international norms that the European Union adheres to, where Latvia aspires to join, and Russia that tries to protect the rights of the Russian-speaking population. The EU and Russia advocate a different strategy, namely accommodation, which presupposes the preservation of the national and cultural identity of each people, respect for their rights and peaceful coexistence. Otherwise, such a policy is called peaceful integration of two peoples into a single community. This is the most humane way of adapting large social groups to the changed political conditions in the 1990s.

Adaptation represents an element of the overall process of socialization. It is not right to identify them. They mean different things. Socialization begins with childhood, when a person as a person is not formed. Adaptations are only subjected to ready-made systems-physical or social. Adapting to a new climate or collective takes place in the existing person. Professional adaptation in the industry includes selection, training, assessment of personal and business qualities of employees.

When moving from a centralized economy to a market economy, it is necessary to adapt enterprises and their employees to the market environment and to market relations. The higher the adaptation measure, the more reliable the system, the higher the degree of its survival. Sociologists found that, contrary to expectations, low adaptation to market conditions, to which Russia moved in the late 80's, is typical for the most active age - from 30 to 50 years. Solving this riddle, scientists came to the conclusion that people under 30 years in the social plan are more mobile, less dependent on the existing way of life, habits and stereotypes, as well as from the position and profession. Many parents still care for that, and they are the strongest agent of socialization. People over 50 years old easily adapted because by that time they already had adult children who could take care of themselves, accumulated certain material values (apartment, cottage, dwelling, car), there was a stable social position (a good profession or a high position). All this facilitated entry into the market. On the contrary, a person in 30-50 years is concerned with how to establish themselves in the chosen profession, make a career, how to provide children and put them on their feet, how to solve the housing problem.

The ability to adapt, as well as to socialization, fades with age. American sociologists have established that, say an English professor (that is, a person who speaks the same

language as Americans) can live in the US for 5-10 years or more, but he will never become an American, although he speaks the same language and has a very similar culture. A semi-literate son of Italian émigrés, speaking with a strong Sicilian accent, by the age of 10, «learns to be an American" and will not be different from American peers. The professor behaves as an Englishman, and the boy - as an American. Adaptation in the first case is more difficult, although it is possible, but complete socialization is unlikely to come. In one case, only adaptation takes place, and in the second - complete socialization.

On the eve of the Second World War, Georges Friedman, who spent most of his life in Russia, studied the extent to which ethno-cultural (national) traits affect the responses of respondents in the survey. He found that Swedes and Americans are mostly inclined to assess the "plus" part of the scale, and Jews and Poles gravitate toward the negative pole: complain about this and this. Russians (living much worse than Swedes or Americans) are mostly optimistic: according to the mentality of the sufferers who never lived well and do not expect a better future. And that's what happened to them. On the eve of the 1998 default, employees of the Institute of Sociology of the Russian Academy of Sciences (headed by V.A. Yadov) interviewed Poles and Russians about how they had undergone economic reforms - the transition from socialism to capitalism. As we know, we have chosen a gradual transition, in Poland - shock therapy. It turned out that the Poles easily suffered their "shock", rather than we - slow reforms. Reflecting on this paradox, V.A. Yadov believes that there are several reasons for this, including the solidarity of society: all Poles - upper and lower - are oriented to the West and want to live there; in Russia, the tops are directed to Europe, and the bottom is not. What turns out - patience is worse than envy [27]. In fact, Russians are more patient with life's troubles, Poles, according to J. Friedman, are more envious of the prosperous nations, let us say to the same Germans. The first want to live their minds and go their own way, the latter all take over from their neighbors and try to catch up with them quickly.

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METHODOLOGICAL TOOLS FOR ANALYSIS IN MODELING THE MANAGEMENT OF THE ORGANIZATION'S FOREIGN TRADE ACTIVITY EFFICIENCY UNDER CONDITIONS OF ECONOMIC UNCERTAINTY

Abstract

The article outlines the directions of the methodology development for analyzing the foreign trade activity of the organization in the system of managing its effectiveness. The author proposes an analysis toolkit focused on the solution of a certain task consisting in making the optimal management decision under conditions of economic uncertainty.

Keywords

probabilistic model, foreign trade activity, criterion, uncertainty, Markov process, methodology, fuzzy set, analysis system, management, economic and mathematical modeling, effectiveness

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Introduction

Maintaining foreign trade activities (hereinafter referred to as "FTA") in conditions of uncertainty forces organizations to abandon the unambiguous estimates based on bipolar perception of foreign trade and to use multifactorial, multi-criteria analysis systems that allow to investigate the effectiveness of this type of activity. This situation is due to the vagueness of foreign trade processes, the vagueness of formulating foreign trade contracts, which are not of a probabilistic nature. Many difficulties arise due to the small amount of data, which does not allow us to apply the theory of probability. The implementation of export-import operations involves making optimal management decisions, which requires the definition of the border that makes it possible to appropriately qualify each of the available alternatives. In practice, it is difficult to find this border, because it is vague, depending on many factors, both external and internal.

At present, foreign trade participants do not have a system for analyzing the effectiveness of FTA, methodological tools for its evaluation, which leads to untimely reorganization of foreign trade operations due to changes in the conditions of operation on the world market, the lack of budget adjustments estimates in the management of FTA effectiveness. This creates a scientific problem, consisting, on the one hand, in resolving the contradictions between the organizations needs in modern methods of managing FTA effectiveness and inadequate methodological apparatus, on the other.

Formulation of the problem

The main purpose of the system for analyzing the effectiveness of FTA is to develop a methodological tool for evaluating the FTA in the management of this type of organization’s activity effectiveness, the methods of analyzing export-import operations in order to make optimal management decisions. On the basis of the foregoing, we believe

that the purposes of the research aimed at studying the system for analyzing FTA and managing its effectiveness should consist in:

- identifying the main directions for improving the strategic management of the organization's FTA effectiveness, based on an analysis of the trends in the development of scientific approaches to the evaluation of this type of activity, the features of its analysis, conditioned by political, legal and economic factors;
- establishing methodological approaches to the evaluation of FTA effectiveness, focused on the foreign trade strategy of an economic entity;
- developing methodological tools for strategic management of FTA effectiveness and models for the forecast analysis of FTA, which characterize its effectiveness in the midterm.

To achieve these purposes, it is necessary to solve the following tasks:

- development of theoretical ideas on the FTA effectiveness strategic management based on the methodological provisions of economic analysis theory;
- development of a system for analyzing FTA effectiveness based on modern approaches to the study of the foreign trade strategy of an economic entity, taking into account the features of its functioning and organizational structure;
- determination of methodological approaches to the evaluation of FTA in the management of its efficiency on the basis of the organization's foreign trade strategy;
- development of recommendations on the development of methodology for analyzing the organization's FTA as a method of establishing information and analytical support for forecasting the effectiveness of this type of activity for an economic entity in conditions of uncertainty;
- development of a model for evaluating the effectiveness of the organization's FTA in the system of economic analysis.

Approaches to solving the problem

The solution of the set tasks is aimed at the development of theoretical, methodological provisions that represent a comprehensive systemic solution to the scientific problem associated with the further development of both theory and methodology for analyzing the organization's FTA in managing its effectiveness. Improvement of the system for analyzing FTA effectiveness will help to develop new methodological provisions and methodological approaches to researching this type of activity, to present FTA effectiveness indicators, formed on the basis of forecast procedures. Specification of the methodology for analyzing and evaluating FTA effectiveness will help to ensure the synthesis of various kinds of information in the accounting and analytical system, to develop a systematic approach to the establishment of forecast estimates, including those of a strategic nature.

The conditions for the maintaining of the organization’s FTA influence the choice of the analysis methods of and their adaptation to reality. Since the choice of the method characterizes the methods of approach to the study of the FTA effectiveness analysis subject, the organization needs to develop a sequence of the selected methods application. Since the concept of an integrated approach to the evaluation of FTA efficiency is the most promising at the present stage of foreign trade development, then the methodology for carrying it out as a system of methods, techniques and technical means meets these conditions. Those provisions, which, in our opinion, determine the directions, stages of research, evaluation criteria are formed in its structure.

An essential feature of the system for analyzing FTA effectiveness is the analysis methodology, which is one of the most important components. We believe that the methodology of FTA analysis should be understood as a system of scientifically based

methods, techniques and procedures aimed at solving problems identified by the subject of the analysis. In this case, the subject is a task that requires a solution in the process of research, based on the results of which, according to corresponding volume of special knowledge, using methods and technical means at the organization's disposal, the economic entity makes an optimal management decision. Hence, the methodology is characterized by a system of methods applied in a certain sequence, which depends both on the questions posed for its resolution and also on the conditions for conducting the research. The conditions, in this case, mean both the state of the foreign trade environment and also the events leading to the registration of occurred facts of economic life by the FTA participant or to ascertainment of their changes leading to the diversification of the organization's foreign trade goods delivery.

Analysis of the foreign trade economic conditions allowed us to state that the domestic organizations of the beer industry maintain FTA against a background of beer production volume falling in Russia from year to year. So, in 2017 beer production in Russia decreased by 2.4% compared to 2016, to 744 million deciliters. Only in December 2017 beer production decreased by 2.9% compared to December 2016 and by 0.2% compared to November 2017. In previous years beer production also decreased: in 2015 - by 5.2%, in 2014 - by 7.4%. The slump in the industry has been observed since 2011 (RF: Production of beer fell by 2.4% last year (2018, January 27)). With this state of the industry, FTA is the kind of activity that ensures the survival of the organization under uncertainty conditions and it is an important reserve of economic growth.

However, the growth of protectionism, the erection of trade barriers does not allow domestic beer industry organizations to strengthen their positions in world trade. Analysis of trends in Russian beer imports, according to the data shown in Figure 1, shows that the growth rate of beer imports in value terms in 2016 was 56.4%, and in 2015 50.3% compared to 2012, respectively, whereas in 2014, the drop in the growth rate of beer imports was by 11.3%, and in 2013 only by 6.4% compared to 2012. The study of beer exports dynamics demonstrates a drop in the growth rates of beer exports from Russia in value terms by 16.7%, in 2015 by 29.4%, and in 2014 by 13.1% compared to 2012.

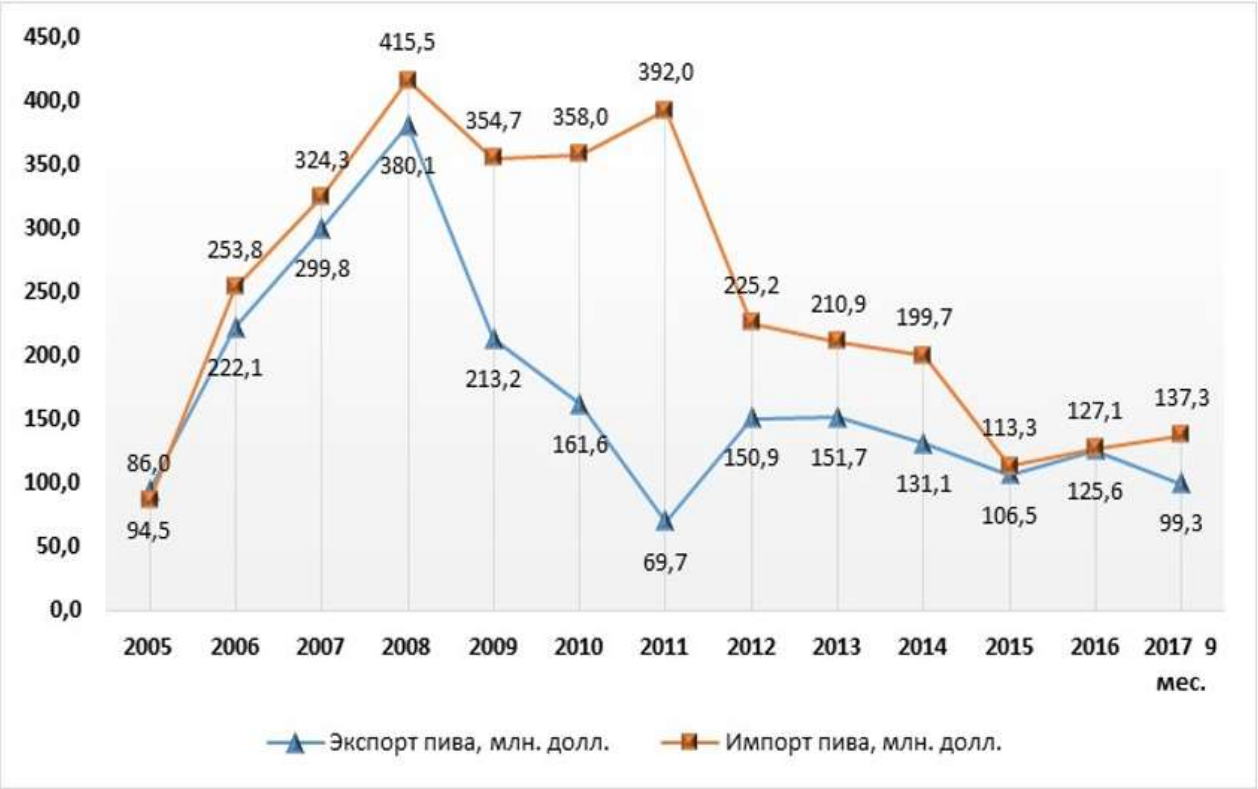

FIGURE 1 - TRENDS IN RUSSIAN BEER EXPORTS AND IMPORTS

Source: (Federal Customs Service of Russia, 2018)

