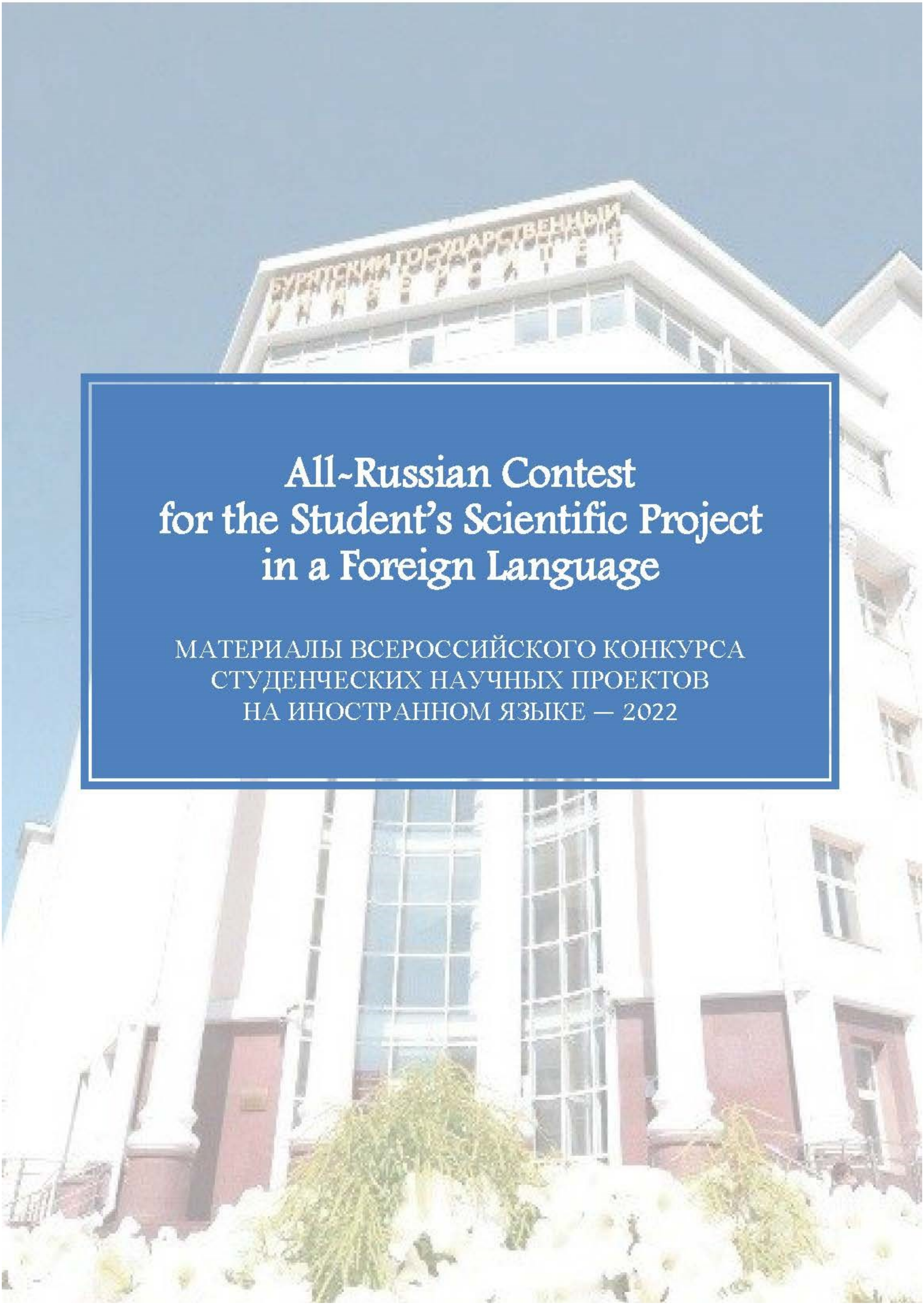

All-Russian Contest for the Student's Scientific Project in a Foreign Language

МАТЕРИАЛЫ ВСЕРОССИЙСКОГО КОНКУРСА
СТУДЕНЧЕСКИХ НАУЧНЫХ ПРОЕКТОВ
НА ИНОСТРАННОМ ЯЗЫКЕ — 2022

МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ РОССИЙСКОЙ ФЕДЕРАЦИИ
Бурятский государственный университет имени Доржи Банзарова
Институт филологии, иностранных языков и массовых коммуникаций

Читинская государственная медицинская академия

ALL-RUSSIAN CONTEST FOR THE STUDENT'S SCIENTIFIC PROJECT IN A FOREIGN LANGUAGE

Материалы всероссийского конкурса студенческих научных проектов
на иностранном языке — 2022
(Улан-Удэ, 19–20 мая, 2022 г.)

Ответственный редактор
О. А. Чепак, кандидат социологических наук, доцент

Улан-Удэ
Издательство Бурятского госуниверситета
2022

УДК 001
ББК 72
А 38

Утверждено к печати редакционно-издательским советом
Бурятского государстввенного университета
Протокол № 4 от 16 мая 2022 г.

Текст печатается в авторской редакции

А 38 **All-Russian Contest for the Student's Scientific Project in a Foreign Language**: материалы всероссийского конкурса студенческих научных проектов на иностранном языке (Улан-Удэ, 19 мая 2022 г.) / отв. ред. О. А. Чепак. — Улан-Удэ: Издательство Бурятского госуниверситета, 2022. — 120 с. ISBN 978-5-9793-1740-3

Сборник содержит материалы студенческих докладов Всероссийского конкурса студенческих научных проектов на иностранном языке. В статьях представлены научные исследования студентов, анализируются новейшие разработки тенденции современной науки. Сборник адресован студентам вузов, аспирантам, преподавателям иностранных языков и широкому кругу читателей.

All-Russian Contest for the Student's Scientific Project in a Foreign Language: materials of the All-Russian student's scientific projects contest / resp. ed. O. A. Chepak. — Ulan-Ude: Buryat State University Publishing Department, 2022. — 120 p. ISBN 978-5-9793-1740-3

The book contains some materials of the students' reports, which were presented within the international contest of student's scientific projects. Tendencies in modern sciences and students' researches are considered to be under investigation.

These articles are devoted to the teachers of foreign languages, university students and to a broad range of readers.

УДК 001
ББК 72

ISBN 978-5-9793-1740-3

ПРЕДИСЛОВИЕ

В данном сборнике представлены результаты исследований, выполненные в рамках Всероссийского конкурса на лучший студенческий научный проект на иностранном языке, который проводился 19–20 мая 2022 года кафедрой иностранных языков Института филологии, иностранных языков и массовых коммуникаций Бурятского государственного университета. В конкурсном отборе принимали участие студенты неязыковых факультетов Бурятского госуниверситета, Читинской государственной медицинской академии, студенты Монгольского государственного университета образования, Томского государственного университета, Забайкальского государственного университета, Сибирского государственного университета путей сообщения.

Цель Конкурса — совершенствование навыков научной работы, ознакомление студентов с фундаментальными исследованиями и инновационной деятельностью зарубежных и отечественных ученых, повышение мотивации студентов к осуществлению научных исследований, оформление и презентация результатов исследования на иностранном языке, а также совершенствование учебного процесса, повышение качества образования.

Задачи Конкурса: создать мотивацию к изучению английского языка в ВУЗе; создать условия для практического применения знаний по английскому языку; развивать языковую компетенцию: овладение новыми языковыми средствами (фонетическими, орфографическими, лексическими, грамматическими) в соответствии с заданной темой конкурса; развивать социокультурную компетенцию: формирование умения представлять свой факультет, университет в условиях иноязычного межкультурного общения; развивать и воспитывать понимание у студентов важности изучения иностранного языка в современном мире и потребности пользоваться им как средством общения, познания, самореализации и социальной адаптации; развивать научное отношение к изучению иностранного языка; внедрять в процесс обучения информационно-коммуникационные технологии.

В сборнике содержатся два раздела: «Медицина, биология, химия, география», «Право, экономика, политика, социальная работа, педагогика, психология, туризм информационные технологии, религия», что соответствует основным направлениям работы конкурса. Доклады опубликованы на английском языке. В работах затронуты такие актуальные вопросы, как сохранение здоровья, роль информационных технологий в современной жизни, активная позиция молодежи в современном мире, проблемы образования, экологические проблемы, эмоциональная сфера разных возрастных категорий людей, развитие туризма и культуры, и многие другие актуальные проблемы современности. Все статьи содержат результаты проведенных исследований, практические рекомендации, а также сравнительно-сопоставительный анализ реалий разных стран.

Материалы сборника могут быть использованы студентами высших учебных заведений, магистрантам и аспирантами при проведении научных исследований, а также преподавателями на занятиях по иностранному языку.

Авторское право на созданные в рамках Конкурса работы сохраняется за их авторами, в том числе и научными руководителями проектов, которые несут всю полноту ответственности за содержание представленных работ.

Преподаватели кафедры иностранных языков благодарят всех участников конференции за участие и надеются на дальнейшее плодотворное сотрудничество.

Section 1
RESEARCH IN MEDICINE, BIOLOGY, CHEMISTRY, GEOGRAPHY

УДК 7642

PEROXIDE BENZOYL SYNTHESIS

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Abstract. It is difficult to imagine modern society without studying what surrounds us, such as chemicals, different substances and their properties. Therefore, a lot of attention in all countries is paid to the study of chemistry, and the main objective is to study the properties of different compounds. Due to the acquired knowledge about the properties of substances, drugs are created. Benzoyl peroxide is one of the most important chemical compounds because it allows people to treat rare skin diseases. Benzoyl peroxide is easy to produce, making it a unique and attractive compound. It has antibacterial and anti-inflammatory effects. Only with the help of Benzoyl peroxide did people manage to cure various acne.
Keywords: peroxide benzoyl, World Health Organization (WHO), aromatic compound, polymer production, benzoyl chloride, spectrometer.

Benzoyl peroxide is a substance with a number of useful properties. Everyone knows that benzoyl peroxide reduces the content of lipids and fatty acids, has a moderate desquamative effect, reducing the appearance of comedones and acne.

The relevance of the topic lies in the fact that today this drug is one of the most important and popular drugs conducted by the World Health Organization (WHO).

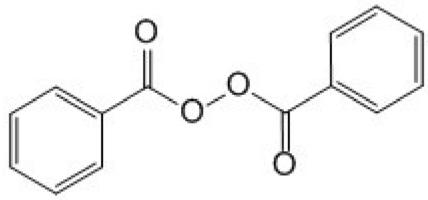
The purpose of this course work is to study this substance from open sources and to verify the topic through practical work.

The objectives are:
– to get acquainted with the history of the discovery of benzoyl peroxide;
– to study the physical and chemical properties of the substance;
– to get acquainted with methods of preparation;
– to synthesize benzoyl peroxide.

Benzoyl peroxide was first obtained and described by Liebig in 1858. It was the first organic peroxide prepared intentionally. In 1901 J.H. Castle and his graduate student A. S. Levenhart noticed that the compound induces guaiaco tincture, which was a sign of oxygen release. In 1905 Levenhart reported about successful use of benzoyl peroxide for treatment of various skin diseases, including burns, chronic varicose leg tumors, and shingles. He also reported on animal experiments that showed relatively low toxicity of the compound.

Treatment by Benzoyl peroxide was first proposed in 1929 by Lyon and Reynolds, later by Peck and Chagrin in 1934 for the treatment of sycosis (inflammation of hair follicles) and also for the treatment of rare skin diseases and various forms of eels.

Benzoyl peroxide is an organic aromatic compound belonging to diacyl peroxides and containing the peroxide group O–O associated with two benzoyl groups C_6H_5–C(O)–. According to the international nomenclature of dibenzoyl peroxide:



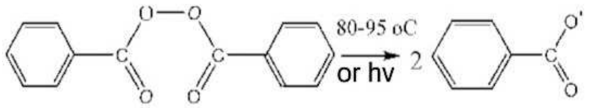
The gross formula is $C_{14}H_{10}O_4$.

It is a white granulated solid with a weak benzaldehyde smell, poorly soluble in water but soluble in acetone, ethanol and many other organic solvents. Melting point is 103 -105°C.

Benzoyl peroxide is highly flammable and burns at high speeds, and in large quantities combustion turns to explosion. It is also detonated when heated and mechanically (with water above 20% resistant to impact and friction). It is flammable in contact with certain organic substances and under the action of mineral acids. It can cause burns to the skin and mucous membranes.

The half-life of benzoyl peroxide is one hour at 92 °C. At 131 °C the half-life is one minute.

The initiation of radical polymerization consists of the creation of free radicals in the reaction system capable of initiating reaction chains. The most common method is based on the implementation in the environment of the monomer of thermal homolithic decay of the non-persistible substances — initiators. Various types of peroxides and benzoyl peroxide are widely used as initiators. Benzoyl peroxide decomposes on heating as follows:



Liebig's original synthesis of 1858 responded with benzoyl chloride with barium peroxide, reaction equation:

$2\ C_6H_5COCl + BaO_2 \rightarrow (C_6H_5CO)_2O_2 + BaCl_2$

Benzoyl peroxide is usually produced by treating hydrogen peroxide with benzoyl chloride under alkaline conditions:

$2\ C_6H_5COCl + H_2O_2 + 2\ NaOH \rightarrow (C_6H_5CO)_2O_2 + 2\ NaCl + 2\ H_2O$

The oxygen-oxygen bond in peroxides is weak. Thus, benzoyl peroxide is easily homolyzed (symmetric division) to form free radicals:

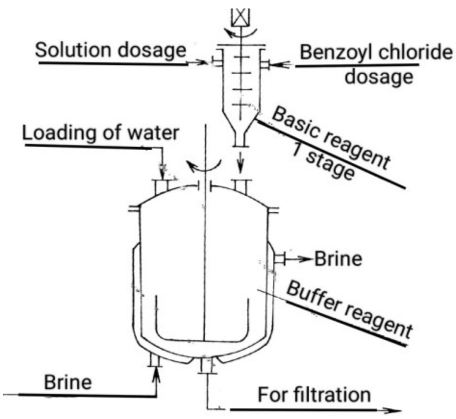
$(C_6H_5CO)_2O_2 \rightarrow 2\ C_6H_5CO \bullet 2$

The symbol • indicates that the products are radicals, that is, they contain one unpaired electron. Such species have high reactivity. Homolysis is usually induced by heating.

Industrial acquisition:

The method for producing benzoyl peroxide ($C_{14}H_{10}O_4$) relates to the field of chemical technology of polymerization initiators, in particular to organic peroxides. The process for producing benzoyl peroxide by interacting the benzoyl chloride with sodium hydroxide and hydrogen peroxide is carried out in two stages, in which the initial reagents are mixed at a temperature of 15 — 25 °C in a given ratio at the first stage, the reaction mass is then dosed into water at the second stage.

The process makes it possible to produce fine-crystal benzoyl peroxide with particle sizes of 10 — 100 μm, to increase the yield and to increase the productivity by 1,5 — 2 times.



The process for producing benzoyl peroxide at the second stage is as follows:

The process is described by the following equation:

$2\ C_6H_5COCl + 2\ NaOH + H_2O_2 \rightarrow (C_6H_5COO)_2 + 2\ NaCl + 2\ H_2O$

Benzoyl peroxide is an oxidant that is mainly used in polymer production. As a bleach, it is used as a drug and disinfectant for water. In specialized contexts its name can be shortened to BPO.

Benzoyl peroxide is also used as an initiator of radical polymerization, in organic chemistry as a source of phenyl radicals, hardener of polyester resins, as a vulcanizing agent, in movies to depict explosions of large volumes of combustible materials (barrels, cisterns).

As a drug, benzoyl peroxide is mainly used for acne treatment, both separately and in combination with other treatments. Some versions are sold in combination with antibiotics such as clindamycin. It is on the WHO list of essential drugs, and in the USA it is available as an over-the-counter and universal drug. It is also actively used in dentistry for teeth whitening. Benzoyl peroxide is also used in cosmetology and for bleaching flour, hair and textiles.

Chemicals and equipment:

Benzene (C6H6) — 30 ml.;

Sodium hydroxide (NaOH) — 4 g.;

Hydrogen peroxide (H2O2) — 15 ml.;

Benzoyl chloride — 11.7 g.;

Porcelain glass (100 ml);

Glass wand;

Büchner vortex;

Bulb Bünzen;

Vacuum pump.

Benzoyl peroxide synthesis method:

In a porcelain glass with benzene in series take sodium hydroxide, hydrogen peroxide and benzoyl chloride. It boils violently to form flake sludge in the upper benzoyl layer. Then we leave to age at night. Neutralize ten percent hydrochloric acid to ph = 6-7.

Having filtered through the Büchner funnel white crystals are washed with distilled water until the chlorine ions disappear, then we check the silver nitrate for the formation of white sediment, and dry in the air.

Results: The mass of the substance produced is 6.5 g., which is 53.7% of the theoretical mass (12.1 g.).