According to the Federal Customs Service, the import of malt beer to the Russian Federation in 2017 increased by 54% compared to 2016, making up 8% of the total volume of alcohol import into Russia in 2017. Import of malt beer in 2017 increased by physical volumes also - by 50%. The main countries-suppliers of beer were Germany, Czech Republic, Belarus and Belgium. Germany holds a leading position both in value terms - 33% and in physical terms - 29%. At the same time, despite the prolonged decline in sales, in 2017, Germany has increased its beer shipments by almost 2 times. The Czech Republic and Belarus increased physical volumes of malt beer export by 1.5 times, and Belgium by 1.3 times (RF: Import of beer increased by 50% last year (2018, February 18)).

The analysis shows that the negative dynamics of FTA, which takes place in beer industry, requires some changes in methodology for analyzing this type of activity and determines the need to use economic and mathematical modeling to forecast the effectiveness of export-import operations. However, to solve specific tasks that are included in the subject of analysis, it is necessary to take into account the specificity of the object under study, the nature of the information used. Dependence of the analysis methodology on the subject and object of research indicates their interrelation. Therefore, the content of the analysis methodology, in our opinion, should be regarded as an essential feature of each type of foreign economic activity analysis.

Results

The results obtained in the course of FTA study, in our opinion, depend in many ways on the methods used, since the methodology for making an analysis of the organization's FTA is focused not only on the study of its object, but on the solution of a specific problem, which determines its specificity for each kind of analysis, including the analysis of FTA

effectiveness, due to the nature of the objects being studied and the problems that need to be solved.

When examining FTA, it is possible to single out general methods that generalize the experience of solving typical problems, applied without any change, and private ones that presuppose a method for solving a particular problem. If the standard methodologies ensure uniformity and consistency in the analysis of all objects, the private methodologies resulting from the modification and additions to the general methodology are based on the laws of economic science, the specific features of definite foreign trade operations knowledge, and are manifested in theoretical generalizations, in the principles of this science on the one hand, and in applied research methods on the other hand.

Since the methodology for FTA analysis is determined by knowledge of the general methodological approaches to it, modeling of foreign trade operations structure, evaluation of interim results, making conclusions and formulation of recommendations, we consider it expedient to single out five stages in the methodology for analyzing FTA effectiveness, including preparatory, analytical, forecast, comparative and final ones. The passage of all stages in a strict sequence makes it possible to analyze all the factors affecting export-import operations effectiveness and, on the basis of their evaluation, to choose the optimal management solution.

As the preparatory phase presumes looking through the information that is available for the analysis by a participant of FTA, the preferred method of investigation is monitoring.

The analytical stage involves identifying and studying the objects of analysis in order to determine the factors of the external as well as the internal environment that affect organization's FTA effectiveness. Since the object of analysis may have a large number of features, properties, which complicates the research process, a comprehensive analysis, including factorial and comparative, will provide an opportunity to determine all the qualitative characteristics of the analyzed features. Having enough information about the object of research, the organization, using a set of general scientific and specific methods, determining the significance of the signs, their possible distortions, chooses the amount of data that is necessary for further research.

At the forecast stage, the conditions for FTA maintaining are simulated, and the characteristics of the investigated object are forecasted. We believe that probabilistic modeling expands the scope of analysis, forms new conditions for the organization functioning in the field of foreign trade, which requires study. Forecasting provides an opportunity to conduct a comparative study.

The comparative stage is an important stage of the study, because it allows to establish the degree of difference in the forecasted data from the actual results by means of the deviation analysis. Within the framework of this stage, specific methods of research are used.

The final stage is connected with making a decision based on the choice of the optimal alternative from all available. The organization analyzes, in accordance with the selected criteria, all the revealed features of the investigated objects of analysis, determines the degree of their individuality. Application of logical, abstract thinking makes it possible to formulate the recommendations for the organization on FTA effectiveness management under conditions of risk and uncertainty.

We believe that the stages identified in the methodology for analyzing FTA effectiveness will not cause problems when they are implemented in practice by organizations operating in the field of foreign trade, with the exception of the forecast phase. Therefore, the foregoing allows us to recommend, for the sake of practical expediency, a methodological tool to conduct a study of organization's FTA effectiveness for settling the issues raised for consideration at this stage and which can be detailed in

accordance with the subject and the object of the analysis. In the example below, it is justified that during analyzing FTA efficiency, it is possible to operate with fuzzy sets in those cases when an economic entity refuses accuracy requirements.

Discussion

At the present stage, foreign trade participants make a budget for FTA maintaining and one of the tasks, that the organizations have to solve, is to determine the optimal balance between the financial budget of FTA and the budget of the specific foreign trade contract, so that the organization's functioning in the sphere of foreign trade would be effective. Since the budget data is determined approximately, then there is uncertainty, which, in our opinion, makes it possible to reduce the problem to determining the fuzzy eigenvector z of the structural matrix v corresponding to its own value equal to 1. At the same time, the elements vij of the fuzzy matrix of organization's FTA budget $V = (v_{ij})$, where $i = \overline{1,k}; j = \overline{1,k},$ are fuzzy numbers characterizing the share of FTA budget used by the i-th subdivision of an economic entity to implement the j-th foreign trade contract.

In a formalized form, the problem of searching for the parameters of an eigenvector can be represented, according to the opinion of G.S. Osipov. (Osipov, 2017), as follows:

$$(\Omega, f): f(z) = \|Vz - z\| \to min,$$
$$\Omega = \left\{z \in \mathbf{\Theta}_+^k : \sum_{i=1}^k z_i = Z\right\} \quad (1)$$

Let us give practical justification for this statement. Let the organization have formed the structural matrix of FTA using fuzzy triangular numbers of the following type

$$V = \frac{1}{12}\begin{pmatrix} (8{,}1 & 1{,}4 & 4{,}0) & (6{,}7 & 2{,}6 & 2{,}4) & (3{,}6 & 2{,}0 & 8{,}4) \\ (2{,}4 & 7{,}1 & 6{,}2) & (4{,}3 & 3{,}4 & 3{,}0) & (7{,}2 & 5{,}8 & 5{,}7) \\ (1{,}3 & 4{,}9 & 7{,}0) & (5{,}8 & 6{,}5 & 1{,}0) & (3{,}8 & 3{,}1 & 6{,}8) \end{pmatrix}$$

A particular solution of the problem under consideration, with the budgetary restriction of $Z = (7;\ 19;\ 29)$, established by the organization, will be a solution that looks like:

$$z = \begin{pmatrix} z_1 \\ z_2 \\ z_3 \end{pmatrix} = \begin{pmatrix} 3{,}11 & 3{,}14 & 9{,}76 \\ 2{,}22 & 8{,}45 & 10{,}65 \\ 1{,}67 & 7{,}41 & 8{,}59 \end{pmatrix}$$

that is explained by the search for the solution for numbers $(v_L;\ v;\ v_R)$, determining the coordinates of triangular numbers vertices forming the structure of the organization's FTA matrix. As a result, all the components of the eigenvector, which is the solution to the problem, are fuzzy numbers.

It should be noted that this problem can also be solved by Gauss method. Having carried out operations with a system of fuzzy homogeneous linear equations, the solution will have the form:

$$z_G = \begin{pmatrix} z_{G_1} \\ z_{G_2} \\ z_{G_3} \end{pmatrix} = \begin{pmatrix} 3{,}18 & 2{,}98 & 9{,}57 \\ 2{,}38 & 8{,}51 & 10{,}54 \\ 1{,}69 & 7{,}52 & 8{,}43 \end{pmatrix}$$

To compare the obtained results, we determine the width of each fuzzy number (W) according to the following expression (Osipov, 2017)

$$W(C) = \int_0^1 (c_R(\beta) - c_L(\beta)) f(\beta) d\beta, \quad (2)$$

where $c_R(\beta); c_L(\beta)$ – right and left boundary of the interval β – level of the fuzzy number,

$\int_0^1 f(\beta) d\beta = 1$

According to formula (2) we have:

$$W(z) = \begin{pmatrix} 3{,}33 \\ 4{,}21 \\ 3{,}46 \end{pmatrix}, \quad W(z_G) = \begin{pmatrix} 3{,}20 \\ 4{,}08 \\ 3{,}37 \end{pmatrix}.$$

Since the obtained values of the fuzzy numbers width do not allow us to judge of their coincidence degree unmistakably, we calculate Minkowski distance between two fuzzy numbers, which is determined with the help of the following equation (Osipov, 2017):

$$d_M(XY) = \left(\int_0^1 ((|y_R(\beta) - x_R(\beta)|)^f + (|y_L(\beta) - x_L(\beta)|)^f) d\beta \right)^{1/f} \text{ при } f \geq 1 \quad (3)$$

When $f = 3$, Minkowski distance between the fuzzy numbers, according to formula (3), is

$$d_M(z, z_G) = \begin{pmatrix} 0{,}096 \\ 0{,}087 \\ 0{,}080 \end{pmatrix},$$

which indicates the possibility of applying the proposed approach when determining the optimal balance between the financial budget of FTA and the budget of a specific foreign trade contract so that the functioning of the organization in the sphere of foreign trade would be effective, since the linear matrix model of organization's FTA using fuzzy numbers allows to obtain results close to the values obtained when solving a system of homogeneous linear algebraic equations with triangular numbers, which is a very laborious procedure.

Conclusion

Against the background of the domestic beer market fall, which, apart from purely economic reasons (the decrease of households incomes, the increase of compulsory expenses cost, including pay for utilities), is due to other factors on which it depends whether the market starts to revive. Among them, in our opinion, is the price wars factor, which the market participants fight not only among themselves, but also with the linear retail. The situation in the sphere of foreign trade is such that a larger volume is easier to sell at the expense of lowering the price, and not at the expense of improving the quality of the product or an innovative proposal. We believe that such a price dumping will not stop until the consumer's income begins to grow.

In such conditions, the problem of forecasting prices for their products becomes topical for organizations maintaining FTA, an instrument for the solution of which, in our opinion, is economic and mathematical modeling. In the example below, the practical implementation of the proposed approach is presented (Martyanova, 2016). As the information base for the calculations, the data was used disclosed in the management reporting of the maintaining FTA manufacturing organization, which should assess the feasibility of concluding a contract for the supply of beer for export at a price of 5.1 euros per liter, whereas according to the information obtained during the study of premium beer

market, the market price of one liter of beer in the analyzed segment may range from 4.6 euros to 12.4 euros.

As a system S, let us consider premium beer in the volume of one liter and estimate those of its states that are characterized by the market price of beer within the following limits:

s_1 – from 4,6 euros to 6,9 euros;
s_2- from 6,9 euros to 8,7 euros;
s_3 – from 8,7 euros to 10,1 euros;
s_4- from10,1 euros to 12,4 euros.

The market price of one liter of beer in this segment essentially depends only on its current price at given time. A change in the price of a commodity in the market can occur at any random time as a result of random effects of the market. Transitions of the system S from state to state occur with probability densities that do not vary with time, the values of which are indicated in the matrix (4)

$$\delta = \begin{pmatrix} 0 & 2 & 1 & 4 \\ 3 & 0 & 5 & 1 \\ 6 & 1 & 0 & 3 \\ 4 & 2 & 2 & 0 \end{pmatrix}. \quad (4)$$

Proceeding from the primary data, there is a discrete homogeneous Markov process with continuous time in the system S. Hence, the streams of events causing the transition of the system S from one state to another are simple ones. The marked state graph is shown in Figure 2.

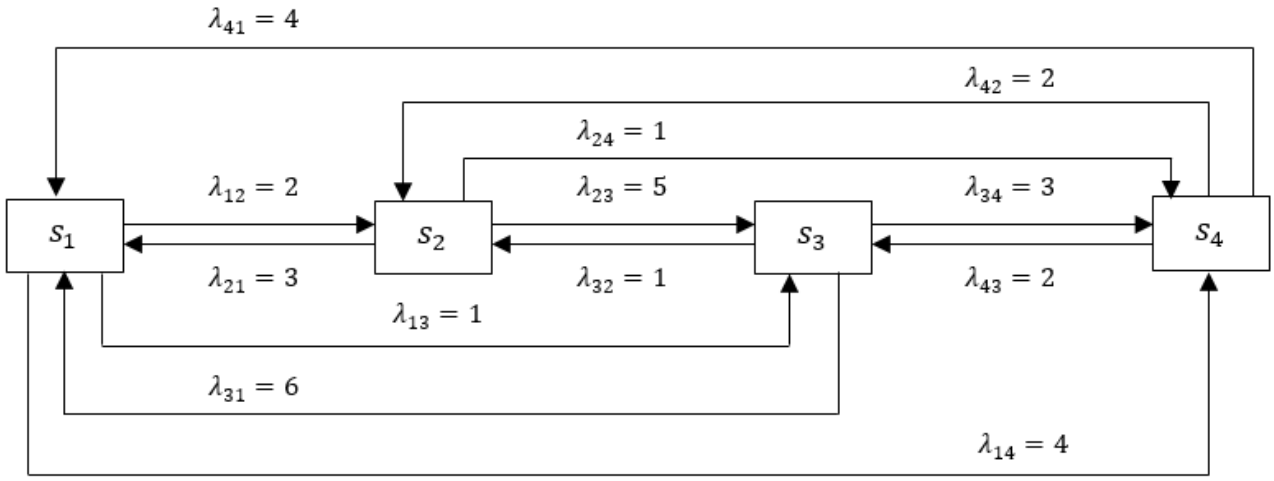

FIGURE 2 - THE STATES GRAPH OF THE INVESTIGATED SYSTEM

The analysis of the graph shows that system S can transit from any state to any other state in a finite number of steps, that is, it is ergodic. In the work (Labsker, 2014) it is proved that if the number of system S states is finite, system S is ergodic and all the events that cause the transition of system S from one state to the other are the simple, then there are final states probabilities (p_i), defined as

$$p_i = \lim_{t \to +\infty} p_i(t), \ i = 1, \dots, n \quad (5)$$

where $p_i(t)$ – state probability s_i of system S in a time moment t.

To determine the final probabilities, it is expedient to use Kolmogorov's system of differential equations, having the form (Labsker, 2014)

$$\frac{dp_i(t)}{dt} = -\left(\sum_{j=1}^{n} \lambda_{ij}\right)p_i(t) + \sum_{j=1}^{n} \lambda_{ij} p_j(t), \quad i = 1, \dots, n; \quad t \geq 0. \tag{6}$$

If we go to the limit with $t \to +\infty$ in equation (6), then it is transformed into a system of homogeneous algebraic linear equations relative to n of unknown quantities $p_i, i = 1, \dots, n$ of the following type (Labsker, 2014)

$$-\left(\sum_{j=1}^{n} \lambda_{ij}\right)p_i + \sum_{j=1}^{n} \lambda_{ij} p_j = 0, \quad i = 1, \dots, n \tag{7}$$

since the probability of a continuous random variable $p_i(t)$ with $t \to +\infty$ tends to a constant value p_i, and the derivative of a constant quantity is zero.

On the basis of the foregoing, we form a system of equations

$$\begin{cases} -7p_1 + 3p_2 + 6p_3 + 4p_4 = 0; \\ 2p_1 - 9p_2 + p_3 + 2p_4 = 0; \\ p_1 + 5p_2 - 10p_3 + 2p_4 = 0; \\ 4p_1 + p_2 + 3p_3 - 8p_4 = 0. \end{cases} \tag{8}$$

Making transformations of the system of equations (8), we obtain

$$\begin{cases} -7p_1 + 3p_2 + 6p_3 + 4p_4 = 0; \\ p_4 = -3p_1 + 9p_2; \\ p_1 = -4p_2 + 10p_3 - p_4; \\ p_2 = -2p_1 - 5p_3 + 9p_4 \end{cases}$$

or

$$\begin{cases} -6p_1 + 4p_2 + 5p_3 = 0; \\ p_2 = 0{,}6p_4; \\ p_3 = 0{,}63p_4; \\ p_1 = 1{,}3p_4. \end{cases}$$

Consequently, the general solution of the system (8), depending on one arbitrary parameter $p_4 \in [0,1]$, is the vector

$$(p_1 = 1{,}3p_4; \quad p_2 = 0{,}6p_4; \quad p_3 = 0{,}63p_4; \quad p_4).$$

Replacing the first equation by the normalizing condition, we obtain a system that allows us to find one of the whole set of particular solutions that satisfies the required conditions:

$$\begin{cases} p_1 + p_2 + p_3 + p_4 = 0; \\ p_2 = 0{,}6p_4; \\ p_3 = 0{,}63p_4; \\ p_1 = 1{,}3p_4. \end{cases}$$

whence

$$\begin{cases} p_1 = 0{,}36; \\ p_2 = 0{,}17; \\ p_3 = 0{,}19; \\ p_4 = 0{,}28. \end{cases}$$

Thanks to the calculations, it becomes possible to form a forecast for the market price of beer in the premium segment, which tells that after a sufficient period of time, the price for one liter of premium beer is likely to be in the range from 4.6 euros to 6.9 euros, therefore an economic entity can conclude an export contract for the supply of premium beer at price of 5.1 euros, taking a minimum level of risk.

Recommendations

Systematization of the analysis results allows us to draw the following conclusions.

Having substantiated the system of FTA analysis as one of the ways to manage its effectiveness, we justify the position about the significance of FTA study in revealing the factors hindering the increase in the efficiency of the organization operating in the sphere of foreign trade. Solving the tasks set in the work, it is justified that the methodology is an obligatory component of the system for analyzing FTA effectiveness of an economic entity, which should not only ensure the reliability and completeness of these analyzes, but also the preliminary and subsequent diagnostics of the economic life facts of the organization maintaining FTA. The results obtained indicate that the multiplicity of analysis objects is a specific feature of FTA research.

Revealing the organizational and methodological approaches to the analysis of FTA effectiveness, the research tool was substantiated and justified in the work. This approach is justified, since in the analysis of organization's FTA effectiveness, the method is a tool for solving the problems posed for its consideration. The results of the conducted research made it possible to trace the sequence of the information base formation in determining FTA effectiveness, which served as the basis for identifying the control points of the study. This approach is advisable, since each selected control point has its own information array.

It is justified in the work that from the system approach positions, based on the content of the questions posed, in the analysis of FTA, the organization should be able to evaluate the information resulting from uncertain concepts. This requirement should be observed, since in the process of conducting FTA effectiveness research, it may become necessary to ask additional questions for handling uncertainty and inaccuracy in the analysis of foreign trade operations.

It is proved in the study that the content of analysis subject determines the choice and sequence of methods. The work substantiates the conclusion that the choice of analysis method for FTA effectiveness investigation is fundamental, and the sequence of procedures depends on the subject and object of analysis. The obtained results allowed to formulate the requirements for the analysis methodology, including FTA, since its content is an essential feature of each type of research. This allowed us to substantiate the essence and content of the methodological tools for analyzing the effectiveness of organization's FTA, maintained under uncertainty conditions.

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STUDY OF VIBROACOUSTIC TIBETAN MASSAGE EFFECTIVENESS TO REDUCE ANXIETY LEVEL

Abstract

The use of vibroacoustic Tibetan massage to reduce anxiety symptoms (according to the Spielberger test and Tsung's self-evaluation scale) in 33 investigated patients was positively effective immediately after one session ($p < 0.05$).

Keywords

vibroacoustic massage, Tibetan singing bowls, psychological rehabilitation, psychocorrection, prevention, anxiety symptoms, reactive anxiety

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Introduction

Development and scientific substantiation of new health-saving technologies that promote the activation of reserve and adaptive capabilities of the organism, correction of the diseases development risk factors, prevention of common somatic diseases complications constitute the main platform for scientific research in the field of restorative medicine (Olenskaya, 2015, Shusharjan, 2013).

At the same time, modern data from epidemiological studies show significant prevalence of anxiety symptoms, both in medical and psychological practice (Neznanov, Martynikhin & Mosolov, 2017).

In our country, the high prevalence of anxiety-depressive disorders was demonstrated by the epidemiological study COMPASS (clinical and epidemiological program for the study of depression in the practice of GPs), the results of which showed that 45.9% of the outpatient department patients were diagnosed with depressive disorders. In most cases, depression is associated with anxiety, so in practice, a doctor has to deal with anxiety-depressive disorder (ADD) in a particular patient.

According to epidemiological data, anxiety disorders are the most common group of psychiatric disorders in the world. For example, in the meta-analysis of epidemiological studies conducted around the world over the past 30 years, the average estimate of anxiety disorders prevalence was higher than that of other psychiatric disorders (including affective disorders and addictions) with a prevalence of 6.7% in the population during the year and 12.9% during life (Peskovets, Evsyukov, 2016). Unfortunately, there are no reliable epidemiological data about the prevalence of anxiety disorders in the Russian Federation. According to the Ministry of Health, in 2013, the number of patients in psychiatric care institutions during the year with neurotic, stress-related and somatoform disorders (the entire chapter F4 of ICD-10) was only 0.3% of the population. It can be assumed that the true prevalence of anxiety disorders in Russia is several dozen times higher than the number of cases recorded by the psychiatric service. However, it is known that inopportune and / or inadequate care for people with anxiety disorders leads to the decrease in the quality of their life and work capacity, development of psychosomatic diseases, unfavorable dynamics of present somatic diseases, which entails serious costs for the public health and economy of the country.

In recent decades, anxiety disorders have been actively studied, a large body of scientific data on their genesis, clinical manifestations and effective therapies has been accumulated, and according to a global survey of psychiatrists conducted by the World Psychiatric Association (WPA) and the World Health Organization (WHO), diagnoses of anxiety disorders are among the most commonly used diagnostic headings by psychiatrists around the world. Moreover, the working group for the preparation of the 11th revision of the International Classification of Diseases (ICD) proposes to single out of the chapter F4 "Neurotic, stress-related and somatoform disorders", existing in ICD-10, an independent chapter "Anxiety and fear-related disorders", which would include generalized anxiety disorder (GAD), panic disorder (PR), agoraphobia, specific phobias and social phobia, and separately an independent chapter "Disorders directly related to stress" (adaptation disorders, post-traumatic stress disorder, etc.) (Shalnova, 2014).