Thus, the synthesized substance has a melting point of 106-108 and decomposes with a flash. We also recorded spectra on an ALPHA IR spectrometer (Bruker, Germany) in the wavelength range of 4000-400 cm^{-1} on an NPVI attachment. These peaks coincide with the absorption range of functional groups in benzoyl peroxide, confirming the successful synthesis.

In conclusion, it can be said that benzoyl peroxide has many positive properties such as anti-inflammatory property and antibacterial action. But one should remember that there are some contraindications for use.

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СИНТЕЗ ПЕРОКСИДА БЕНЗОИЛА

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Аннотация: Трудно представить современное общество без изучения того, что нас окружает, например, химических веществ, различных веществ и их свойств. Поэтому во всех странах изучению химии уделяется большое внимание, и основной целью является изучение свойств различных соединений. Благодаря приобретенным знаниям о свойствах веществ создаются лекарственные препараты. Одним из наиболее важных химических соединений является перекись бензоила, поскольку она позволяет людям лечить редкие кожные заболевания.

Ключевые слова: пероксид бензоила, Всемирная Организация Здравоохранения (ВОЗ), ароматическое соединение, производство полимеров, хлористый бензоил, спектрометр,

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УДК 502.35

BARGUZIN BIOSPHERE RESERVE AND ITS ROLE IN SUSTAINABLE DEVELOPMENT GOALS

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Abstract. The article is about Barguzin Biosphere reserve and how it achieves sustainable development goals. The author gives a history background and outlines long-term dynamics of natural complexes and its cultural heritage sites.
Keywords: biosphere reserves, sustainable development, conservation, protected areas.

The Man and Biosphere Programme (MAB) can be considered as a UNESCO flagship programme linking nature and landscape to sustainable development. The International Coordinating Council of the UNESCO "Man and the Biosphere" (MAB) Programme convened for the first time in 1971 and laid the foundations for a new type of conservation area — Biosphere Reserves. It declared the harmonious development of man and nature to be its key goal. The Statutory Framework and the World Network of Biosphere Reserves (WNBR) was initiated in 1975 as a nature protection programme focused on representative landscapes, integrating management, education and research. The World Network of Biosphere Reserves currently counts 727 sites in 131 countries all over the world, including 22 transboundary sites. WNBR adds to the wealth of experience gathered during 50 years in and with model regions for sustainable development to climate change mitigation and adaptation and aims at making a substantial contribution to these processes as well as to the conservation of biological diversity.

The Sustainable Development Goals are the blueprint to achieve a better and more sustainable future for all. They address the global challenges we face, including poverty, inequality, climate change, environmental degradation, peace and justice [4]. Lake Baikal is a part of the UNESCO World Heritage Site since December 1996. Barguzin Reserve is MAB (Man and Biosphere) Programme since 1986.

The goal of the research is analysis of Barguzin Biosphere Reserve's activity in achieving sustainable development goals.

The objectives are:
- Studying history of Barguzin Reserve
- Definitions of terms "biosphere reserve" and "sustainable development"
- Definition of UNESCO Man and Biosphere Programme
- Analysis of the biosphere reserve in sustainable development
- Summary of Barguzin Biosphere Reserve's activity in last 30 years

Methods of research: literature review, research agenda.

Barguzin biosphere reserve covers 100 km of the north-east shore of Lake Baikal and extends 45-80 km inland to the western slope of the Barguzinskiy Mountain range. Barguzinskyi Biosphere Reserve overlaps with the Lake Baikal World Heritage site. Situated in south-east Siberia, the 3.15 million hectares Lake Baikal is the oldest (25 million years) and deepest (1,637 meters) of the world's lakes. Barguzin Biosphere Reserve is an object of national pride and a symbol of the conservation movement in Russia, It was the first zapovednik created during Tsarist Russia.

Early on, the reserve built its reputation in environmental protection. Under the leadership of Zenon Svatosh, the reserve's first employees frequently risked their lives to stop poaching. Their actions in the 1920 and 30s created an unusual set of ethics and traditions that continued in subsequent generations of nature reserve staff.

Restoring Barguzin sable *(Martes zibellina)* is one of the reserve's most significant achievements. Barguzin reserve took it from the brink extinction to commercial viability. Recognized as a valuable fur-bearing mammal, this one of the new obvious examples where a reserve contributed directly to the state's economy.

The sable played an important role in the economy of the Russian empire and was valued as a national treasure. Under Ivan the Terrible (in the 16^{th} century) it was a crime to export live sables from Russia, the punishment for which was death.

Ecological Characteristics

Its age and isolation have produced one of the world's richest and most unusual freshwater fauna that is of exceptional value to evolutionary science. With its outstanding variety of endemic animals and plants Lake Baikal is one of the most biologically diverse lakes on earth.

Main habitats of the biosphere reserve include for instance lacustrine terraces with larch (Larix dahurica), coniferous forests with pine (Pinus sibirica), spruce (Picea obovata), fir (Abies sibirica), thickets of dwarf pine (Pinus pumila), Kobresia dominated tundra and lichen covered rocks and cliffs. Hot springs remind of warmer climate in the past with relict species such as violets (Viola spp.).

The fauna is characteristic of the taiga with 39 species of mammal recorded, including pika (Ochotona hyperborea), Siberian chipmunk (Eutamias sibiricus), marmot (Marmota baibacina), flying squirrel (Pteromys volans), fox (Vulpes vulpes) and brown bear (Ursus arctos).

Socio-Economic Characteristics

A small community is situated in the core area of the Biosphere Reserve. This is where the main buildings of the estate and the administration of the Reserve (120 people) used to be until 1998. Nowadays the community has up to 15 permanent inhabitants (staff of the Reserve and the meteorological station) and up to 30-40 in the summer months. There is one cordon in the buffer zone periodically visited by 1-3 staff members. The transition zone is formed by the territory of Severo-Baikalskiy district including the town Severobaikalsk, urban community Nizhneangarsk, rural communities and villages. The main occupations of the local population are hunting, fishing, cattle raising, private farming enterprises, railroad (BAM — Baikal-Amur Mainline) services and maintenance, mining and employment in the touristic branch.

Tourists mainly visit the buffer zone for amateur fishing in the estuary of the river flowing into Lake Baikal. A smaller number of tourists visit the Museum of Nature (village Davsha) and two ecological paths on the territory of the buffer zone where ecological tours are conducted. Out of the latter number approximately 10-30 (per year) are schoolchildren, 5–15 are students undergoing practical training. There have been cases of ornithological tours and photographic tours. Several groups of overseas researchers from Japan, China and Germany have visited the coast of Lake Baikal to study its flora and fauna.

Scientific Characteristics.

Contrary to reserve's current purposes (ecosystem research, conservation and education), the early mission of Barguzin zapovednik was solely the study and restoration of the sable to commercially sustainable levels.

As the first scientific research center on Lake Baikal, the zapovednik made many scientific contributions. The scientists developed many original approaches to research which became classical, widely applied methods. For example, beginning in 1937, Barguzin scientists initiated a monitoring program to track and record natural processes (e.g., appearance of migratory species, the timing of flowering plants, climate patterns). This system of record-keeping, now known as the Chronicles of Nature (Letopis Prirodi), became a unified program throughout the zapovednik system in the 1970s and remains a cornerstone of the reserves' work today [1, p. 16]

It is interesting as a territory — a standard of wild nature in the Baikal region, never subjected to human exposure. For a 105-year period in the Barguzin Reserve, databases containing information on long-term dynamics (minimum for 10 years, maximum for 80 years) of controlled parameters of natural complexes have been prepared. Data bases have been prepared in the following sections of long-term observations : weather, water, soil, phenology of plants and birds, nature calendar, yield of berry and tree species, state of populations of rare plant species, winter route registration of animals, spring-autumnal relative the registration of bears, the structure of bear populations, the wolf and ungulate populations, the monitoring of the Barguzin sable population, the summer and winter comprehensive routing surveys of terrestrial birds, the autumn counts of chicken birds, the counting of colonial water birds, the occurrence of birds of prey and owls, ground beetle counts, forest fires. The materials obtained are the basis for assessing the natural variability of the controlled parameters of the state of components of natural complexes and about GIS analysis of long-term observations in order to optimize the monitoring program in the Barguzin biosphere reserve. In addition, this information is used in the development of GIS for protected areas and for assessing biota responses to long-term climate change.

Conclusion. Barguzin Biosphere Reserve promotes and works towards sustainable development. While Biosphere Reserves are nominated by national governments and remain under the sovereign jurisdiction of the states where they are located, their global status as biosphere reserves is internationally recognized. Biosphere Reserves are models to test and apply interdisciplinary approaches to understanding and managing changes in social and ecological systems, and their interaction, including conflict prevention and the conservation of biodiversity [3, p. 3]. Barguzin Biosphere Reserve concept has shown its importance beyond protected areas and has increasingly been embraced by scientists, planners, policy-makers and local communities to have a variety of knowledge, scientific investigations and experiences to link biodiversity conservation and socio-economic development for human well-being.

БАРГУЗИНСКИЙ БИОСФЕРНЫЙ ЗАПОВЕДНИК
И ЕГО РОЛЬ В УСТОЙЧИВОМ РАЗВИТИИ

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Аннотация: В статье рассматривается роль Баргузинского заповедника и его роль в достижении целей устойчивого развития, рассматривается краткая история заповедника, характеристика долговременных наблюдений за природными комплексами и сохранение культурного наследия.
Ключевые слова: биосферный заповедник, устойчивое развитие, сохранение, ООПТ.
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УДК 316.7

VALUE-BASED ATTITUDE TOWARDS HEALTHCARE IN RUSSIA AND ABROAD

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Abstract. Despite numerous achievements of the global healthcare system it faced an excessive burden during COVID-19 pandemic. Positive attitude to the healthcare is vitally important. It can be considered as a value. The study is devoted to the analysis of a value-based attitude of the citizens of 3 countries, namely, Russia, Brazil and France, to their healthcare systems.
Keywords: healthcare, value, attitude, COVID-19, Russia, Brazil, France.

COVID-19 pandemic has greatly changed the world all over. Consequently, the attitude of people to their life, medical care, doctors, vaccination and lots of other things have been changed. The role played by the doctors and healthcare is becoming more and more important.

The goal of this project was the investigation into the attitude of the citizens of Russia, Brazil and France towards their healthcare systems as a value peculiar to these countries.

The objectives of the study were: 1. to learn about the structure of healthcare in Russia, Brazil and France and the attitude of citizens to the healthcare system; 2. to study differences in attitude to healthcare between the Russians, Brazilians and French.

Materials and methods: foreign literature review, a questionnaire for the Russians, Brazilians and French, comparative analysis method and data statistical processing were used.

Value is commonly defined as “something that is held to deserve”. Thus, it can be considered as the significance, worth, profitability or usefulness of somebody or something. Life, family, love, faith, friendship, and peace traditionally appeared to be among the greatest values. Scientists also identify conformity, tradition, universalism, hedonism, power, security, openness to changes and numerous other values. Quality healthcare and education can be attributed as values as well. Due to its achievements, the Soviet healthcare system proved to be one of the greatest values of mankind. This system was unified, free, and strong. Among the well-known strengths of healthcare in the Soviet Union were lifelong prevention of diseases, overall vaccination, successful fight with newborns and infants’ mortality, tuberculosis and alcoholism.

Nowadays healthcare in Russia is supposed to be free to all residents through the compulsory state health insurance program. On the one hand, Russia has always pioneered certain fields of medicine. There exist certain excellent health centers all over the country, for example the Fyodorov Eye Microsurgery Complex [2]. The first in the world COVID-19 vaccine was created in Russia. The vaccine showed great success even at the testing stage. Finally, 3 vaccines have been developed in Russia: Sputnik V, EpiVacCorona, CoviVac. High efficacy (92%) of Sputnik V has already been proved. Over 70 countries of the world approved this Russian vaccine. However, the public healthcare system has numerous drawbacks due to “poor organizational structure, lack of government funds, outdated medical equipment, and poorly paid staff” [1].

Brazilian healthcare is open to any citizen of the country as well as to the foreign tourists. It combines both state and private health centers. It is known as Sistema Único de Saúde, that is “the United Health System” [4]. It is one of the largest global healthcare systems, for it has more patients, more health centers, and covers more geographic territory than any other similar system in the world. Its clients are mainly proud of their healthcare system.

The French health care system is one of universal health care systems largely financed by the government national health insurance. The World Health Organization found that France provided the "best overall health care" in the world [6]. France has universal healthcare that is mandatory for all citizens, whether they're employed or not. Healthcare is managed across the country by the Ministry of Health. The government coverage scheme is administered through the French Social Security office where 70% of services are covered for all typical health care needs, including general practitioners, hospitals, dentists and pharmacy costs. For seniors who are 65 or older, or individuals with chronic illnesses, the services are fully covered [7]. French residents are allowed to subscribe to the so-called "mutuelle" [7], a non-profit insurance plan, or a private plan to receive additional coverage.

Results. The longitudinal survey took 2 years. It was based on a questionnaire consisting of 25 questions. The survey was conducted among 100 Russians, 100 Brazilians and 100 French over the Internet. People of different ages (from 10 to 70) participated in the survey. The sex ratio was almost the same in the three groups (50% female and 50% male Russian respondents, 60% female and 40% male Brazilian respondents, 42% female and 58% male French respondents). Duration of hospitalization in Russia was as follows: 1-4 days — 7% respondents, 5-9 days — 25%, 10-14 days — 58%, 15-19 days — 3%, 20-24 days — 7%. Correspondingly duration of hospitalization in Brazil was 1-4 days for 38% respondents, 5-9 days — 7%, 10-14 days — 7%, 15-19 days — 8%, 20-24 days — 40%. Duration of hospitalization in France was: 1-4 days — 32% respondents, 5-9 days — 22%, 10-14 days — 11%, 15-19 days — 18%, 20-24 days — 17%. According to the data obtained, the French were more satisfied with the conditions of medical care in the emergency department (in general 63% Russians, 54% Brazilians, and 95% French were satisfied) and the availability and quality of diagnostic tests (55% Brazilians, 66% Russians, 87% French). The Russians were more satisfied with the availability of free medicines than Brazilians (77% Russians, 64% Brazilians). The French could not answer this question, as they did not have free medicines. The French were more satisfied than Russians and Brazilians with the availability and quality of information received from a doctor (71% Russians, 70% Brazilians, 92% French), and the work of doctors (88% Russians, 69% Brazilians, 93% French). It was found that the French were also more satisfied with the work of nurses (80% Russians, 62% Brazilians, 90% French). The Russians, Brazilians and French were satisfied with the work of corpsmen (53% Russians, 77% Brazilians, 87% French). Unlike the Brazilians, the Russians were not fully satisfied with the conditions of free accommodation in the hospital (28% Russians, 44% Brazilians). The French could not answer this question, because they did not have free accommodation in the hospital. The biggest difference was in the attitude to nutrition. Almost all Russians considered food in hospitals to be bad (87%), while Brazilians and French considered it satisfactory (72% Brazilians, 67% French). The Russians, Brazilians and French were generally satisfied with the results of treatment (65% Russians, 71% Brazilians, 95% French). 88% Russian patients did not pay anything for treatment in the hospital, although 9% Russians paid for hygienic care services and 3% Russians paid for instrumental diagnostic explorations. 30% Brazilian patients did not pay anything for treatment in the hospital, although 23% Brazilians bought medicines, 11% — instrumental diagnostic explorations, 11% — operations, 7% — complex medical devices, 3% — consultations of doctors, 3% — narcosis or local anesthesia, 3% — laboratory explorations, 3% — simple medical devices, 3% — hygienic care services, and 3% — accommodation. The French paid 30% of the cost for all medical services. In France completely free medical services were provided only to people with chronic diseases.

Conclusion: In general, the Russians, Brazilians and French valued their countries' healthcare systems. They were especially satisfied with the doctors' attitude, medical treatment, work of the nurses, availability and quality of the information enquired, conditions of the emergency care. But the Russians were not satisfied with the quality of patient care, such as the quality of food or cleaning provided by corpsmen. It was also found that the French had a completely different health care system from Russia and Brazil. According to the results of the survey, French healthcare system had certain negative aspects: there were neither free medicines nor free accommodation for the patients. In general, the ability of citizens to value and appreciate their healthcare system is very important because it affects the quality of medical care provided thus contributing to the preservation of human lives and health.

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ЦЕННОСТНОЕ ОТНОШЕНИЕ К ЗДРАВООХРАНЕНИЮ В РОСИИИ И ЗА РУБЕЖОМ

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Аннотация. Несмотря на значительные свои достижения, современная система здравоохранения испытала значительную нагрузку во время пандемии COVID-19. Положительное отношение к здравоохранению является жизненно необходимым, как показывает практика. Такое отношение можно рассматривать как ценность. Исследование посвящено анализу ценностного отношения к системе здравоохранения жителей 3 стран — России, Бразилии и Франции.
Ключевые слова: здравоохранение, ценность, отношение, COVID-19, Россия, Бразилия, Франция.
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УДК 544.723

SORPTION PROPERTIES OF PHARMACY OR OTHER ADSORBENTS

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Abstract. The use of sorbents and the sorption process are quite widespread in various areas of human life. Due to the wide variety of sorbents, the search for the most effective of them remains relevant. This paper presents a comparative characteristic of sorbents of different nature using physico-chemical research methods.
Keywords: sorbents, sorption properties, adsorbents, the titration method.