National studies in several countries have shown that mental disorders are widespread and they are a significant cause of disability. Nevertheless, a significant number of specialized medical care lack cases was revealed, even with serious enough disorders. In developed countries, treatment was not provided in 36-50% of serious cases last year, whereas in developing countries the situation was even worse: 76-86% of cases remained untreated. It was proposed to expand treatment services to reduce the incidence and consequences of mental disorders. The problem of "lack of treatment" is so

serious that the World Health Report 2001 has issued ten recommendations for its elimination, which include ensuring availability of psychiatric care at the primary care level, psychotropic drugs, and mental health specialist's professional development. According to the modeling data, the expansion of evidence-based treatment will reduce the prevalence of mental disorders and provide an economic investment return.

According to the World Health Organization (WHO), about 50% of the world's population suffer from mental disorders at some period of their lives. The results of Psychological Disorders in Primary Care study show that the most common mental disorders in general practice include depression and anxiety disorders. According to experts from WHO (2001), by 2020, depression will take the second place among the causes of disability and mortality of the world population.

According to the literature, the prevalence of anxiety-depressive disorders in the population of economically developed countries in Europe and the US reaches 10% (Jorm, 2017), at least one episode of anxiety disorders is registered in 12-27% of Europe's population, and in persons with somatic pathology, anxiety-depressive disorders occur 2-3 times more often than in the general population.

Most studies, systematic reviews and meta-analyzes provide consistent evidence that depression is an independent risk factor for developing chronic non-infectious diseases.

In foreign and domestic studies, including official statistics, there is a wide range of data on the prevalence of mental disorders and their subclinical conditions, which is associated with the difficulties of conducting epidemiological studies and the complexity of statistical analysis. In addition, studies revealed insufficient training of therapists, cardiologists and other specialists in the field of somatic diseases in the context of diagnosing mental disorders. According to the literature, in patients observed in outpatient clinics, clinical and subclinical state of anxiety was recorded in 20 to 80% of cases, depression - in 20 to 60% and in 50-80% of cases these conditions are not detected by "somatic" doctors (Shalnova, 2014).

The use of subjective psychometric tests allows to minimize the costs of screening possible mental disorders among the population, while interpreting the results obtained does not require special knowledge from GPs and psychologists.

Literature Review

Such method of restorative medicine, like vibroacoustic therapy - is a relatively new drugless method, using the sound of audible range as a source of mechanical vibrations directly transmitted to the human body. This type of massage, given by contact or non-contact method, with the use of "Tibetan singing bowl" (TSB), has a complex sanative physiological effect on cardiovascular, lymphatic, vegetative systems and on the emotional condition of a person. Vibroacoustic massage with singing bowls (VAMSB) allows to affect individual parts of the body, central and peripheral nervous system, tissues and organ systems separately, according to special technology (Anisimov, Karbysheva, 2012; Anisimov, Karbysheva, Kuzmina, Brilkov, Lomzhina, 2015).

Vibromechanical stimulation, focused on medical-rehabilitation, psycho-corrective and sports-improving purposes, has been used in various ways for more than 80 years.

Periodic oscillatory movements, which cause a kind of shaking sensation in a person, are usually called vibrations. The notion of "vibration" is synonymous with the notion of "mechanical oscillation." Any living system from cellular organelles (nucleus, chromosomes) to tissue cells (erythrocytes, capillaries) is characterized by the presence of high-frequency mechanical vibrations (ultrasound - hyper sound). This makes it possible to consider vibrational process as one of the main manifestations of life. Experimental facts indicate that mechanical vibrations participated in the creation of biological

structures at the beginning of life origin. Vibrational processes accompany life at different stages of its organization. They are a constantly acting factor on our planet and are observed in all spheres. The range of these vibrations extends from infrasound to ultrasound, and their intensity varies from the barely perceptible by a human ear to intensities capable of destroying fortresses. The action of mechanical vibrations under certain conditions is necessary for a living organism, the absence of sound stimuli disturbs nervous activity. For example, variations in the atmospheric acoustic noise of very low frequency are an environmentally significant factor. Infrasound vibrations may be attributed to the main rhythm-setting factors of the environment, since they have seasonal-diurnal, perennial variations (Krikuha, Sergievich, 2015; Paine, 2016; Black; Rodin; Zimmermann, 2017; Cho, 2017).

It is found that there is a direct transformation of the energy of cosmic origin (electro-magnetic radiation) into intense acoustic vibrations of the atmosphere, hydrosphere and lithosphere. These acoustic vibrations may be in different ranges - from audible sounds to acoustic-gravitational waves.

Sound waves, in their turn, may be accompanied by electromagnetic radiation. Due to synergism, one can expect that the combined acoustic and electromagnetic effects on biological objects are much stronger than the effects of each of these phenomena separately.

Vibration sensitivity belongs to the most ancient types of sensitivity. It is obvious, that it was on its basis that the separation of auditory and tactile sensations took place.

Vibration sensitivity is one of the most global forms of reflecting the connections of the human body with the most diverse environmental influences. In poorly hearing and deaf people, vibration sensitivity replaces hearing (Timofeev, 2005, Greenberg, 2014, Sagaidak, Tsikunov, 2016).

Nervous cells, as well as muscular fibers, are able to perceive sound stimulations in the audible range of sound spectrum with frequencies of 200-1000 Hz directly, without the participation of hearing organs. The cells of different human organs, including nervous cells, are sensitive to sound vibrations of a similar frequency, especially in the frequency range to which the human ear is most susceptible.

Disorders of vibration sensitivity depend on the condition of the entire brain cortex. That is why significant fluctuations in sensitivity to the same frequency are observed not only in different persons, but also in the same person studied by different researchers; depending on the time of a day, fatigue, temperature fluctuations, etc. Vibration receptors are present in all tissues of the human body, but they are different in number. Basically, they are located in zones that are evolutionarily the most adapted for perceiving information related to mechanical action: hands, feet soles, etc. Large clusters of vibration receptors are present in larynx area, in oral and nasal areas, in paranasal sinuses.

Massage can be one of vibration form. It is known that vibrating massage can normalize cortical-subcortical relationships, improve the functional condition of endocrine system, and increase the lability of nerve centers. It has a pronounced trophic, analgesic, antispasmodic and anti-inflammatory effect. It accelerates the processes of regeneration and repair, including nervous fibers, contributes to the recovery of work capacity of patients, promotes the normalization of the adaptive-trophic function of the organism. For example, the course of lumbar region vibromassage favorably affects the repair processes of injured sciatic or ulnar nerves (Sagaidak, Shilko, 2010, Barrass, 2016); Gelding, Sun, 2018).

Positive effect of vibromassage in the treatment of patients with neurological manifestations of osteochondrosis was established. Thus, the use of vibration was successful in the treatment of a number of diseases: neurological manifestations of spine

osteochondrosis, traumatic injuries of the extremities nerve trunks, infantile cerebral paralysis, gynecological, bronchopulmonary and other diseases.

Positive results with the use of vibration therapy were also obtained in the treatment of endarteritis, scoliosis, vibropuncturing in certain diseases; when using vibration shaking shoes after a stroke for the treatment of blood circulation disorders. The effect of vibration therapy is confirmed by the persistence and duration of the achieved results for a long time.

The effect of vibration on the body is accompanied by certain vasomotor reactions, a change in the bioelectrical activity of the muscles. Positive effect of short-term daily vibration is noted, which is expressed in the increase of muscle strength, improvement of their blood supply, acceleration of wound healing, which persists for several days after the vibration therapy has been stopped.

It was found that vibration procedures affect the entire endocrine system, normalize thyroid gland functioning, causing decrease in serum cholesterol. They stimulated the function of the ovaries: in a number of cases, the recovery of the menstrual-ovarian cycle in middle-aged women with amenorrhea, as well as with menopause that had already occurred, was observed. Endocrine stimulation persisted for many months. The improvement of blood supply in the small pelvis area, metabolism and trophism are also important in the mechanism of this effect; as well as a certain effect on the brain appendage through the central nervous system and increasing of gonadotropic hormones production in connection with this (Dodonov, 2002; Popadyukha, Demidenko, 2016; Bidin, 2016; Goldsby, 2017).

As it was discovered by academician N.I. Arinchin, skeletal muscles are physiological vibrators; vibrations of muscle fibers drive blood in capillary vessels.

The list of diseases, cured by sound vibration massage, counts several dozens and gradually increases. The use of vibroacoustic effects is successful in a variety of pathologies: in the treatment of newborns; in the treatment of burn shock and post-burn hypertrophic scars in children; in complex therapy of compression fractures of the spine; for stimulation of cell regeneration - an element of diabetes complex treatment; for the normalization of cerebral hemodynamics; in the complex treatment of discircular encephalopathy, in the sphere of pediatric urology, in peptic ulcer. The use of vibroacoustic therapy also helps in other diseases: neuritis of facial nerve, osteochondrosis of spine; hepatitis, diseases of the musculoskeletal system, prostatitis, cystitis, essential hypertension, exertional angina, menstruation disorders, cosmetic defects, etc. (Shrestha, 2009; Barrass, 2014; Wu, 2015).

Joint researches of Southern Federal University chronobiology laboratory head, Doctor of Biological Sciences, honored inventor of Russia S.L. Zaguskin with leading specialists in various fields of medicine, conducted for 25 years, allowed us to conclude that the disadvantages of the vibration therapy, physiotherapy conventional methods are connected with the use of permanent impacts or fixed-frequency pulse impacts. In both cases, they are not adequate to the biorhythms of cells, tissues, organs and a whole body sensitivity, to the biorhythms of responses energy, which periods vary constantly. There are no "magic" frequencies for living systems that could give reproducible reactions of the necessary direction. Therefore, conventional physical therapy, as well as drug therapy, cannot guarantee or predict only favorable result for all patients without overdoses and adverse reactions.

One of the ways to improve the treatment results of urological and gynecological diseases, complicated by hypotension and organ atony, is the stimulation of the urogenital system myoneural apparatus by the sound of audible range.

It was found out that the most pronounced effect of smooth muscle contraction occurs when it is exposed to the sound with the frequency in the range from 2 to 3.4 kHz

(Radchenko, 2014, Dyachenko, 2016; Sagaidak, 2016; Campbell, Hynynen, Ala-Ruona, 2017). The response of the genitourinary system musculature in the process of sound stimulation is in great dependence on the initial state of motor activity. With hyperkinesia, the frequency of organ contractions decreases, and with hypokinesia it increases, the depth of contractions increases, dyskinesia stops and the organ function is restored.

Note that the organ having smooth muscle tissue, in any case, responds to the applied irritation in such a way that it approaches its normal level of functioning (Humphries, 2010).

There are two types of vibrations in the human body, including the chest: 1) own or spontaneous, associated with the breathing of a man and 2) forced, caused by external vibrational effects. It is possible to attribute to vibrations in the system of breathing, understood in a broad sense, all mechanical vibrations, including one's own breathing, in which mechanical vibrations of all organs of the chest take place with respiration rate.

The vibration of gas and tissue in the lungs, associated with the movement of gas in the airways, respiratory noise and special breathing maneuvers are considered to be own vibrations. The movement of gas in the respiratory tract is accompanied by the formation of vortices and, under certain conditions, turbulence. The question of transition between laminar and turbulent flows, the role of external vibrations in such transitions is considered (Arend, 2006; Doe, 2013; Gregory, 2017; Jorm, 2017).

Dyachenko A.I. in his work has found out that forced vibrations caused by external mechanical impacts have long been used for diagnostic and therapeutic purposes. Biomechanics of some external vibrations is used in medicine for pulsed oscillometry and other variants of forced oscillations method, as well as for percussion.

It is known that resonance results in the most efficient transfer of energy from the source of vibrations to the body, and therefore it can be the cause of increased sensitivity of the organism to vibrations and acoustic fields, which frequency corresponds to the resonances of the body, its organs or individual cells. At resonance, a relatively weak signal can cause considerable perturbation in the body, therefore it is important to be able to protect the body from the negative influence of intense technogenic physical fields, which frequency falls in resonance with the body's own vibrations. For the same reason, the selection of the dosed vibration frequency used for treatment should also be made taking into account the phenomena of resonance in organs and tissues (Dyachenko, 2016).

It is proved, in particular, that when the muscle contracts, its volume does not change, but due to the change in its shape, intramuscular pressure increases, which pulls the connective tissue coats of the muscle (endomysium, perimysium, epimysium). In this case, as our studies have shown, their elasticity and resonance frequency increase. In relaxed condition, the frequency of forearm muscles resonance, measured with a vibration force of 0.15 N, does not exceed 30 Hz. At maximum isometric effort, the frequency can increase to 90 Hz or more.

Also, in the dissertation of A.B. Timofeev, it was revealed that the frequency of organs and tissues resonance depends on the amount and pressure of the blood contained in them, intercellular and intracellular fluids, therefore it can be used as an indicator of their functional state, blood filling and water balance (Timofeev, 2005).

The author has shown that one can judge about the relative content of elastic and collagen structures in organs and tissues according to the size of their deformation, at which their resonance frequency reaches 40 Hz, and it is also recognized that the exposure of soft tissues to resonant vibration contributes to the elimination of their posttraumatic edema, pain and reflex muscular contractures, and the effectiveness of the impact can be controlled by the resonance frequency.

In particular, in Anisimov B.N., Karbysheva N.V. Kuzmina O.M., Brilkov D.V., Lomzhina I.B. patent RU 2549667 C1 "Method of the organism biological age correction as prevention of premature aging", sound therapy is used in the format of procedures according to the program of resonance-acoustic vibrations and with the use of resonators (a musical self-sounding instrument made in the form of a bowl and called singing bowls), which ensures the normalization of the functional state of the organism.

The therapeutic effect of the complex is based on the principle that the component acoustic fields produced by a multilayer acoustic resonator interact with the patient's body. As a result of this influence, the general tonus of the body increases, destructive emotions, habits, programs and settings are eliminated. This harmonizing practice allows you to relax quickly and get rid of blocks and suppressions, from the bustle and chaos of thoughts, contributes to the equilibrium state of the right and left hemispheres work. At the emotional level, there comes relaxation, pacification, harmonization, this is an excellent anti-stress agent. Sound therapy, like a tuning fork, allows you to adjust each organ "correctly", restore its harmonious functioning, it is a necessary "tuner", increasing the effectiveness of each performed procedure.

As the similar patent of Anisimov B.N., Karbysheva N.V. RU 2611947 C1 "The way to restore the working capacity and adaptive capabilities of athletes at the resort stage" describes - one of the music therapy types is PRAV - the program of resonance-acoustic vibrations (PRAV) - the method of biological resonant influence on organs and systems, that provide directional remote (contactless) and drugless restorative effects on the patient's body, depending on his diseases. The PRAV methodology was approved by the Ministry of Health and Social Development of the Russian Federation (Permission of the Commission for New Medical Technology of the Ministry of Health of the Russian Federation of October 9, 2002, Minutes No. 3, registration certificate N229 / 03031002 / 4633-02 of December 26, 2002).

The programs of resonance-acoustic vibrations are selected by forming musical rhythms for music therapy, restoring the biological potential of the organism, introducing it into the self-regulation mode, which relieves tension, fear, and motivates the feeling of emotional well-being.

The abovementioned mechanisms and principles of health improvement successfully complement and expand the existing traditional rehabilitation possibilities in case of overtraining and allow to naturally combat the causes of prolonged stresses, depressions caused by derange of adaptive-compensatory mechanisms reserves when the goals are not achieved.

From a similar domestic patent RU 2458672 C1 by Anisimov B.N., Karbysheva N.V. "The method of chronic cystitis complex treatment in women at the resort stage" (2012) we know that the "resonance-acoustic vibration program" with the use of TSB is effective when used in the complex treatment of cystitis (the claimed method). It was evaluated based on the analysis of the Hamilton scale and quality of life questionnaire SF-36. In women (34 women were examined) with chronic cystitis, the following symptoms were revealed before treatment: depressive mood, daily mood instabilities, guilt feeling, early and late insomnia, hypochondria. The average value of the Hamilton scale total score was 8.6, which corresponded to the mild degree of depressive symptomatology. According to Hamilton scale for assessing anxiety, anxiety and depressive symptoms, genitourinary symptoms, tension, insomnia were the most pronounced. The anxiety level of the patients averages 8.1 points, which corresponds to the "symptoms of anxiety", i.e. anxiety, combined with other mental disorders. According to the quality of life questionnaire SF-36, the lowest scores were observed on the scales: "general health"; "role functioning due to emotional state"; "life activity". The reduction of these life quality indicators can be explained by the presence of anxiety-depressive disorders in the women surveyed.

In the author's method of massage by Victor Oguy "Vibroacoustic massage with singing bowls", two main techniques are used: Contact technique (“contact dialing”) and Noncontact technique (“remote-acoustic or sound bath”), in the format of individual, group or pair sessions (procedures) (Waltraut, 2009; Sagaidak, Shilko, 2010; Landry, 2014; Shestaev, 2014; Ross, B., Barat, Fujioka, 2017).

Goal

Evaluation of vibroacoustic Tibetan massage method effectiveness for reduction of anxiety symptoms.

Materials and Methods

During the period from January 2018 to March 2018, vibroacoustic massage sessions were given 33 patients (30 women and 3 men) aged 20-55 years (average age 35 ± 6.3 years) who applied to the Clinic of Aesthetic Medicine and a health center "Siberian Center of Singing Bowls" with the aim of improving their psycho-emotional condition and reducing the level of distress. The patients complained of nervousness, anxiety, sleep disorders, feeling of stiffness in the muscles, bad mood, fatigue and irritability.

Health improving massage sessions were conducted according to the author's method of Victor Oguy "Vibroacoustic massage with singing bowls". The singing bowl is a hemispherical metal instrument with a hemispherical cavity inside having a wall 3 mm thick; with internal diameter of 240 mm; height of the walls 120 mm or more and the outer diameter of the bottom not less than 100 mm produced from the alloy of metals close to the formula of the bell bronze alloy.

A singing bowl has internal bottom surface, inner walls surface, outer bottom surface and outer walls surface. A singing bowl has visually 4 sectors, virtually separated by two conditional lines perpendicular to each other's axes.

A stick for extracting the vibration from a singing bowl is an object in the form of a pencil 210 mm long, mainly of wood with a thickening (60 mm or more) on one end of a stick made of a rubber band fixed with a nail through the longitudinal axis of a stick.

It is possible to use a stick to produce vibration by friction. Such a stick is a wooden cylinder with suede attached to the outside surface with a handle. The diameter of the cylinder is not less than 40 mm.

VAMSB is the process when a singing bowl is placed on the massaged body, it is held with one hand, and the second hand with the stick produces vibration from the singing bowl by striking the rubber part of the stick against the upper edge of the bowl with a series of strokes with a certain rhythm. After a noticeable reduction in vibration, the singing bowl moves to the next position (shifting by 3/4 the diameter of the singing bowl bottom, which contacts the body of the massaged patient.

When using VAMSB method, a massage therapist follows the basic principles of classical massage: the gradual increase in the massage intensity both during the session and in the course of the method application.

Vibroacoustic massage with singing bowls is given taking into account the direction of lymph flow in the surface layers of the skin. The singing bowl is moved against the lymph current by application method, when SB, moving to the next place, prevents direct contact with the patient's body. But along the course of the lymph current, SB is moved by sliding method, its bottom or walls contacting the patient's body.

There are 2 variants of the SB disposing in the process of Tibetan vibroacoustic massage performing: 1 - "giving" SB (inverted upward position of the bowl) when the internal surface of the SB bottom contacts with the body of the massaged patient or the

inner surface of the bowl bottom is turned downwards and 2 - "taking" SB in the normal position when the outer part of the SB bottom contacts with the body.

The dosage of VAMSB is administered as follows: 1 - in the rhythm variants, by which vibration is produced; 2 - in the number of rhythm producing cycles at one position of the SB on the patient's body (from 1 cycle in the first procedure to 3-4 in the following); 3 - in the intensity with which vibration is produced (from 1 to 100% of the potential); 4 - in the number of procedures in the course (from 2 to 4); 5 - in the intervals of procedures in the course (from 1 to 2-3 days between the procedures in the course).

The duration of VAMSB varies from 30-40 minutes with the first procedures, up to 60-70 minutes with subsequent procedures in the course of VAMSB. The duration in minutes will depend on the size of the patient's body and on the size of the SB bottom contacting with the body: the larger the body size, and the smaller the SB bottom, the longer the procedure will take in minutes.

The procedure of VAMSB implies the impact on the entire body of a person, according to the scheme of VAMSB massage lines.

All patients, before and immediately after the end of the session, as well as in 1 day after the procedure, were evaluated on special scales (Tsung's anxiety self-evaluation and Spielberger's test (reactive and personal anxiety) to assess the dynamics of the massage effect.

The results of the research were processed by traditional parametric statistical methods using software: BioStat 2009 and Microsoft Office Excel 2010.

Results

After the vibroacoustic massage session in all the patients anxiety significantly decreased according to Tsung's scale and Spielberger's personal anxiety test score ($p < 0.05$).

In one day after the session, there were no significant differences in Tsung's scale and in Spielberger's test (on both scales) with the effectiveness of this vibromassage immediately after the session ($p > 0.05$).

At the same time, significant difference was found between the dynamics of reactive and personal anxiety ($p < 0.05$), as it is shown in Table. 1.

TABLE 1. EFFECTIVENESS OF VIBROACOUSTIC TIBETAN MASSAGE ACCORDING TO SPIELBERGER'S TEST

Evaluating scales of Spielberger's test	Before the session, points	After the session, points	1 day after the session, points
Reactive anxiety	39,8±3,6	26,3±3,7*	30,7±3,9*
Personal anxiety	44,5±3,7	41,4±3,8	43,6±3,8

Note: * - significant difference from the initial level ($p < 0.05$)

This difference according to these two scales is caused, as it seems to us, by the inadequacy of a single time influence on deep psychological and vegetative phenomena of personal anxiety in humans.

Discussions

It was found out that VAMSB reduces the use of drugs, does not depend on the nature and features of the infectious agent, has an effective anti-inflammatory influence and a pronounced reflex effect when applied locally to biologically active zones. The method promotes the restoration of the compensatory and protective mechanisms of the body, increases the excitability of the neuromuscular system, restores tonus of the smooth muscles of mucous membranes vessels, normalizes lymphatic tonus, stimulates trophic function and metabolic processes, resulting in blood and lymph circulation restoration and, eventually, stopping inflammatory process.

Vibration procedures have a labile effect on the neuromuscular apparatus, the effect depends on the initial state of the organism. Thus, vibration can improve nerve conductivity and provide a therapeutic effect. Regardless of the vibrational stimulus application place, the energy supply of the organism rises, which is manifested by the intensification of tissue respiration and oxidation-reduction processes in the body.

Conclusion

So, it was revealed the effectiveness of this health improving, medical and psychological technology having great prospects, but to confirm its full potential, further scientific research is needed that will allow to improve the sessions and clarify quantitative and course recipes of the impact.

Recommendations

1. The use of this massage is effective for rapid and drugless correction of anxiety symptoms ($p < 0.05$).

2. The effectiveness of the method makes it possible to recommend its use in conditions of health improving and psychological centers, as well as for teaching masseurs of a wide profile.

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THE IMAGE OF LEGAL SCIENCE: BETWEEN THE "MODERN" AND "POSTMODERN"

Abstract

The urgency of the problem is caused by the trendy ideas about the system crisis of legal science. The main purpose of the article is the search of the ways to escape the scientific crisis. The lead strategy of the research is the use of philosophical concepts with base methods of analysis. There are philosophy of science, methodological and other issues. The fundamental conclusion of the research is the try to justify the necessity in the new philosophical concept in legal science – "postmodern". The scientific method of the world-system analysis, created by I. Wallerstein, is used as the essential part of the new concept. The materials of the investigation can be used by scientists with the different academic interests, because of interdisciplinary approach to this research (Law, Philosophy, Social Science and others).