Background. Adsorption processes are widespread in living and inanimate nature. Thanks to adsorption, various substances are absorbed from the environment by cells and tissues of biological systems, the work of biological membranes, the first stages of the interaction of enzymes with the substrate, the absorption of toxic substances, etc. Senses such as smell and taste also depend on the adsorption of molecules. Many adsorbents (activated carbon, kaolin, ionites) serve as antidotes, absorbing and removing harmful substances from the body. The variety of sorbents makes it necessary to study their sorption properties and the effectiveness of their use. Various physico-chemical methods can be used to determine the adsorption capacity, but the titration method is the most affordable and convenient.

The goal of the research is to study of sorption properties of pharmacy or other sorbents.

The objectives are:

– To study and analyze the literature data on sorption processes, types and nature of sorbents and their application.

– Using various methods of titrimetric analysis (determination of acetic acid concentration, determination of total water rigidity, determination of permanganate oxidability of water) to study the adsorption process and identify the most effective sorbent.

Materials and methods. The objects of the study were pharmacy sorbents with trade names: "White coal", 20 tab., "Activated carbon", 20 tab., "Polysorb", pack. 3 g, "Smekta", pack. 3 g, "Enterosgel", pack., 3 g and technical sorbent "Tselit". The study of the adsorption process and the identification of the most effective sorbent was carried out using various methods of titrimetric analysis: acid-base titration (determination of acetic acid concentration during adsorption), oxidimetric titration (determination of permanganate oxidability of water), complexometric titration (determination of total water rigidity).

According to the method, when studying the adsorption of CH3COOH, the initial concentration of the acid solution was determined by acid-base titration. Next, the acid solution was mixed with the specified sorbents (m = 3 g) and left for 20-30 minutes, then the suspension was filtered out and the final concentration of the acid solution was determined by titration. Calculations were carried out according to the formula:

$$C = \frac{NNaOH \cdot VNaOH}{VAcid}; \quad \Delta C = C - C_0$$

When determining the total rigidity of water, tap water was mixed with an ammonia buffer solution (pH = 4.7) and an indicator with eriochrome black (chromogen black), then the initial value of the total hardness was determined by complexometric titration using a solution of trilon B. Then the water was mixed with these sorbents (m = 3 g) and left for 20-30 minutes. Then the suspension was filtered out and, according to the method, the stiffness value was determined after the adsorption. Calculations were carried out according to the formula:

$$R = V_{(TrilonБ)} \cdot N_{(TrilonБ)} \cdot 1000 / V_{(Investigated\ water)}$$

To determine the initial permanganate oxidability of water, tap water with the addition of H2SO4 solution is titrated with 0.02 N KMnO4 solution. Then the water was mixed with the specified sorbents (m = 3 g) and left for 20-30 minutes. Further, the suspensions were filtered and the oxidability of water was determined after adsorption. Calculations were carried out according to the formula:

$$\text{Oxidability} = \frac{N_{KMnO4} \cdot K \cdot V_{KMnO4,average} \cdot M_{equivalent}(O) \cdot 1000}{V(H2O)}$$

Results.Analyzing the process of adsorption of acetic acid and the values of ΔC, it can be concluded that the sorbent "Activated Carbon" has the maximum adsorption capacity with respect to 0.122 n solution of CH3COOH. The adsorption capacity of the preparations: "White coal", "Enterosgel", "Tselit" and "Smekta" was high, but below the sorbent "Activated carbon". Acid absorption did not occur on the Polysorb sorbent (ΔC =0), possibly due to the nature and high degree of dispersion of the drug (table 1).

Table 1

Acetic acid concentration values

Sorbent	C_0	C	ΔC
«White coal»	0,122	0,096	0,026
«Activated Carbon»	0,122	0,0045	0,077
«Smekta»	0,122	0,114	0,008
«Polysorb»	0,122	0,122	0
«Enterosgel»	0,122	0,11	0,012
«Tselit»	0,122	0,07	0,052

The differences in the adsorption capacity of the preparations are probably due to the different nature of the sorbents, their degree of dispersion, different duration of action, as well as the nature of the adsorbate. According to the results obtained, the most effective sorbent was "Activated carbon".

Analyzing the data on changes in the overall hardness of water, it can be concluded that the sorbent "Tselit" has the maximum adsorption capacity in relation to various indicators of water hardness. The adsorption capacity of the preparations: "White Coal", "Enterosgel", "Black Coal" and "Smekta" was high, but lower than the sorbent "Tselit" (Table 2). Differences in the adsorption capacity of the preparations are probably due to the different nature of the sorbents, the degree of their dispersion, different duration of action, as well as the nature of adsorbate. According to the results obtained, the most effective sorbent was "Tselit".

Table 2

Values of total water rigidity

Sorbents	$Rigidity_0$ (°)	Rigidity (°)	ΔRigidity
«White coal»	2,45	2,40	0,05
«Activated Carbon»	2,25	2,20	0,05
«Smekta»	2,05	1,8	0,25
«Tselit»	2,05	0	2,05

Analyzing the data on the permanganate oxidability of water, it can be concluded that the maximum adsorption capacity has the sorbent "Smekta". The adsorption capacity of the preparations: "White coal", "Enterosgel", "Tselit" and "Black coal" was high, but lower than the sorbent "Smekta". There was no change in the values of permanganate oxidability on the "White Coal" sorbent (change in oxidability = 0), possibly due to the nature of the drug and its affinity for reducing agents contained in water (Table 3). According to the results obtained, "Smekta" turned out to be the most effective sorbent.

Table 3

Determination of the oxidability of permanganate water

Sorbents	Oxidability before adsorption	Oxidizability after adsorption	Change in oxidability
«White coal»	0,4	0,4	0
«Activated Carbon»	0,4	0,342	0,058
«Tselit»	0,4	0,294	0,106
«Polysorb»	0,4	0,364	0,036
«Smekta»	0,4	0,246	0,154

Conclusion. Thus, comparing the sorption properties of the studied sorbents by various methods, it can be concluded that the effectiveness of each sorbent depends on the conditions and methods of research.

When studying the adsorption of acetic acid, the most effective sorbent turned out to be "Activated carbon". When studying the effect of sorbents on the values of total water rigidity, the most effective sorbent turned out to be "Tselit", i.e. this sorbent actively absorbs calcium and magnesium cations. Under the influence of adsorption on the values of permanganate oxidability of water, the drug "Smekta" exhibits a large adsorption capacity. The preparation "White coal" does not exhibit sorption properties with respect to the oxidability of water, and "Polysorb" with respect to acetic acid.

ИЗУЧЕНИЕ СОРБЦИОННЫХ СВОЙСТВ АПТЕЧНЫХ ИЛИ ИНЫХ АДСОРБЕНТОВ

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Аннотация: применение сорбентов, а также использование процесса адсорбции достаточно широко распространено в различных областях жизни человека. На сегодняшний день имеется большое разнообразие сорбентов, в этой связи актуальным остается поиск наиболее эффективных из них. В данной работе приведена сравнительная характеристика сорбентов различной природы с использованием физико-химических методов исследования.
Ключевые слова: сорбенты, адсорбция, сорбционные свойства, титриметрический анализ, адсорбционная емкость.
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УДК 796

RESEARCH IN NUTRITIONAL SUPPLEMENTS FOR HEALTH, PHYSICAL ACTIVITY AND PERFORMANCE

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Abstract. The success of a sport depends primarily on the genetic abilities of the athlete with the morphological, psychological, physiological, and metabolic characteristics inherent in the performance characteristics essential to the sport. These genetically endowed athletes must also receive optimal training to improve their physical fitness, improve their mental strength, and gain mechanical advantage. However, athletes often go beyond training and use substances and techniques, often called ergogenic, to gain a competitive advantage. Many athletes are looking at the use of a variety of dietary supplements that they believe are effective, safe, and legal. Drugs such as anabolic steroid hormones and amphetamines have been used in the past, but such practices by athletes have led to the introduction of anti-doping methods.
Keywords: creatine supplements, an anabolic steroid, performance, bodybuilders, creatine monohydrate, creatine hydrochloride
The goal of the research is to help benefit the knowledge of athletes on nutritional supplements that helps exceed their performance.

Introduction

Creatine was first successfully extracted from meat in 1832 by French philosopher and scientist Michel Eugene Chevreul. Chevreul soon christened his discovery creatine, concerning the Greek word κρέας (kreas), which meant meat in Greece. Since the early 1990s, Western countries have been obsessed with miraculous medicines that improve athletic performance, help build muscle, and have relatively few side effects. Creatine is probably one of the best-known supplements on the market. It has been praised and criticized for its effectiveness and has often been mistakenly regarded as a dangerous substance. Also mentioning dangerous substances this transitions to anabolic steroids. Concerning the proposed drug, anabolic steroid hormones are relatively new. In the 1930s, scientists synthesized male hormones to help men produce more testosterone so that they could achieve excessive growth and development. in the muscle and performance. Creatine and anabolic steroids are still being used today one being more the natural and safer option the other can drastically affect the health of the user badly.

Creatine and its impact on athletic performance

Firstly, there are many types of creatine supplementation but the two most widely used creatine is creatine monohydrate and creatine hydrochloride. Creatine monohydrate is the favored choice between the two mainly because it has over 300,000 researches on the supplement on the other hand creatine hydrochloride has fewer researches and doesn’t have many proving points as to say it is good for the athlete's body. Therefore, the effects of creatine monohydrate on resistance training exercises have been extensively studied. There are many managed studies reporting increased power and strength with short-term, maximum-intensity exercise. Resistance training has been measured in a variety of ways, including exercises such as bench press, leg press, biceps curl, leg extension, jump squat, and stationary bike. Methods for measuring intensity and power in creatine studies include a maximum number of iterations, average power, total power, and several iterations. Results on the performance-enhancing effects of creatine supplementation are not uniform. However, there is ample evidence that creatine improves performance during short-term and long-term, maximum strength training. There is conflicting evidence regarding the effects of creatine supplementation on anaerobic performance for athletes. At this moment, studies have found no effect on aerobic performance from creatine supplementation. In addition to power measurements, there is evidence to support increased lean body mass and type II muscle fiber area. Glycogen levels in muscle can also be affected by creatine supplementation, probably as a result of increased cell water content. As early as 1928, weight gain from creatine supplementation was reported. However, current evidence suggests that the weight gain seen with creatine is due to decreased urine output and water retention in the early stages of creatine intake. The sports-specific performance has also been extensively studied to see if the effects of creatine supplements range from the weight room to the field. Several studies have examined the effects of creatine supplements on sprinting, swimming, and flexibility training, but no effect. This shows that creatine supplementation only works on weight exercises and helps gain muscle mass.

Positives and negatives of creatine

Creatine monohydrate and creatine hydrochloride are one of the most researched supplements in the fitness industry. Therefore, creatine has many positive effects and zero side effects it has also been studied for its other potential health benefits, such as improving brain function and healthy aging. Taking creatine supplements gives your muscles extra fuel so you can train longer and harder. Extra fuel that is given to the muscle for a long drive on your exercises has also been shown to increase muscle size, power, and strength. After hard workout creatine helps reduce muscle fatigue and enhance recovery. There was research done proving the increase in power, strength, and performance increased by 5-15%. Creatine has been shown to be most effective for high-intensity sports and activities such as bodybuilding, martial arts, powerlifting, athletics, soccer, American football, hockey, athletics, and swimming. As a person gets older their sarcopenia starts to worsen and lose a heavy amount of muscle mass and strength. Sarcopenia can be slowed down with the intake of creatine supplements, sarcopenia usually affects the older generation meaning that creatine should be taken by every age group except a minor. This condition is estimated to affect 5-13% of adults over the age of 60 living in today’s society or community. It is associated with disability, poor quality of life, and increased risk of death. Several studies of older people have shown that taking creatine supplements in combination with weightlifting can help with muscle health. A review of studies found that taking creatine supplements benefits older adults build more muscle mass. In the review, participants took creatine supplements and were resistance-trained 2–3 times per week for 7–52 weeks. As a result, they gained 3 pounds (1.4 kg) more lean muscle mass than those who only weight trained. Similar results were obtained in another review of older people, who found that taking creatine may increase the effectiveness of strength training compared to strength training alone. As for brain function, creatine improves brain functionality by 5-15%. This usually occurred through increased oxygen delivery to the brain as well as the energy supply. A review of six studies of 281 healthy people examined the effects of creatine supplement intake on specific aspects of brain function. Taking 5 to 20 grams daily for 5 days to 6 weeks has been shown to improve short-term memory and intellectual or logical thinking. A few amounts of people have suggested that taking these supplements may delay the decline in cognitive function associated with neurodegenerative diseases such as Parkinson's disease and Huntington's disease. But human research has found no benefit.

There are many nonproven negative effects from the intake of creatine here are a few:

- Kidney damage
- Liver damage
- Kidney stones
- Weight gain
- Bloating
- Dehydration
- Muscle cramps
- Digestive problems
- Compartment syndrome
- Rhabdomyolysis

But in the later studies has shown that taking creatine supplement does not harm the kidney, liver, etc. Creatine may cause bloating or stomach discomfort if you take it too much at one time.

Anabolic steroids and their impact on athletic performance

Anabolic steroids are synthetic derivatives of the male hormone testosterone. They can exert strong effects on athletes or bodybuilders that are beneficial for athletic performance. According to reviews, most laboratory studies have not examined the actual doses of anabolic steroids that are currently being abused in the fitness or bodybuilding field. Therefore, those studies may not reflect the actual effects of steroids. The available scientific literature describes that short-term administration of these drugs by athletes can increase strength and body weight. An increase in the intensity of approximately 5-20% of baseline intensity and an increase in body weight of 2-5 kg have been observed. This may be due to an increase in lean body mass. The loss of fat mass does not seem to occur. Administration of anabolic steroids hormones may affect erythropoiesis and blood hemoglobin levels, but no effect on endurance performance has been observed. Few data on the effects of anabolic steroids on metabolic responses during exercise and recovery make it impossible to draw definitive conclusions. The main adverse effects of short-term and long-term anabolic steroid hormone abuse most commonly self-reported by male athletes have increased libido, scabbing Vulgaris, increased hair, and increased aggressive behavior. Administration of anabolic steroid hormones disrupts the regular endogenous production of testosterone and gonadotropins, which can be sustained for several months after discontinuation of the drug. Cardiovascular risk factors can cause adverse changes such as increased blood pressure and lower serum high-density lipoprotein and high cholesterol. Echocardiography of male athletes did not show that anabolic steroids affect the structure and function of the heart, but animal studies have observed dangerous effects on the structure and function of the heart. Studies on athletes have found that anabolic steroid hormones do not damage the liver. Mental and behavior appear to be strongly influenced by anabolic steroid hormones. In general, anabolic steroid hormones appear to induce aggression and hostility. Mood disorders such as depression, hypomania, and psychotic features can be drug-dependent. Anabolic steroid hormone dependence or withdrawal symptoms appear to occur only in a small number of anabolic steroid users. Physical dissatisfaction and low self-esteem can lead to what is known as "reverse anorexia syndrome", which predisposes you to start using anabolic steroids. Many other side effects are associated with the abuse of anabolic steroid hormones, including impaired endocrine and immune function, sebum and skin changes, and hemostatic and urogenital changes. It should be noted that scientific data may underestimate the actual adverse effects, as the doses administered in these studies are relatively low and do not approximate the doses used by illegal steroid users. The action of anabolic steroid hormones can differ between compounds due to changes in steroid molecules and their affinity for androgen receptors. Several routes have been identified. The enzyme 5α-reductase appears to play an important role in converting anabolic steroids to dihydrotestosterone (androstanolone), which acts in the nucleus of target organs such as the male adrenal glands, skin, and prostate. Other mechanisms include mediation by the enzymes aromatase, which converts anabolic steroids to female hormones (estradiol and estrone), estrogen antagonism, and competitive antagonism to glucocorticoid receptors. In addition, anabolic steroids stimulate erythropoietin synthesis and red blood cell production, and bone formation, but prevent bone loss. Effects on the cardiovascular system are mediated by the development of anabolic steroid-induced atherosclerosis (due to adverse effects on serum lipids and lipoproteins), thrombosis, vasospasm, or direct damage to the walls of blood vessels, or Probably a combination of different mechanisms. The increase in muscle tissue caused by anabolic steroid hormones can be due to hypertrophy and the formation of new muscle fibers in which the number and superstructure of satellite cells, androgen receptors, and myonuclei play an important role.