Keywords

postmodern, world-system analysis, I. Wallerstein, legal science

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1. Introduction

The evolution of the science formation and current issues of legal science are emphasized in this research work. The concept of the world-system analysis of the American scientist I. Wallerstein is studied as the new methodological paradigm for science, in general, and for legal science, in particular.

The urgency of the work can be seen in the following. Today the stage of science development is increasingly characterized as the crisis. The change of physical theories (the heliocentric, mechanical, quantum-relativistic pictures of the world) with the transition from the metaphysical approach to the dialectics in philosophy of science is in the past. Realities are rapidly changing under the influence of numerous scientific and technological innovations. The mechanization of the world, in which the solution of all the problems is seen in further technical and digital achievements, turns the artificial intelligence into the driving force of science, and the person - into the secondary element of the machine world. The start of the digital era and the next change in the physical picture of the world promotes the significant impact on both natural science and the philosophy of science. That is why; the need in the new global worldview revolution is coming.

2. Methods and Materials

2.1. Purposes

The aim of the work is the analysis of the scientific method of world-system analysis as the way of overcoming the crisis of legal science in the postmodern era.

There are 4 tasks for the consummation:

1. To explore the development of science in the evolutionary-historical plane.
2. To investigate the idea of I. Wallerstein's world-system analysis as the conceptual basis for the new scientific paradigm.
3. To analyze the development of legal science in the evolutionary-historical plane.
4. To apply the method of world-system analysis for building the image of legal science in the postmodern era.

The object of research is the social relations, viewed through the prism of the development of science, in general, and legal science, in particular.

The forms of regulating these relations constitute the subject of research.

The problems are discussed in the scientific literature only in the fragmented manner.

The evolution of science formation is illustrated in the work of N. F. Buchilo, I.A. Isaev «History and Philosophy of Science», etc.

The concept of world-system analysis is presented in the works of I. Wallerstein «Analysis of world systems and the situation in the modern world», «World-system analysis: introduction», «The end of the familiar world. Sociology of the XXI century», etc.

The main problems of the history and methodology of modern legal science are summarized in the monograph, edited by V.V. Sorokin, and in the scientific work of V.M. Syrykh «History and methodology of legal science», etc.

The contours of the legal science of the postmodern era can be traced in the I.L. Chestnov's monograph «Postclassical theory of law», etc.

2.2. Methods

During the work the general scientific method of analysis is used. From the specific scientific methods the system, historical-legal and comparative methods are used. The system method allows researching concepts, which are reflecting the essence of legal science, in unity. The historical-legal method emphasizes the evolution of the science formation. Comparative method allows drawing the parallel between different concepts to compare different approaches for the study.

2.3. Description of the research

The modern science is the very complicated and ambiguous phenomenon. It is impossible to describe it, using the single word, as it can be made with the previous stages of the development of science (ancient science - natural philosophy, medieval - scholastic, classical - metaphysical). Modern science is the wide association of mathematical, natural-science, humanitarian and technical branches, disciplinary and interdisciplinary research, fundamental, applied and other knowledge.

The most complete understanding of the specifics of the modern science is possible, comparing the reality with the previous stages of development.

The need to understand, how we understand the world, always impacts on the society. In the past it was limited only by belief in the supernatural forces because of the

absence of the proper cognitive skills. Further, theological theories were gradually replaced by non-religious motives.

The separation from the ancient and medieval philosophy is the period from the 17th to the 20th centuries. It is usually called as the period of classical science. This milestone in the history of science development is characterized by the following features:

1. The complete system of knowledge, which fixes the truth in its final form. It inevitably generates the metaphysics of science.

2. The conviction that nature is unchanging. This methodological approach has generated such guidelines as statism, elementarism and anti-evolutionism (Grushevitskaya, 2014).

3. Classical science cuts out the religion as an intellectual authority.

Being mechanistic, classical science prepares the gradual collapse of the metaphysical view on the nature. The scientific revolution promotes the penetration of dialectics into the methodological research apparatus. Thanks to the teachings of Charles Darwin, the idea of the universal connection and evolutionary development of knowledge is affirmed.

The impetus for the emergence of modern science is the whole series of scientific revolutions. This stage is accompanied by the collapse of previous ideas about matter, space and time, which lead to the final crisis of the metaphysical philosophical foundations of the classical science. The new revolution turns into the theory of relativity. The principle of relativity displaces the old determinism. Modern science can be characterized as nonclassical traits:

1. The understanding of the subject of knowledge has changed.

2. Science begins to research the conditions instead of things. That's the methods become more significant.

3. If the classical science deals with the single object, the modern science deals with the multitude of projections of this object.

Non-classical science becomes the religion of the 20th century. It goes without saying, that now it is criticized by philosophers, social scientists, culturologists, writers, etc. People are faced with large-scale scientific and technical achievements in the field of nanotechnology, cybernetics, etc., which do not fit into the harmonious philosophy of the 20th century. The significant transformation of the new physical picture of the world without the corresponding change in philosophical views indicates the set of nonclassical science and the maturing of worldview revolution.

The concept of the American scientist I. Wallerstein, who is convinced that the world community is undergoing the phase of the systemic crisis, one of the reasons for which is the hyperbolization of the technogenic sphere at the expense of the social, is seen as a little studied, but promising (Wallerstein, 2001). For studying the causes, current state and consequences of the present crisis I. Wallerstein introduces into the scientific revolution the newest methods of world-system analysis that can be used to construct the model of the new worldview concept in the philosophy of science (Wallerstein, 2006).

I. Wallerstein's position is universal and comprehensive. The restoration of the integrity of knowledge and the evolutionary-historical approach to the study of society is the task of world-system analysis.

According to I. Wallerstein, the social disciplines go to extinction either because of their constant grinding down to self-destruction, or, conversely, because of the predominance of over-disciplinary studies.

The true way, to his opinion, is the way of over-disciplinary overcoming of the fragmentation of knowledge, implying the cross-research of the system-historical origins of different disciplines. I. Wallerstein calls to clear the debris of the present ideological concepts and create the new paradigm of a single historical social science, and not just

another concrete theory, but the metatheoretical methodology - the opportunity to look at the world differently.

The principle of the sociological studies of I. Wallerstein is that the economic message precedes everywhere. Thus, the scientist unambiguously makes it clear that the main driver of social, including scientific, development is the development of economic relations. Indeed, the expansion of capital requires the investment in the innovation. Scientific knowledge is the permanent generator of innovation. This logical chain of interrelation of economic and scientific potential is the characteristic both archaic and modern society. Moreover, the economic potential, as a rule, is supported by the state interest. The chance to realize the scientific idea appears, if this idea fits in the context of public policy (KHabibullina, 2015). Capitalization of science can be viewed in different meanings. On the one hand, it is the subordination of science to the laws of the market and the transformation of applied science into the component of capital. On the other hand, capitalization of applied science has turned the applied science into the priority object of financing, compared with the fundamental research.

However, the leitmotif of the studies of I. Wallerstein is the inseparable relationship of scientific knowledge. Science is not a collection of independent disciplinary plexuses, but a single interrelated and interdependent network. The research of science development in the evolutionary and historical plane shows it: the discrepancy between the level of development of applied and fundamental sciences generates the systemic crisis. This is the logical conclusion, according to I. Wallerstein, who considers that science is the single organism, the crisis of one part of which inevitably entails a crisis of the whole organism. So, the current polarization of fundamental and applied sciences is harmful for the further development (Krylov, 2009).

The process of differentiation of sciences has not lost its urgency today. There is the statement that social science includes three spheres, which live according to different laws. That's why the study of them is confused and their methods unique fit to each of the spheres. So, the market is explored by economists, the state - political scientists, and civil society - sociologists. However, it goes without saying that these fields of knowledge pervade each other.

It turns out that the statement about scientific sectoral independence and non-interference is false, because social science is based on studying not the part of the world, but the whole world as the system. Logical reflections about scientific unity and interconnection again lead us to the world-system analysis of I. Wallerstein.

The next step of research is the transformation abstract problems of modern scientific knowledge and the method of restoring the integrity of knowledge on the plane of concrete scientific knowledge – legal science.

Legal science also overcomes the ancient, medieval and classical stages of the development of science.

With the statehood formation, the impossibility of regulating complicated social relations by the mononorms has become apparent. There is the need in the ideological impact of the compulsory actions of the state for legitimacy. Undeveloped scientific knowledge at the ancient and medieval stage leads to the approval of exclusively idealistic approach to the study of law, which is characterized by theological teachings. The next stage - classical legal science - carries the following features:

1. The human mind and the practical transformation of social relations as the result of human's activities completely supplanted the theological doctrine and as the main sources of knowledge.

2. The basic principles are: unambiguous interpretation of events, exclusion the probability, evaluation of existing knowledge as absolutely true, etc. Statism, elementarism and anti-evolutionism find the most complete embodiment in the legal

proceedings. During this period, the development of criminal justice continues to be blocked due to the approval of the inquisition process, which is characterized by the system of formal proofs, where the value of each type of evidence is predetermined by law, the most perfect proof is the confession of the accused, and the testimony is assessed taking into account the social status.

The period of classical science is characterized by inconsistency, which is explained by the gradual interspersion of the dialectical style of thinking. It has led to introduction of new ideas into the arsenal of general knowledge.

So, the classical model of the world-mechanism tends to destroy and concurrently establish the model of the world-thought, based on the ideas of universal connection, variability and development. The transition period from classical legal science to modern is associated with the gradual change of metaphysics by new dialectical attitudes:

- Classical determinism is replaced by the variability of the picture of the world;
- The passive role of the observer is replaced by the new activity approach, recognizing the indispensable influence of the researcher;
- Scientific knowledge is no longer understood as absolutely reliable, but only as the relatively true, existing in the multitude of theories.

Therefore, in this period there are lots of of qualitatively new theories of legal understanding. Depending on what is the source of legal formation, the state or the nature of man, the natural-legal and positivist theories of law are distinguished (Alekseev, 2005). Then these theories give birth to sociological, psychological, normativity and other concepts.

So, the progressive start of the legal science in the era of modernity characterizes the diversity of existing approaches to the study and understanding the law.

However, these progressive prerequisites, which set the tone for the legal science of modern, have not yet been crowned with success. The diversity of theories, on the contrary, gives the birth to the fragmentary study of law within the particular concept. The crisis situation appears in the fact that different types of legal understanding denote its own subject of study and methods of investigation. But in this way scientist uses incomplete methodological tools. The predominant in the Russian legal science is still the positivist theory with the formal dogmatic approach. So, R.S. Bajniyazov is sure that formally dogmatic legal positivism expresses the legal nihilism (Bajniyazov, 2001).

Modern legal science has not yet freed itself from a purely normativistic understanding of law and one-sided dogmatic, formal-logical analysis of sources of law. The idea of the need to investigate the rules of law in dynamics, analyzing the processes of their implementation in specific legal relations not always gets reflection in the practice of scientific research.

The integrity of legal knowledge is also questionable. Modern legal science doesn't demonstrate the system. The tendency to the grinding has already shown negative results. The legal researches investigate the vicissitudes of the conceptual apparatus within the framework of the branch, sub-sector, institution, sub-institution of law, legal norm or its structural units. The fragmentation of the subject of scientific knowledge is obvious. Because of the fact that legal science, like other sciences of the humanitarian cycle, is the artificial science, it means that it is created by human, but not by natural phenomena, the circle of scientific problems of jurisprudence is significantly narrowed in comparison with the natural sciences. As the result, cognitive activity within the framework of jurisprudence is reduced not to the logical result, which is the scientific discovery, but to the skillful periphrase. The monotonous methodological apparatus, coupled with the static artificial knowledge, leads to the justified reproach of the legal science in unscientificity (Sorokin, 2016). Undoubtedly, this way of the legal science aggravates the declared scientific crisis.