Positives and negatives of anabolic steroids

Stating it once again will give a reminder of what anabolic steroids are, anabolic steroid hormones are synthetic drugs designed to mimic testosterone and human growth hormone. Although they are prescribed by doctors for slow-growing people, they are also commonly used in the gym to promote rapid muscle growth, speed up the recovery process, and increase strength. increase. Most anabolic steroids sold on the Internet are genuine and legal, while other steroids are fake and can be very harmful to your health. But even with the use of legitimate steroids, abuse can ruin your life. For this reason, it is necessary to pay close attention and carefully observe and use it to confirm and understand the reaction. There are many negative aspects of anabolic steroid hormones, but some are positive. Therefore, anyone who intends to use anabolic steroids for bodybuilding should take into consideration and understand these strengths and weaknesses before making a decision.

Positives of using anabolic steroids

Many sources from the sellers of this drug can guarantee these positive effects. Also, a number of scientists have proven these effects:

- **Weight Loss and Muscle Building–** this is the ultimate goal of many athletes and fitness enthusiasts. High levels of human growth hormone and testosterone, in combination with exercise and diet, promote the rapid loss and growth of more muscle. Therefore, most bodybuilders are considerably muscular
- **A tremendous amount of muscle strength and endurance–** increased muscle mass and high oxygen supply improve strength and endurance, but it also works well when exercising regularly, such as athletes.
- **Rapid Muscle Recovery–** another major reason athletes and fitness enthusiasts take steroids is to shorten the recovery process after an extreme amount of training. Due to the action of anabolic steroid hormones, muscle growth and high levels of oxygenation require all muscles to recover in a short period of time.

Negatives of using anabolic steroids

On the other hand, there are many side effects caused by anabolic steroid hormones. But this depends a lot on how you use them and how they react with your body.

- **Risk of being unhealthy —** users are more likely to have illnesses such as hepatitis B, liver failure, heart attack, stroke, and cancer. In addition, allergic reactions can occur immediately or immediately after the use of certain anabolic steroids.
- **Hormonal changes and infertility —** many medical studies have proven anabolic steroid hormones to hormonal changes and infertility. What people are unaware of is that steroids act by changing hormones, so it's an immediate side effect. In extreme cases, long-term use can lead to infertility in both men and women due to hormonal changes.
- **Aggressive personality —** another worrisome side effect of anabolic steroid hormones is increased user anxiety. Keep in mind that these supplements affect hormones and are known to be very aggressive to some users, even if they are not needed.

Modest use of anabolic steroid hormones for good reason can benefit athletes and fitness enthusiasts in many ways, but as described in this article, abuse has a negative impact on health. For best results, athletes should be careful and always consult a doctor about the use of anabolic steroids.

Conclusion

Summarizing my thoughts and conveying the larger implications of my study. Creatine monohydrate and creatine hydrochloride are dietary supplements that help increase muscle mass and performance. Creatine is a relatively safe dietary supplement with few side effects reported. The most common side effect is temporary water retention in the early stages of the supplement. There are cases of liver and kidney complications from creatine when combined with other dietary supplements or when taken at higher doses than recommended for several months. Exposure to creatine increases urinary levels of the cytotoxic substances methylamine and formaldehyde. Athletes should be aware of the unknown effects of long-term use on the kidneys. More research is needed to assess the distant and potential future side effects of long-term creatine supplementation. Creatine is an ergogenic supplement with few side effects that, when used at appropriate doses in the short term, can enhance short-term maximum strength training. On the other hand, anabolic steroids are synthetic androgens with higher anabolic effects. They're used to enhance muscle strength and performance as well as muscle size but the side effects that come with them are highly risky. Liver failure, heart attack, stroke, and cancer are the few traumatic effects that could happen to the human body and the effects are scientifically proven. From this conclusion, a natural supplement called creatine and a foreign drug called anabolic steroids have many differences one having almost zero side effects also benefiting athletic performance and the other also benefiting muscle strength and performance but with a greater risk of being life-threatening.

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ИССЛЕДОВАНИЯ ПИЩЕВЫХ ДОБАВОК ДЛЯ ЗДОРОВЬЯ, ФИЗИЧЕСКОЙ АКТИВНОСТИ И РАБОТОСПОСОБНОСТИ

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Аннотация. Успех в спорте зависит в первую очередь от генетических способностей спортсмена с морфологическими, психологическими, физиологическими и метаболическими характеристиками, присущими характеристикам работоспособности, важным для спорта. Эти генетически одаренные спортсмены также должны пройти оптимальную подготовку, чтобы улучшить свою физическую форму, улучшить свою умственную силу и получить преимущество в технике. Однако спортсмены часто выходят за рамки тренировок и используют вещества и приемы, часто называемые эрогенными, для получения конкурентного преимущества. Многие спортсмены рассматривают возможность использования различных пищевых добавок, которые они считают эффективными, безопасными и законными. В прошлом использовались такие препараты, как анаболические стероидные гормоны и амфетамину, но такая практика спортсменов привела к внедрению антидопинговых методов.
Ключевые слова: кретоновое добавки, анаболический стероид, работоспособность, бодибилдеры, моногидрат креатина, гидрохлорид креатина.
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УДК 159.9

LACK OF SLEEP AMONG MEDICAL STUDENTS

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Abstract. Students' lack of sleep is a concern for many experts, because lack of sleep can lead to serious health problems. Actually, lack of sleep can impair memory and thinking, which is a great problem contributing to difficulties studying. Medical students need sufficient duration of sleep due to especially high educational and psychological exertion. The patterns and duration of sleep appear to be indicators of a healthy lifestyle. The research is devoted to the analysis of the significance of sleep for medical students and the ways it affects their daily routine.
Keywords: lack of sleep, students, well-being, inattention, emotional state.

Sleep is a periodic condition that, through certain neurophysiological, chemical, and psychological changes, gives people the opportunity to work and meets theirphysical, mental, and emotional needs. This is a natural need of the body and an indispensable part of their lives. The structure of sleep has several cycles, which are repeated every 1.5 hours, and include 4-6 cycles every night. The following phases of sleep are commonly distinguished: REM (rapid eye movement) and non-REM (non-rapid eye movement) sleep.The slow sleep phase is characterized by relatively low brain activity, in which body movement is retained, a decrease in the frequency of breathing movement, and a high threshold for awakening. Slow sleep accounts for 75-80% of the entire night sleep period, and one stage lasts about 90 minutes. Slow sleep is followed by fast sleep, which lasts for 10 to 20 minutes. The temperature and pressure increase, and the heart beats more frequently. The body is fixed, except for the muscles responsible for heartbeat and breathing. Under the closed eyelids, the eyeballs move quickly. The brain is actively working. The key component of a complete sleep is its continuity and the normal relationship between stages. This explains the fact that many people do not feel rested when taking sleeping pills.Violations of the body's biological rhythms, the system and duration of sleep lead to deterioration of physical and mental state, depression, behavioral disorders and aggressiveness.

The goal of this project wasto study in what ways lack of sleep affected medical students' lives and health.

The objectives were 1. to study the main causes of sleep deprivation, 2. to determine how medical students cope with lack of sleep, 3. to analyzethe impact of changes in daily routine on the well-being of medical students.

Materials and methods: Analysis of scientific literature and video sources, questionnaire for the students of the Chita State Medical Academy, comparative analysis and data statistical processing methods were used.Data analysis was carried out using Microsoft Excel 2016.

Results.150 medical students were enrolled into the survey. According to the data obtained,60.7% of students slept 6-8 hours a day on weekdays, 34.7% — less than 5 hours, and 4.6% — more than 9 hours.To the question "Do you go to bed at the same time?" 26% of students answered "yes", 74% answered "no". 23.3% of respondents get up at the same time.One of the earliest manifestations of lack of sleep was the presence of inattention: 20% of the surveyed students noted their inattention during the day, 74% of the surveyed students sometimes mademistakes, only 6% were not aware of this phenomenon.Therefore, 42% of students slept during lectures, classes or during breaks. It was also found that lack of sleep affected the educational activities of students. It turned out that 72.7% of students stated it was difficult for them to focus on classes, and 27.3% did not note the impact of lack of sleep. 71.3% hada good academic performance, 22% — satisfactory, 6% — excellent, 0.7% — unsatisfactory. 26%of the respondents had problems with falling asleep, and 74% did not have such problems. The reasons for not falling asleep were: 58% — obsessive thoughts, 48.7% — extraneous noises, 41.3% — uncomfortable position in the bed, 40.7% — light and 12% — fatigue.Due to a sleep disorder, 47.7% of students often woke up at night and then quickly fell asleep again, 8.6% — seldom woke up, but then could not fall asleep. 43.7% of the students almost never woke up at night.Also, with an increased lack of sleep, people became exhausted, irritable and aggressive, or sluggish. Among the respondents, only 5% of students never noticed any changes, 79.5% — experienced lethargy, 49.7% — irritability, 43.7% — headache, and 30.5% showed aggression.Since the body experienced stress in the conditions of lack of sleep, this had a negative impact on appearance. Probably that was the reason for many students to have skin rash, hair loss, weight loss, eye bags and so on.The study showed that 40.7% of respondents used energy drinks as a method of combating lack of sleep, and 59.3% did not use anything and made up for lack of sleep on weekends. To improve falling asleep, they took sleeping pills in 19.3% of cases.

Conclusion. After conducting the survey and summarizing the results, the following conclusions could be drawn:

1. Most medical students suffered from lack of sleep. 2. Exhaustion, drowsiness, irritability, aggressiveness, and reduced concentration were the most common manifestations of insufficient sleep. 3. Lack of sleep had a negative impact on students' studies, daily activities and mood. This research allowed some suggestions for improving students' health and academic performance. The main components of healthy sleep were compliance with the system of education and rest activities, as well as self-control of emotional state and sufficient daily physical activity.

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НЕДОСТАТОК СНА СРЕДИ СТУДЕНТОВ-МЕДИКОВ

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Аннотация. Недостаток сна у студентов вызывает беспокойство у многих специалистов, поскольку недосыпание может привести к серьезным проблемам со здоровьем. На самом деле недостаток сна может ухудшить память и мышление, что является серьезной проблемой, усугубляющей трудности в учебе. Студенты-медики нуждаются в достаточной продолжительности сна в связи с особо высокими учебными и психологическими нагрузками. Характер и продолжительность сна, по-видимому, являются показателями здорового образа жизни. Исследование посвящено анализу значения сна для студентов-медиков и его влияния на их распорядок дня.

Ключевые слова: недосыпание, студенты, самочувствие, невнимательность, эмоциональное состояние.

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УДК 661.162.66

THE INFLUENCE OF ARSENIC AND SELENIUM SALTS ON THE GROWTH AND DEVELOPMENT OF PLANTS

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Abstract. There are many scientific works now devoted to the identification of the influence on the plant growth by heavy metal salts. It was determined the degree of influence of arsenic's and selenium's salts on germination and development of cultivated plant's grains (*Secale cereale* L) and of representative of wildlife's grains (*Melica virgata* Turcz. ex Trin). Their role in the level of oxidative stress was identified. Oxidative stress is a process that occurs as a result of an increased concentration of reactive oxygen species (ROS) in cells. It is a key component of the body's reactions to stressful environmental conditions.
Keywords: arsenic's and selenium's salts, *Secale cereale*, *Melica virgata*, oxidative stress, reactive oxygen species, MDA (malondialdehyde)

The goal of the research is identification of the effect of arsenic and selenium salts on the germination of the *Secale cereale* and *Melica virgata* plants, their growth and on the development of oxidative stress.

The objectives are:

– The investigation of arsenic and selenium salts effect on the growth of the plants;
– Identification of oxidative stress on the MDA concentration;
– Comparison of growth and development of plants under the influence of arsenic's and selenium's salts and without it.

The first stage of the germination of *Secale cereale* and *Melica virgata* took place in Petri dishes. Filter paper was placed on the bottom, *Secale cereale* or *Melica virgata* grains were placed on it and filled with water, for control, solutions of arsenic salts with a concentration of 1 mg/l and 10 mg/l or selenium salts with the same concentrations. Then they were closed with transparent lids, placed in a special device — the thermostat and stood there at a temperature of 25°C.

The very next day from the beginning of the experiment, sprouts began to appear. In all the cups, quite intensive germination began, which in the first days did not particularly depend on salt solutions and their concentration. Further, in the *Melica virgata*, a slowdown in the growth process was observed after reaching certain values: the length of the roots of the *Melica virgata* was about 1.2 cm, the length of the leaf was about 3.2 cm (see Table 1).

Table 1

Morphometry of *Melica virgate*

	01.12.2021		03.12.2021		11.12.2021	
Criterion	Rootlength, cm	Leaflength, cm	Rootlength, cm	Leaflength, cm	Rootlength, cm	Leaflength, cm
As 1 mg/l	0,9	2	1,1	3	1,2	3,4
As 10 mg/l	0,9	2	1	3,1	1,1	3,2
Se 1 mg/l	0,8	2	1,1	2,7	1,25	3
Se 10 mg/l	0,9	1,5	1	2,8	1,3	3,1
Control	0,8	1,9	1	2,7	1,1	3

In *Secale cereale*, in the first days, more active growth was observed in containers with an arsenic salt solution with a concentration of 1mg/land a selenium salt solution with a concentration of 10 mg/l, but in the following days the growth process accelerated in the control, and in the rest began to slow down, as can be seen from Table 2:

Table 2

Morphometry of *Secale cereal*

	08.12.2021		11.12.2021		18.12.2021	
Criterion	Rootlength, cm	Leaflength, cm	Rootlength, cm	Leaflength, cm	Rootlength, cm	Leaflength, cm
As 1 mg/l	3	5,5	4	6,5	10	15,5

As 10 mg/l	4	2,7	4,5	3	8	12
Se 1 mg/l	5,1	4,5	7	5,3	7,2	10
Se 10 mg/l	8,5	6,5	9,5	9,7	9,5	13,8
Control	3,5	1,5	6,5	6,5	15,5	17

According to the tables, it can be concluded that *Secale cereale* grows more intensively.

After the leaves and roots had significantly increased in size, we moved them from Petri dishes to more spacious containers for them — glasses, and covered them with foil and a lid in order to get as little oxygen inside as possible, as well as to avoid excessive evaporation. Next, the glasses with sprouts were also placed in a thermostat.

During the entire study, it was necessary to monitor the condition of the sprouts: check the amount of liquid in the cups to make sure that the sprouts do not dry out and do not moldy.

If we talk about the germination of sprouts, then *Melica virgata* in all containers had a germination close to 100% in value. In *Secale cereale*, seed germination was equal to more than 70% (see Tables 3 and 4, Diagram 1 and 2).