Thus, the evolutionary and historically legal science followed through the ancient, medieval and classical concepts. Historically, the change of the paradigm is preceded by the crisis of established concept. Methodological devastation of modern legal science testifies the crisis of the jurisprudence of modernity. The modern model of jurisprudence is not capable to react operatively on the changes in society. It shows that modernization processes in the sphere of law are coming to the end. The legal culture of postmodern begins forming.

3. Result

The term "postmodernism" is unclear. There are many definitions of postmodernism, various postmodern theories have created. Everybody recognizes that postmodernism is the heterogeneous phenomenon, which confronts the modernism (Moiseev, 2004).

Legal postmodernism develops as the reaction to the crisis of legitimization of existing law (Lazarev, 2016).

The feature of postmodernism is the criticism of modernity, the method of deconstruction. As noted I. L. Chestnov, the main traits of postmodernism are relativism as the peculiar view of the world, the rejection the truth, as well as the new conception of social reality (Chestnov, 2012).

Analyzing the scientific method of world-system analysis of I. Wallerstein, it can be point essential characteristics of legal postmodernism. Among them are the integrity of the scientific ideas, universalism, perception as the cumulative plurality of interpretations, the unity of the subject and the object of cognition, the self-criticism of the researcher, the branching of knowledge, the lack of the single conceptual perception of realities, dialogism as the necessary consequence of informatization.

Postmodernization of legal thinking is associated with overcoming the formal-dogmatic method of thinking, because the law is declared to be the open, dynamic, constantly updated system, and its concepts are constantly transformed, filled with new content.

Let point the main contours of postmodern science:

1. I. Wallerstein fundamentally rejects the allocation of the single sphere of human activity or one feature in the worldview as the leading and recognizes the equality of spheres of scientific activity. There must be the decentralization of science. It seems that the important feature will be the complexity – to get off partitions between the traditionally separated natural, social and technical sciences.

2. Modernist science is the monological form of knowledge: the intellect contemplates the thing and expresses it. In postmodernism the observer recognizes himself as the part of the explored world, actively interacting with the observed object, the knowledge of postmodern science is dialogical.

3. At the heart of the postmodern is the idea of global evolutionism, the nonlinear, self-changing, self-organizing, self-regulating system. It is proposed to consider the picture of the world not as the world itself in its immediate reality, but as the historically changing theoretical model of the world.

So, I. Wallerstein's scientific method postulates the synthesis of scientific knowledge. Consequently, postmodernism presages the formation of the synthetic, integrative understanding of law.

Indeed, there is no ideal theory of legal understanding. Each is characterized by the number of advantages and disadvantages. To take as the basis one, as it is done now with legal positivism, means to gain the advantages of the proposed model and to tolerate blindly its shortcomings and the lack of virtues of other theories.

Thus, the essential feature of legal science in the postmodern era is the formation of an integrative legal understanding, which synthesizes established legal theories and applies the variety of approaches to comprehensive research and full analysis of the legal phenomenon, taken in its concrete historical conditions.

4. Conclusion

Postmodernism argues that the society XXI century is fundamentally different from the modern era. First of all, it is the realization of the complexity of reality and the impossibility of its full knowledge. The postmodern world is the world of relative values, therefore postmodern protects pluralism and coexistence of many concepts and interpretations. Methodological pluralism replaces the methodological monism.

If there are cardinal changes in the society, then, obviously, they influence on the sphere of law. Therefore, the desire to revise the classic picture of legal reality is the tribute to the current situation, but the urgent need to update law and jurisprudence.

As the fundamental principles of the scientific legal picture of the world, the following are revealed: relativism and multidimensionality of law.

The principle of relativism assumes that the reliability of scientific knowledge cannot be complete, definitive. It is possible to speak about reliability only in relation to the certain context and with some degree of probability.

The multidimensionality of law assumes its irreducibility to one mode of being. If the jurisprudence of modernity considers the rights from the position of "planimetry", i.e. in the plane of only one or another theory of legal understanding with the appropriate methodological tools, and doesn't go beyond the boundaries indicated, the legal science of postmodernism is characterized by the "stereometric" approach to the study of the phenomenon of law. This approach corresponds the multifaceted property of law, where law is the polyhedron whose facets - theories of legal understanding - allow comprehensively investigate all aspects of the reflection of law in real life. Thanks to this synthetic nature of the integrative theory of legal understanding of law, the methodological apparatus enriches and included the techniques of all theories of legal understanding. As F. Bacon writes, the method is a lantern that illuminates the path to the scientist. Proceeding from this metaphor, this integrative approach allows us to beautify the way of scientific thought with all the diversity of the lights.

Thus, the scientific method of world-system analysis, implying the integration of scientific knowledge, can update the methodology of legal science and overcome the outlined crisis of science in the era of postmodernity.

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MOTIVATING STUDENTS AT THE LESSONS OF FOREIGN LANGUAGE BY MEANS OF MUSIC

Abstract

The article deals with the methods for motivating students at foreign language lessons. The authors substantiate the urgency of the use of modern music in order to increase the level of motivation of secondary school students at foreign language studying in accordance with their psycho-physiological characteristics. Tasks with the use of modern English songs are presented in the article. The results of the experiment allowed the authors to justify that the use of modern music means at the lessons of foreign language is an effective way to increase the level of motivation at foreign language studying.

Keywords

motivation, methods for motivating, motivation at foreign language lessons, means of music, secondary school students

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MAIN CONTENT OF THE ARTICLE

Nowadays, English has acquired the status of an international language and therefore it is an integral part of modern culture, economy, politics, sport, art, tourism, education and science. Communicative competence is formed by means of a foreign language, which includes both linguistic and sociocultural competences, since without knowledge of the sociocultural background it is impossible to form a communicative competence even within limited limits. Learning a foreign language is a way of forming such a type of a person who is able and willing to participate in intercultural communication.

We emphasize that these days there is a decrease of interest and motivation in learning new languages in schools, which is not favorable for the quality of knowledge. In this aspect, the study of the English language, or rather the very problem of creating motivation and introducing methods to build motivation to learn English is quite relevant.

Obviously, the traditional ways of teaching a foreign language lose their effectiveness in the process of learning, and moreover, they result in a drop in interest in the subjects studied. Among different ways to increase student's motivation to learn a foreign language, modern music is an effective one. Many modern musical compositions contain the cultural component of the country of the target language. However, these compositions are practically not used by teachers as a means of acquaintance with the culture and features of the country of the target language, while teenagers show a genuine interest in the content of songs they listen.

In line with the problem under consideration, it should be noted that there are small number of lesson packages and extra-curricular activities to build motivation to learn a foreign language at school. And since modern music contains authentic texts accessible to a large number of people and it is also the source of the transfer of genuine knowledge about the country of the target language, the need to build student's motivation to learn a foreign language by means of music has been recognized.

The concepts of "motivation" and "motivation formation" investigated in our work are repeatedly considered in the works of such scientists as J. Atkinson (Atkinson, 2015), D. Berline (Berlain, 2016), L.I. Bozovic (Bozhovich, 2015), K. Levin (Levin, 2016) F. Lutens (Lyutens, 2017), D.K. McKeland (Makklelland, 2017), A.K. Markova (Markova, 2016), A. Maslow (Maslou, 2014), G. Olport (Olport, 2012), etc. Despite the difference in approaches, the authors seek to identify factors that cause the activity of the organism and determine the direction of human behavior in their studies. However, in their own works they did not focus on the development of techniques and methods to form motivation to foreign language lessons by means of modern music, which is becoming increasingly important in the educational paradigm of the modern school.

It should be noted that motivation is a process that starts with a physiological or psychological shortage, or a need that activates behavior or creates an incentive aimed at achieving a specific goal or reward (Lyutens, 2017), or in other words, a complex mechanism of the person's correlation with external and internal factors of behavior, which determines the origin, direction, as well as the way of carrying out activities (Bozhovich, 2011).

Considering the modern music as a means of students' motivation building to learn a foreign language, we note that in the context of globalization, it has become an integral part of the life of a modern student. Therefore, the use of the modern music in foreign language lessons is not only a comprehensive solution of educational and developmental tasks of teaching, but it is also the possibility of penetrating into their emotional sphere, which activates the student's interest in the subject.

According to psychologists (I.E. Domogatskaya (Domogatskaya, 2014), E.B. Tesla (Teslya, 2013), etc.), music is one of the most effective ways of memorizing linguistic material, since it is an activity that involves both hemispheres of the brain, which in turn

facilitates the storage of the studied material and, as experience shows, its faster reproduction. This provision is the key in our study.

In addition, the use of songs in the studied language is very relevant: students are immediately involved in the culture of the country of the target language, since children of school age, according to psychologists, are particularly sensitive to foreign culture, and when working with such a unique lingua-cultural material, a good premise is created for the comprehensive development of the student's personality, as specifically selected songs stimulate imaginative thinking and form a good taste.

Considering the foregoing, in the course of our research, a technique was developed for the formation of motivation by means of music on the example of contemporary English songs (Demons by Imagine Dragons, «Symphony» by Clean Bandit (feat. Zara Larsson), Jar of Hearts by Christina Perri, Listen to your heart by Roxette, Hello by Adele, Halleluiah by Alexandra Burke etc).

The methods developed by us, including receptions and techniques of interest and motivation for foreign language lessons, are intended for students of grades 5-9 of general education schools, but it can also be used in junior and senior classes, if change the level of linguistic material to an easier or complex one. The methods are designed for one quarter, each item containing tasks in accordance with the type of speech activity.

The methods of motivation building consist of four sections (categories), each section is named in accordance with the type of speech activity. The methods include tasks using not only listening, but also other types of speech activity (speaking, reading, and writing).

Content of the methods «Listen − sing − speak English»:

1. Listen
2. Listen and speak
3. Listen and read
4. Listen and write

According to the general theory, methodology and didactics of teaching foreign languages, the tasks for the songs were selected in the following sequence: before listening, during listening and tasks after listening. From a variety of English music, songs were selected, the texts of which meet the following requirements: the richness of the songs; songs that stimulate discussion and correspond to the level and age of the students; songs that do not have a lot of information – contain an average volume of text; the performer of the song has a good expression and pronounces the text clearly; lyrics that give the opportunity to develop grammatical and lexical skills, or correspond to the subject of the lesson (Pirverdieva, Bityutskaya, 2018).

Before you start working with the song, you should activate the knowledge associated with the theme of the song. These tasks also allow you to create an atmosphere of communication at the lesson through students' unprepared speech. For example: on the presented photo of the artist of the song – give his brief biography; answer the questions about the knowledge of a particular performer and his repertoire, and talk about the singer's/ group's favorite songs. Also, to introduce students into the situation, you can use such techniques as presentation and description of illustrations suitable for the content of the song, presentation of the video clip of the song with the sound off, providing an opportunity to state your hypothesis regarding the content of the song, writing a short text with separate words from the song, previously selected by the teacher, creation of associograms or intelligence cards in accordance with the topic.

Considering the tasks before listening, we note that they directly relate to tasks that develop reading skills (the category "Listen and read"): changing the text of the stanza or the entire song from separate fragments, filling in the gaps with suitable words, reading fragments of the text before listening, and also making of assumptions about the content of the song.

Here is an example of one of the tasks before listening, namely the intelligence card for the song Rihanna by Clean Bandit feat. Noonie Bao (Figure 1). As an assignment it is suggested to write your associations to words and guess about the approximate content of the song. The name of the song in the center of the card could also be removed and suggested to come up with it together or guess.