Table 3

Quantitative ratio of sprouted *Secale cereale* seeds

	8.12	11.12	18.12
Control	5/20	10/20	15/20
As (10 mg/l)	5/19	9/19	14/19
As (1 mg/l)	6/19	10/19	15/19
Se (10 mg/l)	5/18	10/18	14/18
Se (1 mg/l)	5/19	10/19	15/19

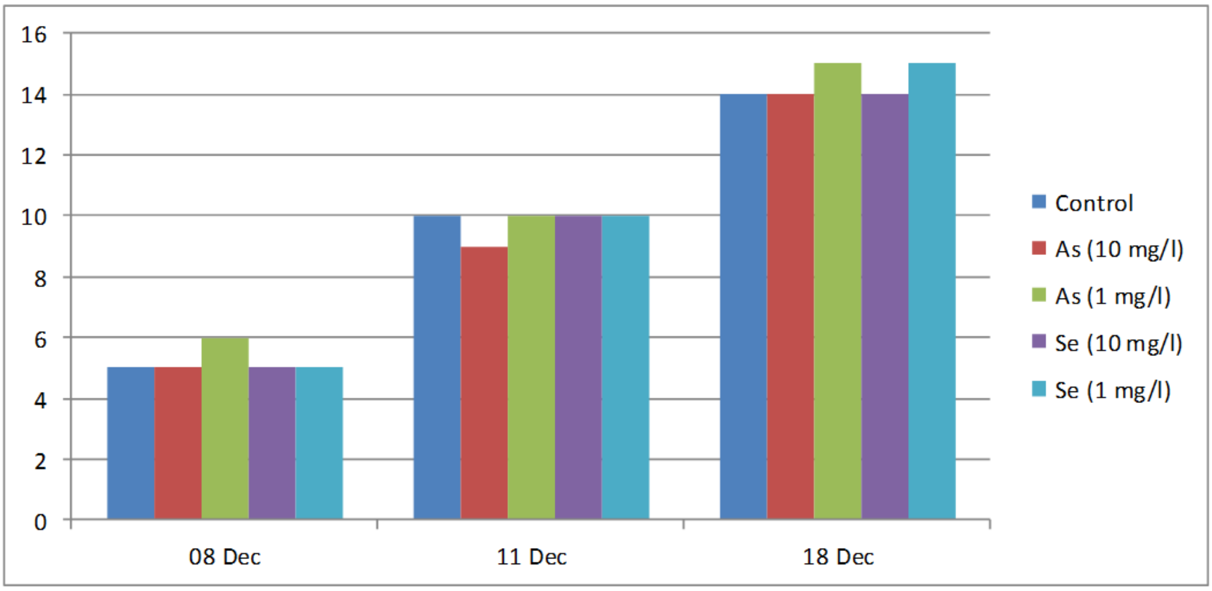


Diagram 1. Quantitative ratio of sprouted *Secale cereale* seeds

Table 4

The germination of *Secale cereale* in different containers

	8.12	11.12	18.12
Control	25%	50%	75%
As (10 mg/l)	26%	47%	74%
As (1 mg/l)	32%	53%	79%
Se (10 mg/l)	27%	55%	77%
Se (1 mg/l)	26%	53%	79%

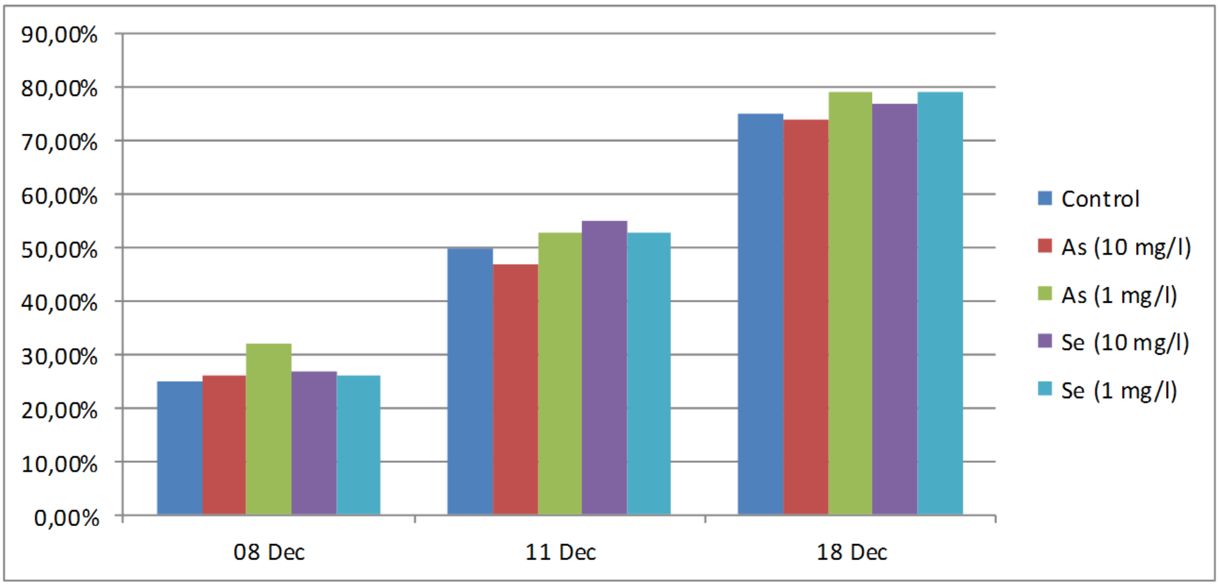


Diagram 2. Percentage ratio of *Secale cereale* germination in different containers.

Judging by the number of sprouts that have sprung up, it can be concluded that the presence of arsenic and selenium salts affects not so much the germination as the growth of the roots and leaves of the plant itself.

The sprouts were grown for 2 weeks; after which they underwent an oxidative stress response.

Oxidative stress is a process that occurs as a result of an increased concentration of reactive oxygen species (ROS) in cells and is a key component of the body's reactions to stressful environmental conditions. It has a complex and diverse metabolism.

An imbalance in the level of generation and neutralization of ROS is often a consequence of the failure of the antioxidant systems of the body. Free radicals, most often represented by ROS, are highly reactive molecules with unpaired electrons. In addition to oxygen, such molecules can also form nitrogen and sulfur atoms [2, p. 32].

ROS include hydroxyl radicals, singlet oxygen and hydrogen peroxide in plant cells and activate signaling pathways leading to some changes in the physiological, biochemical and molecular mechanisms of cellular metabolism [1, p. 7-8].

However, an excessive amount of ROS causes oxidative stress, a state of imbalance between the production of ROS and the neutralization of free radicals by antioxidants, which leads to damage to cellular components, including metabolites. The consequences of the destructive effects of ROS include peroxidation of lipids and phospholipids of cell membranes, oxidative damage to proteins. Reactive oxygen derivatives can interact with nucleic acids, damaging nitrogenous bases, deoxyriboses and riboses [4, p. 314].

To identify the level of oxidative stress, the values of the concentration of MDA (malondialdehyde) in plant seeds were determined for each of the solutions (see Table 6). To do this, the sprouted seeds of common *Secale cereale* and *Melica virgata*, immersed in their own solutions, were subjected to heat treatment (boiling).

A medical spectrophotometer is an electronic device that determines the composition of substances and their compounds in emulsions, suspensions and solutions using electromagnetic radiation. Light rays pass through the sample or are reflected from it. The device compares the flow of light that is initially directed at the biomaterial with radiation passing through the sample or reflecting from its surface [3].

It was necessary to install cuvettes filled with solutions of arsenic and selenium salts in different concentrations on a spectrophotometer stand, and then pass light rays through this material.

The monochromator of the spectrophotometer contains a prism that emit radiation of a certain wavelength. In our case, the values of the wavelength λ=532 nm and λ =600 nm were used. With the help of photodetectors, the spectrophotometer records the level of light radiation. In this case, the display reflected certain values of optical density, E (see Table 5), which were used to calculate the mathematical formula.

Table 5

Optical density, E.

Name of the solution	The value of the optical density (E) at λ = 532 nm	The value of the optical density (E) at λ = 600 nm
Control (*Melica virgata*)	0,033	0,011
As 1 mg/l (*Melica virgata*)	0,065	0,013
As 10 mg/l (*Melica virgata*)	0,05	0,025
Se 1 mg/l (*Secale cereale*)	0,230	0,106
Se 1 mg/l (*Melica virgata*)	0,04	0,020
Control (*Secale cereale*)	0,297	0,213
As 1 mg/l (*Secale cereale*)	0,387	0,335
As 10 mg/l (*Secale cereale*)	0,246	0,175
Se 10 mg/l (*Melica virgata*)	0,111	0,09
Se 10 mg/l (*Secale cereale*)	0,183	0,112

The following mathematical expression was applied:

$$C_x = \frac{(E_{532} - E_{600}) \times V_e \times 2}{K \times m_s \times V_a}$$

where Cx is the MDA content, mmol/g of the raw mass, E is the optical density of the solution, Ve is the volume of the extract, ml; Va is the volume of the extract taken for analysis, ml; K is the molar extinction coefficient of MDA: 156 mM-1*cm-1; ms is the mass of the extraction sample, g.

We used the values Ve=1.5ml and Va=0.3 ml. The values of ms, g of barley *Secale cereale* seeds were measured in advance:

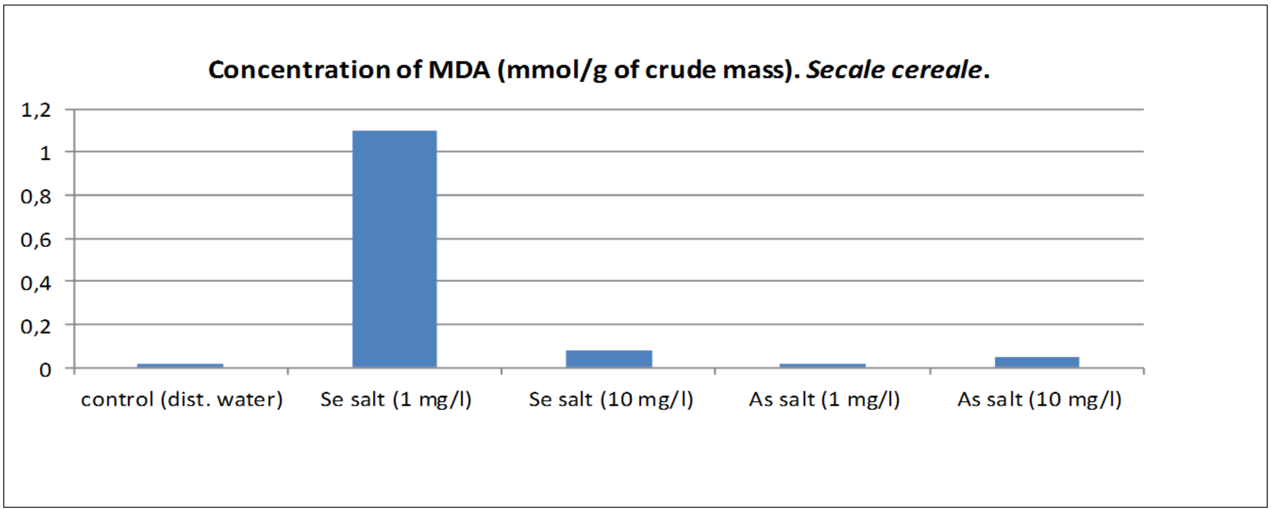
Name of the solution	M_s value, g
Control (*Melica virgata*)	0,0003
As 1 mg/l (*Melica virgata*)	0,0003
As 10 mg/l (*Melica virgata*)	0,0008
Se 1 mg/l (*Secale cereale*)	0,0072
Se 1 mg/l (*Melica virgata*)	0,0001
Control (*Secale cereale*)	0,2619
As 1 mg/l (*Secale cereale*)	0,1735
As 10 mg/l (*Secale cereale*)	0, 1007
Se 10 mg/l (*Melica virgata*)	0,0004
Se 10 mg/l (*Secale cereale*)	0,0558

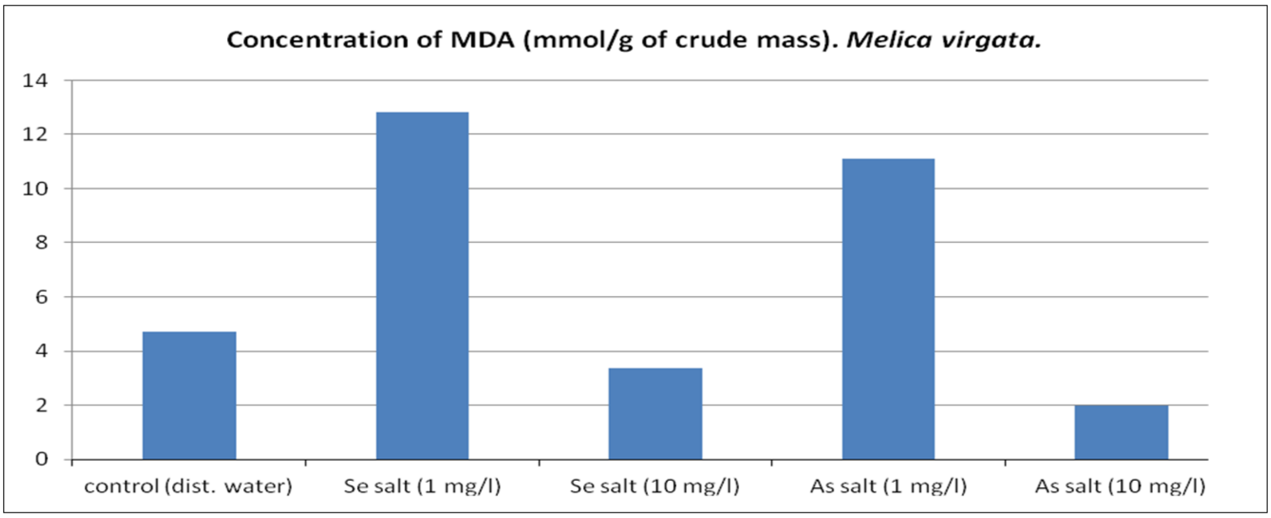
Substituting the known values into the formulas, we obtained the following MDA readings:

Table 6. MDA readings, mmol/g of raw mass

The Plant	Name of the solution	Concentration of MDA (mmol/g of crude mass)
Secale cereale	control (dist. water)	0,02
	Se salt (1 mg/l)	1,1
	Se salt (10 mg/l)	0,08
	As salt (1 mg/l)	0,02
	As salt (10 mg/l)	0,045
Melica virgata	control (dist. water)	4,7
	Se salt (1 mg/l)	12,82
	Se salt (10 mg/l)	3,365
	As salt (1 mg/l)	11,11
	As salt (10 mg/l)	2

From the data obtained, it can be concluded that the concentration of MDA has higher values in *Melica virgata* (control, As 1, As 10, Se 1, Se 10) and less high *Secale cereale*. In addition, *Secale cereale* reacts more strongly to selenium than *Melica virgata*. This is explained by the fact that plants belong to different species groups. The weight of the suspension will not affect the concentration of malondialdehyde, since the values per 1 gram of raw mass were taken. At low concentrations of arsenic and selenium salts in *Melica virgata*, the level of oxidative stress increases, at higher concentrations it decreases. So, the largest values of MDA are observed in selenium and arsenic at a concentration of 1 mg/l. Consequently, the lower the concentration of heavy metal salts, the higher the level of MDA, and hence the level of oxidative stress.





Conclusion: Analyzing the data obtained, we can say that arsenic and selenium salts have a significant impact on the development of *Secale cereale* and *Melica virgata* seedling — there is an intensive growth of leaves and roots of plant seedling, but up to a certain level. Further, the process slows down, and the values of the length of the organs of the seedling immersed in arsenic and selenium salts do not exceed those of the seedlings taken for control. The level of oxidative stress is higher at low concentrations of selenium and arsenic salts.

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ВЛИЯНИЕ СОЛЕЙ МЫШЬЯКА И СЕЛЕНА НА РОСТ И РАЗВИТИЕ РАСТЕНИЙ

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Аннотация. Сейчас существует множество научных работ, посвященных выявлению влияния солей тяжелых металлов на рост растений. Определена степень влияния солей мышьяка и селена на прорастание и развитие зерна культурных растений (рожь посевная) и представителя злаков дикой природы (перловник прутьевидный). Была выявлена их роль в уровне окислительного стресса. Окислительный стресс — это процесс, возникающий в результате повышенной концентрации активных форм кислорода (АФК) в клетках. Это ключевой компонент реакций организма на стрессовые условия окружающей среды.
Ключевые слова: соли мышьяка и селена, рожь, перловник, окислительный стресс, активные формы кислорода, стрессовые условия окружающей среды.
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УДК 316.7

IMPACT OF MUSIC ON MEDICAL STUDENTS

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Abstract. It's common knowledge that music is important for people's life and health. The life of medical students appears to be obviously connected to music: students are fond of listening to the music, playing it, and singing. Sometimes music interferes with their daily routine and studies. The research deals with an attempt to estimate of degree of students' dependence on music and identification of a certain type of their addiction.
Keywords: music, medical students, daily routine, impact, addiction, dopamine.

Addiction is defined as "not having control over doing, taking or using something to the point where it could be harmful". Addiction is most commonly associated with drugs, alcohol and smoking but not with music, according to the UK National Health Service. Nevertheless, researchers from McGill University Valorie Salimpoor and Robert Zatorre from Montreal, found that dopamine released during moments of enjoyments while listening to music. When a person listens to music there's often an emotional peak which he may expect. When emotional peak arrives, dopamine releases. Thus, that person wants to listen to some song again and again. Some people may get "addicted" to music because of this. It was also found that music had numerous positive functions, for example, music therapy was used to reduce stress, pain and blood pressure, to decrease anxiety and depression, to improve memory, to lower cholesterol, to diminish risk of heart disease and stroke. Actually music therapy and music therapists are quite common.

The goal of this project was to assess the impact of music on students' life.

The objectives were: 1. to study how music affected life of medical students; 2. to find whether they had an addiction to music.

Materials and methods. Analysis of scientific literature and video sources, questionnaire for the students of the Chita State Medical Academy, comparative analysis and data statistical processing methods were used.

Results. The survey was conducted among 138 respondents. It involved medical students of the Chita State Medical Academy. According to the data obtained, the respondents were divided into the following groups: 91 (65.9%) female respondents, 47 (34.1%) male respondents. The age ratio was as follows: 96 respondents aged 18-19 years, 42 respondents aged 20-27 years. Most respondents 93 (67.4%) loved listening to music, 44 (31.9%) listened depending on mood, only 1 (0.7%) did not like listening to music. The reasons why people listened to music were as follows: music "cheered them up" (17 students), music "settled them down" (17 students), music gave motivation and power (10 respondents), other reasons (42 respondents). 13 (9.4%) respondents had music education, 110 (79.4%) did not have music education, 17 (12.3%) learned to play music. 99 (71.7%) respondents did not play any musical instruments, 39 (28.3%) played some instruments. 107 (78.1%) respondents liked singing songs, 30 (21.9%) did not like to sing songs. The top 3 music genres were: pop music for 102 (77.3%) respondents, rock music — 67 (50.8%) respondents, rap music — 79 (59.8%). 99 (72.3%) respondents listened to music at any time, 70 (51%) respondents listened during cleaning up, 24 (17.5%) — often during their studies. Music made 131 (91.9%)

respondents feel calm, though 7 (5.7%) respondents did not feel calm. Answering the question whether music made them feel confident, 124 (91.2 %) respondents said "more yes, than no", while 12 (8.8%) — "more no, than yes". 2 respondents were not sure. 94 (68.6%) stated that music made them forget about the outside world, 43 (31.4%) had an opposite opinion, and 1 respondent wasn't sure. 75 (54.3%) could not imagine their daily routine without music, and 63 (45.7%) could. Generally, 81 (58.7%) respondents considered they had not any addiction, 51 (41. 3%) had this or that type of addiction; all the rest were not sure. The most common addiction types were: social media — 51 (78.5%) respondents, gadgets — 38 (58.5 %), food — 27 (41.5%), others — 22 (15.94%). 85 (61.6%) stated they had no addiction to music, 24 (17.4%) found it difficult to answer, 29 (21%) were sure they had a certain addiction to music. Answering the question where music could be used, 125 (90.6%) suggested sports, 29 (21%) — studies, 37 (26.8%) — disease treatment, 113 (81.9%) — spiritual development.

Conclusion. The results were controversial. Only 21 students stated they had an addiction to music and 85 did not have an addiction; all the rest were not sure. Since the results obtained were based only on the students' opinion, it was impossible to consider them fully reliable. Still 75 respondents couldn't imagine their daily routine without music that suggested that most likely they had an addiction to music, but they were not aware of it. Consequently, more than half (54.4%) of the Chita State Medical Academy students were aware of strong impact of music on their life, feelings and emotions.

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ВЛИЯНИЕ МУЗЫКИ НА СТУДЕНТОВ-МЕДИКОВ

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Аннотация. Общеизвестно, что музыка важна для жизни и здоровья людей. Оказывается, жизнь студентов-медиков несомненно тесно связана с музыкой — они увлечены прослушиванием музыки, игрой на музыкальных инструментах или пением. Иногда увлеченность музыкой мешает их учебным занятиям. В исследовании делается попытка оценить степень зависимости студентов от музыки, выявление у них определенного типа аддикции.
Ключевые слова: музыка, студенты-медики, повседневная практика, влияние, аддикция, дофамин.
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УДК 811.111

ANALYSIS OF PRESENT-DAY METHODS OF LEARNING ENGLISH

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Abstract. At present, distant and independent learning is of great significance especially for students. The article presents the analysis of available learning techniques that can be helpful in the educational process. The advantages and disadvantages are analyzed during an experimental part after determining the type of respondents' dominant perceptual modality.
Keywords: Chita State Medical Academy, the English language, methods of learning, mobile applications.

The COVID-19 pandemic has caused great changes in many spheres of the society. According to such authoritative dictionaries as the Oxford Dictionary and the Cambridge Dictionary, the main words of 2020 were: coronavirus, quarantine, key workers, lockdown, pandemic, self-isolation, etc., which testify to significant transformations worldwide. Internet has become a chief platform for most social activities, including education. The most significant problem was the distant and independent study of curriculum subjects, especially English, the main communication language in the virtual space. The development of present-day techniques of learning English are aimed at mastering the vocabulary and grammar rules within a short period.

The goal of the study was the search for up-to-date methods of learning English, analysis of the efficacy of their use in the educational process at Chita State Medical Academy.

The objectives are:

1. Social survey on the role of English for medical students.
2. Review of modern methods for self-study of English
3. Experiment in three stages.

A social survey of 190 students of the medical and pediatric faculties of ChSMA: 139 of them were girls and 51 boys who had a questionnaire that included questions about the role of English for medical students.

The respondents were interested in learning English; 73.7% considered that a a health professional has to know English. 179 (94.2%) of respondents studied English at school. On a ten-point scale, 19.6% of the respondents assessed their own level of language proficiency by 5 points, which may indicate insufficiently formed knowledge acquired in school on this subject. For 128 (67.4%) students, the reason for difficulties is a lack of time. Only 53 (27.9%) of respondents were engaged in additional language learning, and 88 (46.5%) were not engaged in it at all. To the main question of the questionnaire about the availability of ideas about modern methods of learning English, 140 (73.5%) of respondents answer that they are not aware of the existence of such methods, but 113 (59.5%) of respondents would prefer to combine both classical and standard methods in full-time format.

It was interesting to analyze the respondents' answers to the question about motivation to learn a language: some seek to learn a language in order to travel the world, and some are interested in understanding English in a variety of media (cinema, literature, video games, foreign media). For someone it is important to be able to support any topics for conversation with foreigners, and for someone it is necessary to know English in order to read scientific publications in it. There is a correlation between the desire to learn a foreign language and the experience of studying it at school. All of the above speaks about the desire of students to learn the language and their motivation. Based on the conducted social survey, an overview of modern methods of learning English is offered.

Modern methods of learning English existed long before the events of the COVID-19 pandemic, but it was the pandemic that contributed to the actualization of such methods. As you know, many people had to isolate themselves and work while at home, so people who studied English in familiar conditions had to adapt and look for other ways of self-development in the field of a foreign language. Various online English language schools help in this situation. They help you choose an individual route from several plans, both for adults studying English for a career, travel and entertainment, and for teenagers who need to study for successful exams. For example, the popular Russian online English school Skyeng or the British online school Oxford Online English allow you to build your own trajectory of language learning for a fee. Skyeng and Oxford Online English have their own channels on the YouTube video service, on which videos on various topics are regularly published, in which the grammar and vocabulary of the English language are necessarily involved.

Another way of in-depth language learning is to watch movies, TV series and other media in English with subtitles, but this is suitable for people who already have some experience and level of language proficiency. The pandemic has also contributed to the emergence of mobile applications for communication with foreigners from all over the world. For example, the popular Ablo mobile application allows you to correspond and make video calls with people from anywhere in the world by randomly selecting an interlocutor. This not only helps to consolidate the knowledge of the language, but also to develop communicative qualities, which will be very useful for antisocial people.

A technique using video games. Plot-oriented video games also contribute to a more in-depth study of the English language, because in such games the emphasis is on narrative and characters. Such video games are mainly developed for an English-speaking audience, which means that the characters also speak English. In addition, in such video games there is often the presence of subtitles in Russian, so anyone who wants to play will be able to deepen their knowledge of English by reading subtitles and visually observing the gameplay. This method of language learning is suitable for people with a level of knowledge of English above average. There are many video games focused on storytelling and the interaction of characters with each other through communication. All these video games are united by an exciting plot and memorable colorful characters who speak English and can introduce the player to many speech turns and phrases. Examples of such games are video games called Life is Strange, Night in the Woods, What Remains of Edith Finch, Vanishing of Ethan Carter, Firewatch, Oxenfree and others.

Continuing to talk about communication, the VRChat video game is worthy of mention, which is a massively multiplayer online virtual reality platform. The user creates an avatar for himself (a virtual character for whom he will play), and the video game puts him in one of the many rooms in which other users are already playing. The peculiarity is that these users are also people from all over the world. The game provides the user with the possibility of social interaction through voice chat, which means that anyone who wants to talk to a foreigner can fully realize this desire in a playful way.

Listening to music in English also contributes to the development of auditory memory, because very often English words are used in the songs of foreign performers, which are easily remembered with pleasant instrumental accompaniment. You can view the text of your favorite song, read it aloud several times, and maybe even sing it, and eventually remember an interesting phrase or word. Those who are keen on learning English are recommended to keep a kind of diary written in a foreign language. Common English expressions and phraseological units used in everyday life can be entered into it.

All of the above modern techniques are suitable for people with already formed knowledge of the English language, but the question arises about the rest of the people who seek to learn English in an applied way in a short time. In this situation, these people are students of CHMA. It was for them that three methods of memorizing English words were selected in the shortest possible time. An experiment was conducted to test the effectiveness of these techniques.

The experiment, in which 36 students participated, included S. Efremtsev's testing to determine the type of dominant perceptual modality. This testing allowed the subjects to be divided into 3 conditional groups: visual (13 people), auditory (12 people) and kinesthetic (11 people).

After that, all the subjects were offered to study the lexical minimum according to three methods:

1) memorizing words through watching the educational video "How to Talk about Illness and Medicine in English", from the Oxford Online English online school;

2) Memorizing words using flashcards in the Quizlet mobile app;

3) memorizing words in a playful way in the Puzzle English app.

The duration of the study was 14 days, of which a social survey was conducted for 7 days, and an experiment was conducted on the other 7 days, 2 days for each technique.

A lexical minimum of 14 words and expressions was given for each method.

The technique with the video included actually watching the video 2 times a day, writing out words and expressions from the video and re-watching the video the next day.

The method with the cards included the use of the Quizlet mobile application, in which a module with the necessary lexical minimum of 14 words and expressions was created in advance. The participants of the experiment were asked to study words from these cards for 24 hours.

The technique of learning words in a playful way in the Puzzle English application included a game mode of the application called "Typesetter". Participants were asked to compose as many words as possible from a given word in English in a certain time, which were shown immediately in the application.

After mastering each technique, testing was offered to check the memorized words. The testing included 14 questions, each for one word. The lexical minimum included the following words: fever, cough, sore throat, swelling, rash, prescription, prescribe a medicine, painkiller, pill, take with food, avoid alcohol, get enough sleep, stay hydrated, avoid stress, pandemic, lockdown, prevention, contagiousness, self-isolation and more.

The best results (90-100% of correct answers) were shown by testing on the studied Quizlet application cards: 28 people out of 36 (86.67%) were completely successfully tested: 12 visuals, 9 kinesthetics and 7 audials. Testing on the video showed the following results: 24 students out of 36 (66.67%), namely 13 visuals, 6 audials and 5 kinesthetics, managed to get good results (90-100% correct answers). Testing on words learned in a playful way showed the lowest results: only 19 students out of 36 (52.78%) managed to successfully answer questions (90-100% of correct answers): 14 kinesthetics, 3 visual and 2 auditory.

A survey conducted after the experiment showed that students with an auditory type of perception were most suited to the option of studying words through watching videos, visual students easily managed to learn words through flashcards, and kinesthetics found the best option to study words in a playful way. There was no correlation between the level of additional knowledge in English.

Conclusion. We came to the conclusion that in conditions of social distancing it is very important to discover modern methods of self-study of the language, because classical methods in these conditions become difficult to access. Such techniques can be very useful. The study revealed that students consider it important to study English at a medical university. In medical school, the main goal of mastering the English language program is to expand the vocabulary through terminology. Therefore, in such a situation, unusual ways of memorizing words help. Of the three listed options for learning English, the most effective was the option with Quizlet cards. A student can independently create flashcards with the necessary lexical minimum and start learning words from them. However, there are other methods of language learning presented, such as watching educational videos or learning words in a playful way. The choice of methods of learning English directly depends on the leading type of perception, so before starting it is recommended to take a test with. Efremtseva to determine his type, and only then try each of the ways. Those interested in in-depth acquisition of knowledge of the English language should familiarize themselves with modern methods, since this has become most relevant during the pandemic. It is important to have motivation to learn a language, otherwise none of the above methods will be effective without it.

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АНАЛИЗ СОВРЕМЕННЫХ МЕТОДОВ ИЗУЧЕНИЯ АНГЛИЙСКОГО ЯЗЫКА

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Аннотация. В настоящее время дистанционное и самостоятельное обучение имеет большое значение, особенно для студентов. В статье представлен анализ доступных методов обучения, которые могут быть полезны в образовательном процессе. Преимущества и недостатки анализируются в ходе экспериментальной части после определения типа доминирующей модальности восприятия респондентов.

Ключевые слова: Читинская государственная медицинская академия, английский язык, методика изучения, мобильные приложения

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УДК 612.115.3

INFLUENCE OF INTERLEUKIN-2 ON THROMBIN FORMATION IN WHOLE BLOOD CULTURE

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Abstract. Currently, the method of cytokine therapy is widely used for the treatment of various diseases. Interleukin-2 has found wide application for the treatment of oncological diseases and a number of infections. The procoagulant effect of this interleukin is known, which is not desirable in patients and requires the administration of anticoagulants. The paper presents the results of a study of the effect of interleukin-2 on the formation of thrombin, a key coagulation factor. Using the thrombin generation test, a new global method for assessing the hemostasis system, the stimulating effect of cytokine on the formation of the enzyme in whole blood culture has been proven.

Keywords: interleukin-2, thrombin, thrombin generation test, endogenous thrombin potential, whole blood culture, thrombodynamics 4D.

Interleukin-2 (IL-2) is known as a powerful pro-inflammatory cytokine that is able to activate various populations of lymphocytes, monocytes and dendritic cells. It stimulates cell proliferation, cell migration to the area of inflammation, enhances the interaction of antigen-presenting cells with the antigen [1]. IL-2 has found wide application in the treatment of oncological diseases due to the stimulation of antitumor cell defenses, as well as an immunostimulant in the fight against infections. However, despite the many positive effects, the use of this interleukin can cause some side effects, in particular related to its procoagulant properties. The physiological role of IL-2 in the regulation of primary and secondary hemostasis remains poorly understood. Understanding these mechanisms opens up a significant future prospect for the treatment of patients with tumor diseases, inflammatory processes, and pathologies complicated by thrombosis.

Thrombin is the main enzyme of hemostasis. It catalyzes the conversion of fibrinogen to fibrin and activates procoagulant factors V, VIII, XI and XIII. In addition, when bound to thrombomodulin, it activates protein C, an anticoagulant zymogen. Thrombin also activates platelets, regulates the function of endothelial cells, and has a direct effect on other cells [2]. It is known that, by activating PARs, thrombin can regulate physiological processes, such as embryonic development, wound healing, as well as pathophysiological processes, such as cancer, sepsis, fibrosis, and inflammation. Thrombin can have the opposite effect on cells, on the one hand, inducing anti-inflammatory reactions, and on the other hand, inflammatory reactions. However, excessive formation of thrombin can lead to vascular occlusion with consequences of myocardial infarction, stroke, thrombosis [3].

The thrombin generation test (TGT) is known as a global test for assessing the total effect of all blood coagulation factors on the dynamics of thrombin formation. TGT uses a trigger to mimic damage to the vascular wall, such as tissue factor. Compared to tests that assess fibrin clot formation as a whole, TGT provides more information because thrombin formation continues at the time of fibrin clot formation [4].

The goal of the research: to research investigate the effect of interleukin 2 on the formation of thrombin in whole blood culture.

Materials and methods.

The objective is whole blood of 12 practically healthy men aged 18-20. Blood sampling was carried out by venipuncture. Donors were excluded: taking antiplatelet agents and anticoagulants, smoking, physical activity, food intake before the research. Blood was collected in plastic vacuum tubes with 3.2% Na citrate solution. The tube with the first portion of blood containing traces of tissue factor was disposed of. For the research, blood was used in the second test tube. The samples were divided into two equal parts and placed for incubation in a thermostat at 37°C for 2 hours. Preliminarily, sterile saline was added to the control sample, and Interleukin-2 (Roncoleukin®) was added to the test tube at a final concentration of 0.2 mcg per 1 ml of blood. After incubation, the blood was swirled twice for 20 and 15 min at 1600 g acceleration to obtain platelet-free plasma. Previously received fresh platelet-free donor plasma, which was mixed with previously incubated in a ratio of 6:1. Samples were placed in fluorochrome cuvettes and reagents were added in accordance with the instructions for operating the instrument. Thrombin generation was assessed by fluorescent microscopy using the "T2-T Thrombodynamics analyzer" instrument manufactured by "HemaCore", Russia. The principle is based on measuring the spatial luminescence of fluorochrome during the production of thrombin. Coagulation is initiated in the cuvette of the device in a mixture of the studied plasma and reagents by introducing a plastic insert coated with recombinant tissue factor. As a result of its contact with the plasma, the growth of the clot begins, the parameters of its spatial growth are recorded by a photo/video camera and are described further by the recording software. TGT allows estimation of several parameters of spatial thrombin generation, which include Ast—stationary amplitude of the moving thrombin peak, Vt—spread velocity of the thrombin concentration peak in space, ETP—activated thrombin potential or area under the curve of activator thrombin generation, Cmax—maximum thrombin concentration near the activator , Lag is the time to the start of thrombin formation in the activator region and Tmax is the time to reach the peak of thrombin formation.

Statistical processing of the obtained data was carried out using the LibreOffice Calc program, as well as using the online calculator [5]. Quantitative results are presented as median (Me) and percentiles [0.25; 0.75]. The reliability of the data, depending on the nature of their distribution, was assessed by the methods of parametric and nonparametric statistics. Student's t-test and Mann-Whitney U-test were used. In all cases, $p<0.05$ was considered statistically significant.