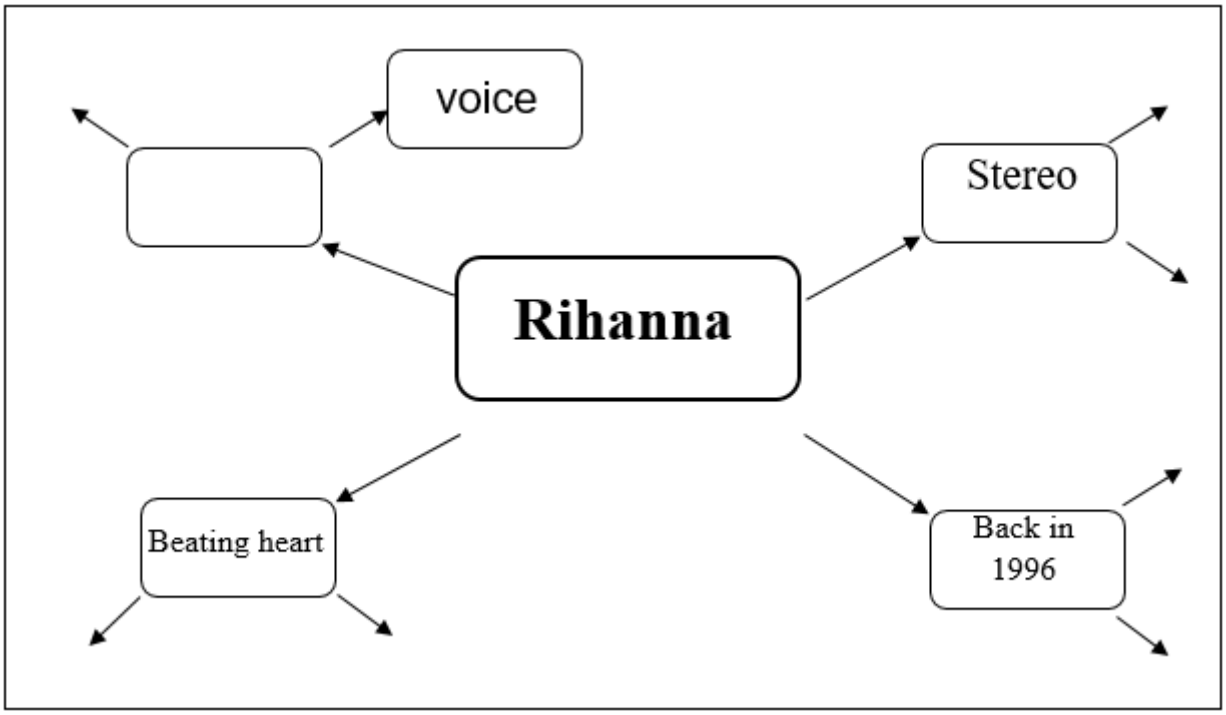

FIGURE 1 - INTELLIGENCE CARD FOR THE SONG RIHANNA BY CLEAN BANDIT FEAT.NOONIE BAO

As mentioned earlier, tasks to lyrics are used in accordance with the types of speech activity (listening, reading, writing, speaking), as well as with types of skills (lexical, grammatical).

So, we have developed tasks of forming listening skills (category "Listen"): gap-filling the text of the song while listening (Figure 2), finding the correct sequence of strings or stanzas, adding rhymes, correcting incorrect words and / or word combinations in the text (Figure 3), writing a word from a text of a certain category (for example, writing out all adjectives or verbs in a certain time form, etc. (Figure 4)).

Task. Listen to the audio carefully and fill in the gaps
Listen to your heart

I know there's _____ in the _____ __
your smile.
I get a _____ from the _____ __ ____
_____, yea.
You've _____ __ _____ but that love _____
_____.
Your _____ _____of _____turns too
_____.

REFRAIN:
Listen to your heart when he's _____ ___
_____.
Listen to your heart there's_____ _____ ____
____ _____.
I don't _____ _____ _____ _____ and I don't know
why.
But listen to your heart _____you tell him
_____.

FIGURE 2 - FRAGMENT OF THE TASK OF FORMING LISTENING SKILLS (FILLING THE GAPS IN THE TEXT OF THE SONG WHILE LISTENING)

Task. Put the lines in the correct order
Demons by Imagine Dragons

1. And the saints we see
2. And the cards all fold
3. Are all made of gold
4. When the days are cold

Key - 4,2,1,3

FIGURE 3 - FRAGMENT OF THE TASK OF FORMING LISTENING SKILLS (FINDING THE CORRECT SEQUENCE OF LINES)

Task. Find and write out irregular verbs, write down their other forms. Example: do - did-done.

«Symphony» by Clean Bandit (feat. Zara Larsson)

I've been hearing symphonies
Before all I heard was silence
A rhapsody for you and me
And every melody is timeless
Life was stringing me along
Then you came and you cut me loose
Was solo singing on my own
Now I can't find the key without you

And now your song is on repeat
And I'm dancing on to your heartbeat
And when you're gone, I feel incomplete
So if you want the truth

Key

Been - be - was (were)
Heard - hear - heard
Came - come - come
Cut - cut - cut
Was (were) - be - been
Find - found - found
Gone - go - went
Feel - felt - felt

FIGURE 4 - FRAGMENT OF THE TASK (WRITING OUT IRREGULAR VERBS FROM THE TEXT)

During the research, we developed the following tasks for fixing the listening results: to play a dialogue between the characters (tasks from the category "Listen and speak"), to pass the testing, to describe the situations, to retell the story of the song, to come up with a rhyme text from the lyrics, as well as grammatical tasks: change the tense forms of verbs (Figure 5), create an illustration or collage to a song, etc. In addition, as a homework, it is suggested to make up a story before the events described in the song, and after the development of events (this task was used to form the skills of written speech, the category "Listen and write").

Task. Change the underlined verbs in the past tense

Jar of Hearts by Christina Perri

I know I can't take one more step towards you
Cause all that's waiting is regret
Don't you know I'm not your ghost anymore
You lost the love I loved the most

Key

I knew I couldn't take one more step towards you
Cause all that's waiting was regret
Didn't you know I was not your ghost anymore
You lost the love I loved the most

FIGURE 5. - FRAGMENT OF THE GRAMMATICAL TASK FOR FIXING THE RESULTS OF LISTENING

Here is an example of one of the simple tasks for testing the category "Listening" (Figure 6) after listening to the song *Count on me* by Bruno Mars, which allows you to check the understanding of the received information. Students are proposed to watch and listen to the clip twice, after it they should select the correct answer to the question.

1. *Where has the girl stuck?*
a) In the middle of the world
b) In the middle of the sea
c) In the middle of the dark

2. *What was boy going to do to find her?*
a) He was going to sail the world
b) He was going to catch a fish
c) He was going to bring her a flower

3. *Where has the girl lost herself?*
a) In the room
b) In the wood
c) In the dark

4. *For what do they made of?*
a) to help each other in need
b) to find each other in the dark
c) to count each other in difficulties

5. *What she couldn't do?*
a) to drink a coffee
b) to sleep
c) to close her eyes

6. *What was he going to do?*
a) to come into her room
b) to play the guitar
c) to sing a song

7. *What does she always have when she cries?*
a) a jacket
b) a hand
c) a shoulder

8. *What he would never allow her to do?*
a) to cry
b) to go
c) to find him again

FIGURE 6 - TASKS FOR TESTING (SONG COUNT ON ME BY BRUNO MARS)

On the basis of private methods and with the purpose of providing qualitative transformations in the level of the formation of students' motivation, an experiment was conducted in the 8th classes of the general education school.

Based on the results of the experiment, it was found that the work carried out contributed to an increase in the level of motivation to learn a foreign language, and also provided an obvious positive dynamic in the sphere of verbal and communicative skills. The following diagram shows results before and after our experiment (Figure 7).

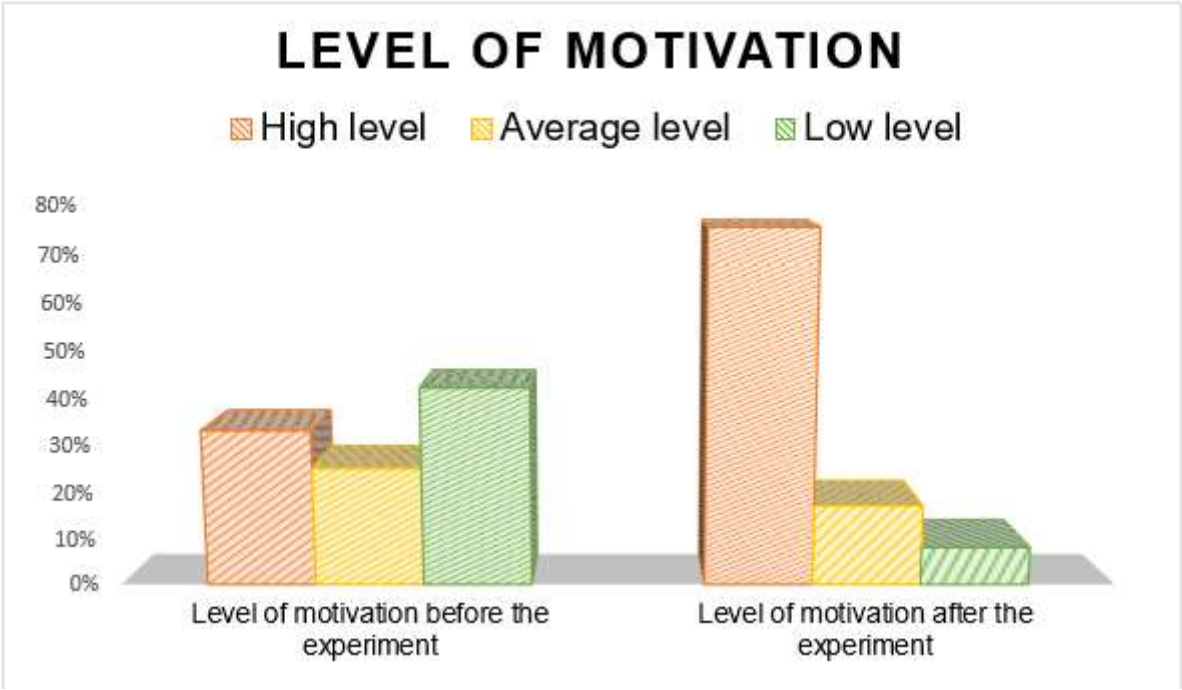

FIGURE 7 - THE DIAGRAM (LEVEL OF MOTIVATION)

Thus, the methods of forming motivation to foreign language lessons by means of modern music are one of the effective ways. Also, we emphasize that modern music activates educational activities and leads to the expansion and enrichment of students' vocabulary.

The combination of traditional and innovative educational technologies in teaching, the use of modern music in learning a foreign language, as well as the consideration of individual characteristics of students, not only contributes of the motivation and comprehensive development of students, but also to the formation of motivational, value, cognitive, actionable and emotional-volitional components of children' personality.

In the process of research, such methodological advantages of using means of English music at the lesson are revealed:

1) the songs serve as a means for a more lasting absorption and expansion of the vocabulary;

2) more robust incorporation and activation of grammatical constructions are passed through the paradigm of musical means;

3) songs are an excellent means of improving the skills of foreign pronunciation and the development of a good ear of music;

4) the songs contribute to the aesthetic education of students, the rallying of the collective, the fuller disclosure of the creative abilities;

5) songs are a good stimulus for mono-logical and dialogical utterances.

Given the many aspects of students' motivation described above, it can be argued that the use of modern music is an effective way to increase interest and the level of motivation to foreign language lessons.

Thus, we have established and experimentally proved that the means of modern music is not only a means of familiarizing the culture of that country, a means of firmly mastering and expanding the vocabulary, and a means of achieving the communicative side of the language, but also contain huge potential of motivating school students at the lessons of a foreign language.

As our research has shown, work at various stages in this direction can be continued. The methods of using modern music in order to increase the motivation at the lessons of foreign language can be included in the teaching methods provided by the curriculum. Schoolchildren have certain musical preferences and basically it is modern English music, so the introduction of the methods into the school curriculum for teaching a foreign language can prove to be a very effective tool.

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