Results and its discussion: In the course of the conducted studies, it was found that the introduction of IL-2 into the whole blood culture increased the generation of thrombin. Thus, the indicator of endogenous thrombin potential (ETP) increased in the experimental sample by 1.6 times (in the control 1035.2 [902.2; 1289.0] u, in the experiment 1709.1 [1615.9; 1837.0] u, $p<0.01$). Under the influence of IL-2, the peak concentration of thrombin (Cmax) increased by 1.35 times in comparison with the control (the indicator is 302.25 [162.5; 246.6] and 223.2 [297.4; 312.9] in samples, respectively, $p<0.01$). Also, under the influence of the studied cytokine, the time to reach the peak of thrombin Tmax increased by 1.33 times (2.0 [1.9; 2.0] in the experimental group versus 1.5 [1.5; 1.6] in the control group, $p<0.05$). The period of initiation of thrombin formation (Lag time), Ast and Vt showed no significant differences, data are not presented. As a result of the research, it can be concluded that the presence of IL-2 in whole blood leads to an increase in its procoagulant potential due to increased thrombin generation. How can the results be explained? Proinflammatory cytokines are known to have procoagulant properties. So Vitkovsky Y.A. It has been proven that plasma coagulation time is reduced when lymphocyte culture supernatant is added after their incubation with some cytokines, in particular IL-2 [6]. Given that IL-2 receptors are present precisely on mononuclear cells, it is likely that they are indirectly involved in the increase in thrombin generation. However, in the previous works used long-term cell culture. In our experimental system, the culture was short-term — only 2 hours. Thus, the participation of other cells in response to the introduction of IL-2 is more likely. It is well known that monocytes also carry IL-2 receptors on their surface [7]. Therefore, they also undoubtedly react to his presence. In addition, these cells can respond very quickly to changes in the concentration of cytokines due to their properties, they only need a few hours to activate. In addition to all of the above, an important feature of monocytes is the ability to express tissue factor on the membrane surface when they are activated. As is known, when a tissue factor appears, the external pathway of blood coagulation is triggered with the participation of factor VII and the subsequent formation of an external tenase complex (Xa + Va). External tenase is able to convert prothrombin to thrombin and increase the prothrombogenic potential of plasma and blood. In addition, the resulting thrombin activates blood platelets, on the surface of which the internal coagulation pathway is launched, followed by the formation of internal tenase and, as a result, the generation of a new portion of thrombin from prothrombin. It is noteworthy that it is the thrombin generation test that makes it possible to assess the true prothrombogenic potential of the blood by recording the level of this protease, which is lacking in widely used coagulological tests based on recording the amount of fibrin formed. This only indirectly reflects thrombin activity. Considering that there are specific PAR receptors for thrombin on various types of cells (platelets, endothelium, etc.), the creation of blockers of these receptors can serve as a promising way to prevent thrombosis and eliminate side effects during chemotherapy or treatment with cytokines, such as interleukin-2 [8].

Conclusion: Thus, was founded the ability of interleukin-2 to increase the formation of thrombin in whole blood culture. Using the thrombin generation test, an increase in the amount of the generated enzyme, its peak concentration, the endogenous thrombin potential index, and the time to reach the thrombin peak was proved. The results obtained require further research in order to identify the role of various formed elements in the generation of thrombin and changes in the coagulation properties of blood. In the future, this will make it possible to understand the pathogenesis of many diseases accompanied by thrombus formation and help to correct their treatment.

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ВЛИЯНИЕ ИНТЕРЛЕЙКИНА-2 НА ОБРАЗОВАНИЕ ТРОМБИНА В КУЛЬТУРЕ ЦЕЛЬНОЙ КРОВИ

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Аннотация. В настоящее время широко используется метод цитокинотерапии для лечения различных заболеваний. Широкое применение нашел интерлейкин-2 для лечения онкологических заболеваний и ряда инфекций. Известен прокоагулянтный эффект этого интерлейкина, который не желателен у пациентов и требует назначения антикоагулянтов. В работе представлены результаты исследования влияния интерлейкина-2 на образование тромбина, ключевого фактора свёртывания культуры цельной крови. С помощью теста генерации тромбина, нового глобального метода оценки системы гемостаза, доказано стимулирующее влияние цитокина на образование тромбина.

Ключевые слова: интерлейкин-2, тромбин, тест генерации тромбина, эндогенный тромбиновый потенциал, культура цельной крови, тромбодинамика 4D

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УДК 57.085.23

THE EFFECTIVENESS OF THE USE OF HUMAN UMBILICAL CORD BLOOD PLATELET LYSATE AS A REPLACEMENT FOR XENOGENIC SERUM FOR THE CULTIVATION OF MESENCHYMAL STEM CELLS

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Abstract. Biomedical technologies related to cellular and tissue engineering constructs involve the use of biomaterials from different sources. Perinatal tissues (placenta, umbilical cord blood, platelet lysate of umbilical cord blood, stroma of the umbilical cord, etc.) are considered by researchers and clinicians as promising objects for cell therapy of a wide range of acquired and hereditary diseases. This study evaluated the effectiveness of using umbilical cord blood platelet lysate as an alternative to xenogenic growth factors for building cell mass of mesenchymal stem cells from the stroma of the human umbilical cord in clinical and laboratory protocols.
Keywords: cell therapy, mesenchymal stem cells, cord blood, umbilical cord, tissue engineering.

Prospects for the use of cells and cellular derivatives of perinatal tissues in the treatment of a wide range of pathological conditions of the body (in cardiology, neurology, angiology, traumatology and orthopedics, in diseases of the liver, kidneys, reproductive system, and oncology) are highly appreciated by experts [4]. The most important element of the success of cell technology and tissue engineering is the availability of the necessary number of functionally active cells. In this regard, the first task of tissue engineering arises is the search and availability of a stable and accessible source of functionally active cells and derivatives [2]. The human umbilical cord is a source of mesenchymal stromal stem cells, having a combination of such properties as the absence of ethical problems in the production of biomaterial, significant proliferative and differentiation potential high immunomodulatory activity. Cord blood is the blood preserved in the placenta and umbilical cord vein after the birth of the baby; it contains a high number of hematopoietic (hematopoietic) stem cells, similar to their content in the bone marrow, as well as growth factors such as cytokines, TGF-b, interleukins [4]. Currently, isolated and cultured umbilical cord cells are a promising storage object for leading biobanks of the world, the number of registered clinical trials with their use is constantly increasing, but the question of using growth factors in the nutrient medium to maintain and expand the cells in vitro becomes acute [1, 3, 4].

The purpose of work is to determine the effect of umbilical cord blood platelet lysate on the morphofunctional features of human umbilical cord mesenchymal stromal cells in vitro.

Materials and methods. The umbilical cord blood was collected from women with verified status in cord blood containers containing 100 ml CFDA-1. Two-step centrifugation of umbilical cord blood was performed in 50 ml tubes at 500g for 10 minutes and at 700g for 20 minutes. Cryodestruction of obtained platelets in phosphate-salt buffer (1:1) was performed at -20°C for at least 48 hours. Thawed and resuspended platelet lysate samples were centrifuged at 5000 rpm for 15 min and added to serum-free medium. Stromal mesenchymal stem cells were isolated from human umbilical cord jelly by enzymatic method and explants. The umbilical cord was transported in sterile DMEM/F12 nutrient medium with glutamine, with a double dose of antibiotic solutions (streptomycin-penicillin, gentamicin) and addition of HEPES buffer agent at 4°C. The blood was washed thoroughly with physiological solution (0.9% NaCl). The umbilical cord was cut into small pieces of 2-3 cm, and then thoroughly washed of blood with Hanks' solution or phosphate-salt buffer with antibiotics. After washing, pieces of umbilical cord were filled with transport medium (DMEM/F12 with glutamine and antibiotics) for mesenchymal stem cells. The umbilical cord was finely sliced to a mushy state (with scissors or scalpel); enzymatic disaggregation was performed using type I collagenase. Incubation was performed on a shaker in a thermostat at 37°C for 3 hours until gel-like. To neutralize the enzyme, we added growth medium consisting of 450 ml DMEM/F12 medium with glutamine, 50 ml fetal bovine serum, 200 μl FGF-2 solution, 750 μl heparin 5000 units, 750 μl gentamicin, 750 μl 0.2% diflucan, and 10 ml insulin 50-fold in triplicate. Cells were cultured at 37°C in a CO_2 incubator. The first medium change was performed after 24 hours, then the medium was changed every 72 hours by 7 ml. After 7-10 days, depending on the confluence of up to 70-80% confluent, the cells were removed from the Petri dishes and passed into culture vials. Cells were seeded at a density of 3-5,000 cells/cm2. Cell counting was performed using an automatic cell counter.

Results. An analysis of the morphophysiology of umbilical cord mesenchymal stem cells compared with culturing with the addition of 10% fetal bovine serum (positive control) and in medium without serum (negative control) was performed to evaluate the effectiveness of using platelet lysate as an additive in nutrient medium. After cultures of human umbilical cord mesenchymal stem cells reached 70-80% monolayer, the cells were removed from the surface of the culture vial using Versen solution and trypsin. The obtained cells were counted and transplanted to the following passages. Visual control of cell culture morphology using inverted microscopy was performed at all control points of the study (days 1, 3, 5, 7, and 14). We found that cell culturing in the presence of umbilical cord blood platelet lysate contributed to the preservation of morphology of mesenchymal stem cells characteristic of early passages of the umbilical cord, in the negative control cells were not viable-detached from the culture plate. In the course of cultivation in some early passages spontaneous differentiation-formation of mineralized areas of extracellular matrix and collagenic islets with volumetric extracellular formations on the surface — was noted.

It was found that the introduction of cord blood thrombolysate into a specialized nutrient medium for cultivation of stem cells provides obtaining a quality cell transplant in the same terms as in the cultivation with expensive serum (fetal calf serum). The findings allow us to recommend the use of cord blood platelet lysate as an alternative to xenogeneic serum in clinical and laboratory protocols.

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ЭФФЕКТИВНОСТЬ ПРИМЕНЕНИЯ ЛИЗАТА ТРОМБОЦИТОВ ПУПОВИННОЙ КРОВИ ЧЕЛОВЕКА В КАЧЕСТВЕ ЗАМЕНЫ КСЕНОГЕННОЙ СЫВОРОТКИ ДЛЯ КУЛЬТИВИРОВАНИЯ МЕЗЕНХИМАЛЬНЫХ СТВОЛОВЫХ КЛЕТОК

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Аннотация. Биомедицинские технологии, связанные с клеточными и тканеинженерными конструкциями, подразумевают использование биоматериалов из разных источников. Перинатальные ткани (плацента, пуповинная кровь, лизат тромбоцитов пуповинной крови, строма пупочного канатика и др.) рассматриваются исследователями и клиницистами как перспективные объекты для клеточной терапии широкого спектра приобретенных и наследственных заболеваний. В данном исследовании проведена оценка эффективности использования лизата тромбоцитов пуповинной крови в качестве альтернативы ксеногенных ростовых факторов для наращивания клеточной массы мезенхимальных стволовых клеток из стромы пупочного канатика человека в клинических и лабораторных протоколах.

Ключевые слова: клеточная терапия, мезенхимальные стволовые клетки, пуповинная кровь, пупочный канатик, тканевая инженерия.

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УДК 616-006.04

PREVENTION OF ORAL DISEASES IN CHILDREN UNDERGOING SUPPORTING CHEMOTHERAPY

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Abstract. The problem of oncological diseases also remains one of the priorities for modern society. The Russian Federation is characterized by a consistently high level of cancer incidence. The prevalence of malignant neoplasms and hemoblastoses in Russian children is high. Prevention of dental diseases in pediatric patients undergoing chemotherapy should be comprehensive, systematic and accompanied by constant monitoring of their condition.
Keywords: prevention, oral cavity, caries, oncological children, diseases, chemotherapy, hygiene.

The negative effect of modern methods of chemotherapy and radiation therapy is also noted when assessing the intensity of dental caries, stomatitis, and cheilitis of various nature. As a rule, dental treatment of such patients is symptomatic and is aimed only at temporarily improving their well-being. For this purpose, antiseptic and epithelial agents are used. In the foreign literature, one can find studies on the dynamics of the oral microflora, changes in the biochemical parameters of saliva in children with oncological pathology during chemotherapy. However, studies of the dental status, changes in the oral microflora in pediatric patients with the background of systemic chemotherapeutic treatment may be controversial and also require attention.

The Objective was to raise awareness of preventive measures aimed at preventing or reducing the manifestation of lesions of the hard tissues of the teeth and oral mucosa in children undergoing maintenance chemotherapy. The task was to study the status of such dental diseases and to develop some recommendations for oral hygiene, so that mucositis, stomatitis and such diseases are less observed in oncological children.

Materials and methods: Russian and foreign literature review; phenomenological (for the study of related terms) and sociological methods (interviewing) necessary for practical work were used.

Results. Changes in the dental status in pediatric patients with cancer undergoing chemotherapy are systemic, progressive and negative, accompanied by pathological changes in the oral mucosa and hard dental tissues; Prevention of dental diseases in pediatric patients undergoing chemotherapy should be comprehensive, systematic and accompanied by constant monitoring of their condition, as evidenced by the data from the survey of 15 mothers of children with this pathology. In Transbaikalia, about 100 children are registered annually at the dispensary. There are especially many problems with oral cavity sanitation, which occur in the acute period of polychemotherapy. The majority of mothers of such children note the presence of problems with the oral cavity during treatment (85.8 %). They also visit the dentist more often as it is necessary to carefully monitor the teeth (67.3 %). Along with mucositis, stomatitis, there is also a large increase in dental caries (86 %) in children during chemotherapy. Long-term use of cytotoxic drugs, lead to an imbalance in the microbial flora of the mouth. The rate of salivation increases during the entire course of polychemotherapy. A stable level of potassium and sodium in the oral fluid in children, during the period of treatment of oncological pathology, indicates the safety functions of active transport of these ions in the cells of the salivary glands. Indicators of the level of calcium and phosphorus ions in mixed saliva in children throughout courses of polychemotherapy tend to decrease [2].

The use of means for sanitation of the oral cavity (rinsing, irrigation) is obligatory in 98.6 % children. Therefore, paying increased attention to oral hygiene and prevention of oral diseases is vitally important for such children. A number of recommendations were prepared for good oral hygiene, and prevention of dental diseases in children receiving maintenance chemotherapy, such as teaching young children in a playful way to brush their teeth, and rinse their mouth gently and carefully, and teaching parents to take care of their children properly.

Conclusion. Prevention of dental diseases in pediatric patients with malignant tumors and hemoblastoses provides not only an improvement in the dental status of the child, but is also an effective tool that improves the quality of life both during chemotherapy treatment, with supporting therapy, and after it. It should be noted that children who have received treatment for a long time strive for recovery with all their might. In case there are fewer problems, including problems with the oral cavity, it will bring them closer to convalescence. The full return of the child to the peer group and to his usual activities will help him return the feeling of his own usefulness, often lost during treatment, the feeling that he is the same as other children.

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ПРОФИЛАКТИКА СТОМАТОЛОГИЧЕСКИХ ЗАБОЛЕВАНИЙ У ДЕТЕЙ, НАХОДЯЩИХСЯ НА ПОДДЕРЖИВАЮЩЕЙ ХИМИОТЕРАПИИ

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Аннотация. Проблема онкологических заболеваний остается также одной из приоритетных для современного общества. Российская Федерация характеризуется стабильно высоким уровнем онкологической заболеваемости. Распространенность злокачественных новообразований и гемобластозов у детей России высока. Профилактика стоматологических заболеваний у детей, получающих химиотерапию, должна быть комплексной, систематической и сопровождаться постоянным контролем за их состоянием.
Ключевые слова: профилактика, полость рта, кариес, дети с онкологическими болезнями, химиотерапия, гигиена.
Научный руководитель: Елсукова Е. Г., старший преподаватель.

УДК 581.9

ORIGINAL CALCAREOUS COMMUNITIES OF THE MALO-AMALATSKAYA BASIN (THE NORTHERN TRANSBAIKALIA)

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Abstract. The Malo-Amalatskaya basin is characterized by the originality of its vegetation cover which remains unexplored due to poor transport system, difficult accessibility to the territory, and insufficient economic development. Calcareous flora is heterogeneous and diverse; it is represented by 47 families, 105 genera, and 163 species. The leading families are headed by Asteraceae, Ranunculaceae and Rosaceae. The scientific research of the limestone flora of the Malo-AmalatskayaBasin was carried out by the Department of Botany of the Buryat State University named after Dorzhi Banzarov in 2004-2006 and 2017-2021.
Keywords: limestone outcrops, calcareous communities, xerophytes, Malo-Amalatskaya Basin, Northern Transbaikalia, flora

The Malo-Amalatskaya basin is one of the Meso-Cenozoic cavities of the central part of the Vitim Plateau [3]. The north-western boundary, represented by cryophytic larch forests of Dauria, is characterized by the originality of the vegetation cover. This specific character is caused by the substratum, geographical location and historical past of the territory [5]. Fragmentary outcrops of limestone in the Malo-Amalatskaya cavity in Eastern Siberia are of particular value [2] for studying the formation and development of the vegetation cover of the North Asia. The natural conditions of the area (negative mean annual temperatures, short frost-free season, small amount of rainfall, perennial permafrost) determine the high waterlogging of the territory [1]. The carbonate rocks are of late Paleozoic age.

Floristic research was conducted at three key locations: 1. Belaya (Bagdarin settlement), Bagdarinka River valley (left tributary of the Little Amalat River), absolute altitude 1499 m above sea level, coordinates 54.454694 north, 113.595158 east; 2. Izvestka, Aunik River Valley (right tributary of the Bagdarinka River), 1203 m above sea level, coordinates 54.452832 north, 113.442349 east; 3. Belaya (Bagdakhali Tract), Beryozovy Brook, Toocher River Valley (left tributary of the Little Amalat River), abs. elevation 1346, coordinates 54.439261 north,113.227184 east.

The deposits of marbleized limestone in the north-western part of the Malo-Amalatskaya basin are characterized by the development of erosion processes. The vegetation cover here is characterized by heterogeneity, low total projective cover, and low species diversity. Calcareous flora of the study area is represented by 47 families, 105 genera, and 163 species. The dominant position of the coelenterates (92.02%) is over the gymnosperms and sporas.

The floristic composition is heterogeneous throughout the study area. *Larix dahurica, Pinus sylvestris* L., steppe form *Pinus sibirica* Du Tour, *Picea obovata* Ledeb. There are aspen (*Populu stremula* L.) and birch (*Betula pendulla* Roth.) forests in the middle and top parts of the Malo-Amalatskaya Basin.

The southern exposure of the slope is represented by *Dryas sumneviczii, Kobresiafilifolia, Carex pediformis, Gypsophila sambukii, Oxytropis triphylla, Tofieldia coccinea,* etc. (7-22 species). *Salix nummularia, Stellaria cherleriae, Saxifraga oppositifolia, Phlojodicarpus sibiricus, Potentilla nivea, Saussurea schanginiana,* and *Pulsatilla tenuiloba* are also often found.

The slopes of northern exposures are characterized by *Larix gmelinii, Pinus obovata*, and *Pinus sibirica. Pinus pumila* is represented by patches of vegetation between curvilinear forests. Grass-bush layer forms mosaic groups of *Tofieldia coccinea, Paraquilegia microphylla, Kobresia filifolia, Carex rupestris, Ptilagrostis mongholica, Arctous erythrocarpa, Dryas sumneviczii, Androsace lehmanniana, Saxifraga oppositifolia, Lloydia serotina, Cypripedium macranthos* (marked albinos), *C. guttatum, Gimnadenia conopsea,* and *Corallor hizatrifida.*

The dominant families are headed by Asteraceae, Ranunculaceae, and Rosaceae. General representatives of these families are mesophytes and xerophytes. This ecology of the given areal is characterized by high positions of the families of Ericaceae, Orchidaceae, and Pinaceae [4]. These families are typical only for limestones parts of the territory studied.

The genus spectrum is headed by *Salix*. These are mainly forest species, but of special interest are obligate calciphytes of highland and mountainous common belt complex: *Salix saxatilis* Turcz. ex Ledeb. A high position is held by the genus *Festuca*, in which it is necessary to note such endemic species as *Festuca hubsugulica* Krivot. and *F. komarovii* of Krivot.

Representatives of obligate calcephytes on carbonate substrates are *Oxytropis triphylla* (Pall.) Pers., *Dryas sumneviczii* Serg., *Gypsophila sambukii* Schischk., *Paraquilegia microphylla* (Royle) J. Drumm. et Hutch., *Lloydia serotina* (L.) Rchb., *Callianthemum sajanense* (Regel) Witasek, *Saxifraga oppositifolia* L., *Caragana jubata* (Pall.) Poiret., *Primula xanthobasis* Fed., *Spiraea alpina* Pallas., *Saussurea schanginiana* (Wydl.) Fisch.and others.

The flora of the study area is represented by relict arcto-alpine species, which can be found in isolated areals of the given territory (*Paraquilegia microphylla, Lloydia serotina,* and *Saxifraga oppositifolia*). A large number of rare and endangered species (*Oxytropis triphylla, Caragana jubata, Cypripedium macranthos, Corallor hizatrifida, Botrychium lunaria*) is also characteristic for the study territory.

Conclusion: Analysis of the flora showed that the outcrops of carbonate rocks on the surface act as refugia of Pleistocene relics in a drier and a colder areal. Equal proportion participation of arcto-alpine and steppe plants allows us to classify these communities as "steppoid", which require further study and more profound florogenetic analysis.

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ОРИГИНАЛЬНЫЕ КАЛЬЦЕФИТНЫЕ СООБЩЕСТВА МАЛО-АМАЛАТСКОЙ КОТЛОВИНЫ (СЕВЕРНОЕ ЗАБАЙКАЛЬЕ)

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Аннотация. Мало-Амалатская котловина отличается оригинальностью растительного покрова. Растительный покров этого региона остается малоизученным из-за плохой транспортной системы, труднодоступности территории, слабой экономической освоенности. Кальцефитная флора неоднородна, не отличается высоким видовым разнообразием и представлена 47 семействами, 105 родами и 163 видами. Ведущие семейства возглавляют Asteraceae, Ranunculaceae и Rosaceae. Исследования флоры известняков

Мало-Амалатской впадины были проведены кафедрой ботаники ФГБОУ ВО «Бурятский государственный университет им. Доржи Банзарова» в 2004-2006, 2017-2021 гг.
Ключевые слова: известняковые обнажения, кальцефитные сообщества, ксерофиты, Мало-Амалатская котловина, Северное Забайкалье, флора
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УДК 13058

PRIMARY HEALTH CARE IN A PANDEMIC

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Abstract: Humanity faced a problem in the form of a dangerous virus in December 2019. The size of the virus is so small, but the consequences in the form of the lives of doctors and civilians not saved are shocking with their data. Medical personnel found themselves in the center of a focus on combating the spread, detection, and treatment of seriously ill patients. Doctors and nurses risking the cost of their lives, were on duty in hospitals. Employees did not see their children, spouses, parents. They were in the red zone for up to six months. The object of my observation is the primary health care unit of the Republic of Buryatia. Polyclinics of the city provide medical care to the population. The main direction is informing the population about the methods of preventing morbidity, prescribing treatment for uncomplicated cases, rehabilitation and recovery period.
Keywords: primary health care, pandemic, polyclinic, secondary medical personnel.

1. Introduction

Primary health care (PHC) is defined as "essential health care that is based on scientifically sound and socially acceptable methods and technology. This makes universal health care accessible to all individuals and families in a community" [1]. The goal of primary healthcare is the attainment of better health services for all people. PHC is understood that healthcare is an none-stop process of improving people's lives. Primary Health Care is the first level of contact with the health system to promote health, prevent illness, care for common illnesses, and manage ongoing health problems. PHC includes primary care of doctors and nurses, illness prevention, home support, emergency medical service and others. The COVID-19 crisis demonstrated the importance of primary health care system to manage the demand and care for all.

2. Research objective

Analysis of the load on the staff of polyclinics, personnel shortage during the epidemic in the city of Ulan Ude.

3. Methodology

The research data and medical information statistics is based on the polyclinic personal, mass media observations, conversations with the medical staff, the author's own experience of work in the hospital during pandemic and dialogues with the patients of the polyclinic.

4. Research

4.1. Student of medical faculty and my experience

The object of my observation is "GAU City Polyclinic No. 6". I want to focus this study on the shortage of human resources, which was noted even before the onset of the coronavirus pandemic. The reason for choosing this organization is direct participation in the organization's workflow. I, as an operating nurse, started working in the structural unit of the city polyclinic No. 6 — "department of outpatient surgery" since July 2012. In 2014, I was approved as a senior nurse of the department. As a responsible person, when drawing up a schedule for going to work, the schedule of the operational unit, the schedule for the distribution of regular vacations, I observed a lack of human resources. Continuous work was carried out to attract specialists of surgical, ophthalmological, traumatological profile. Now I am a 1st year student of the Dorzhi Banzarov Buryat State University, I have extensive experience in the healthcare system, which is certainly a big plus in further education. After all, medicine is a continuous path of learning, with moving progress in development. Primary health care is the cradle of medicine. Performance indicators largely determine the signs of the nation's health. A strong primary link prolongs the healthy lifestyle of the nation, reduces mortality, promotes physical activity, by conducting health schools, conversations with patients during outpatient appointments. Such a situation in fact strongly decreased its activity of the polyclinic during the pandemic.

4.2. Polyclinic during pandemic. Two conversations with the head of the HR department of the City Polyclinic № 6.

During the conversation with Tatiana Viktorovna Munkueva, who holds the position of head of the personnel department, the necessary information for the study was collected. Based on the explanatory note for 2020, it is possible to trace the turnover of personnel, and possible ways to solve this problem. During the conversation, the strengths and weaknesses of the polyclinic's work were revealed. The polyclinic № 6 is one of the three biggest medical institutions the Republic of Buryatia.

The polyclinic complies with the requirements of ISO 9001: 2015 standards, complies with the requirements of the voluntary certification system for "quality and safety of medical activities" from 12/30/2021 to 12/30/2024. Therefore, through the implementation of a quality management system, it strives to become the best medical institution in the Republic of Buryatia.

The shortage of medical workers was acute even before the onset of the coronavirus pandemic. In the current conditions, the burden on the entire healthcare system has significantly increased. The polyclinic decreased its usual regular activity at the time of the pandemic serving for 89,600 residents, including 22,400 children.

During the pandemic the polyclinic experienced the severe lack of human resources. The head of personnel department noted the reasons for the shortage of personnel. Among them: a) the transition of medical workers to higher-paying jobs in hospitals, covid departments, private medical organizations; b) retirement of medical workers; c) insufficient number of young people willing to master the profession of a doctor.

The result of the data is an increase in the shortage of staff units. In 2021, 266 full-time medical positions were approved in the staffing table of the polyclinic, 155 individuals. SMR — staff units — 383, staffing — 224. The staffing of doctors is approximately 52% (2021), 59% (2020), 64% (2019). In the positions of nurses for 2021, students of higher medical institutions (in the amount of 9 people) provide medical services that are aimed at combating the pandemic. The shortage of doctors at the end of 2021 is 61 staff positions.

To address the issue of human resources, the administration of the polyclinic is working to involve young professionals through:

• conclusion of targeted contracts for specialist's programs
• payment of a one-time allowance to doctors 50,000 rubles, to paramedical workers 25,000 rubles
• payment for kindergartens in the amount of 50% of private kindergartens
• payment of housing rent from 1000 to 5000

4.3. Dialogues with patients

Patient 1: Khokhryakova Tatyana Alexandrovna, born on March 18, 1954. A patient with a diagnosis of varicose veins of the lower extremity, chronic venous insufficiency. She was examined in a polyclinic, received recommendations for treatment — surgery is necessary, with laser obliteration of the veins. During this period, the patient cannot receive the necessary assistance, since there is no necessary specialist in polyclinic No. 6. There is a staff shortage of medical workers. In case of restoration of planned hospitalization, the patient will be referred for surgical treatment to another institution of the Republic of Buryatia.

Patient 2: Strekalovskaya Albina Dugarovna, born on February 10, 1974. Asked for medical help, complaining of dry mouth, shaking hands, dizziness. During the examination, a diagnosis was made: type 2 diabetes mellitus. The patient was prescribed the necessary medication. It is recommended to go through health schools in a polyclinic. During the pandemic, all mass events are prohibited, which has lost its relevance in resolving the issue.

Conclusion: By the end of 2020, the pandemic affected all medical institutions in the Republic of Buryatia. The Ministry of Health of Russia has developed clinical recommendations for the prevention, diagnosis and treatment of a new coronavirus infection. The burden on primary health care was enormous. All artillery of medical care was sent to the initial appointment with signs of SARS, filter boxes, vaccination points. Planned appointments have been suspended. Planned hospitalizations in the Department of Surgery have been cancelled. Patients who were on treatment were moved to the dressing room of the main branch.

Additional involvement of specialists is an actual solution to problems. Volunteer medical students provided voluntary assistance in the polyclinic, registered patients in filter boxes, delivered medicines to addresses, prepared medical documentation, and helped to carry out the nursing process. As for the work of the clinic during the pandemic, mass events were suspended, all scientific conferences were held online via video link, work on disease prevention, health schools for the population were practically not held. Accordingly, the prophylactic indicator is reduced.

As a result of the study, I came to the conclusion that the lack of human resources leads to psychological burnout of medical personnel. High workload, fear for personal health, unstable epidemiological situation, irregular working hours — all this is a side effect of medical professions! Each employee in such a difficult period needs to learn how to unload their psychological system, learn to control their emotions, be able to rest and relax at the end of the daily shift, eat right, breathe, and be physically active. After all, we, medical workers, should be an example of a healthy nation!

Scientific adviser: Radnaeva L. D., Doctor of Philology

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Section 2
RESEARCH IN LAW, ECONOMICS, POLITICS, SOCIAL WORK, PEDAGOGY, PSYCHOLOGY, TOURISM, INFORMATION TECHNOLOGY, RELIGION

УДК 373

EDUCATIONAL DIALOGUE AT LOCAL LORE CLASSES AS TEENAGERS' COMMUNICATIVE COMPETENCE FORMATION MEANS

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Abstract. The article considers the ways of forming communicative competencies. Methods such as conversation and discussion were used in the course of the work. Also, an experiment was conducted; during it several forms of dialogue were considered. In the modern educational space, psychosocial problems associated with the communication process, especially with its communicative aspects, are of particular importance.
Keywords: educational dialogue; communicative competencies; diagnostics.

The ability to communicate is characterized by the ability to form a successful personality in the changing conditions of the social environment. Therefore, its research is one of the main directions of modern education since society needs a person with a high level of communicative culture. 40 students of the 7th A and 7th B grades aged 12-13 were taken as an experimental base for this work. Grade 7A was chosen as a control grade, 7B — an experimental grade. In each grade, 20 students took part in the experiment.

The subject of the exploration is the formation of communicative competencies of teens by means of educational dialogue in the process of studying local history. This particular mechanism has reduced the number of calls to state bodies, reduced and speeded up getting help with inquiries, certificates, authorization documents and etc.

Research objectives:

– to research the educational dialogue as a means of forming the communicative competence of teenagers;

– to diagnose the communicative competence of teenagers;

– to develop a program for the use of educational dialogue as a way of forming the communicative competence of teenagers in the process of studying local lore.

Research methods: analysis, synthesis, deduction, induction, comparing, systematization, generalization; observation.

The experimental research program consisted of three steps: ascertaining, forming and controlling. At the ascertaining stage, preparatory work was carried out: selection of theoretical and methodological material, familiarization of teachers with the tasks and materials of the experiment, selection of criteria, indicators and levels of the research criterion, determination of the state of formation of the communicative competence of adolescents. The criterion of the study is the communicative competence, its indicator is a cognitive component (includes knowledge of communication norms, the ability to anticipate the behavior of another person and adequately assess the communication situation, effectively solve various communicative tasks; the emotional component (includes emotional responsiveness, attention to the actions of partners), behavioral (reflects the ability of a teenager to cooperate, joint activities imitativeness, organizational abilities are characterized by formed communicative skills and abilities.

To determine the level of communicative competence we used the observation method as well as the analysis of the construction of communication of adolescents when working in pairs of situations developed by us.

At the ascertaining step of the research, we determined the level of communicative competence of pupils which is reflected in the first table.

According to the first table, 25% of children of the control group are characterized by a high level of communicative competence, for 50% of the average level and for 25% — low level. The data obtained suggest insufficient formation of communication skills of teenagers. Children lack the ability to analyze the content of a work, monologue and dialogue, highlight its characteristics, describe them and differentiate between them. Students do not feel satisfied with the emotional experience of speaking; they often cannot express their thought. […]

Table 1

Of the formation of communicative competence of teenagers at the ascertaining step of the research

Levels	A control class		An experimental class	
	Number of children	%	Number of children	%
Low	5	25	4	20
Medium	10	50	11	55
High	5	25	5	25

At the formative step of the research, we have developed and conducted a methodology for the formation of communicative competence of adolescents. In the experimental grade, lessons were conducted on the base of an educational dialogue for the development of interpersonal interaction of pupils. Lessons were conducted without making changes in the control grade.

At the controlling stage of the research, after conducting the lessons developed by us, we again determined the level of communicative competence of adolescents. Children began to express emotions, speak with intonation, conduct a dialogue and express their thoughts competently. Students gave a broader assessment of the work, showed an emotional response in monologue and dialogue, gave an expanded. Verbal description implementation of the methodology developed by us made possible to identify the following conditions for the successful influence of educational dialogue on the formation of the communicative culture of students: socially-psychological, organizational and active; personal and communicative.

Conclusion: Currently, the problems of educational dialogue are given a wide attention and its application as a means of developing the general culture of the individual and its various components in the educational process is revealed in the psychological and pedagogical literature. We believe that specially organized educational activities contribute to the harmonious development of teenagers' communication skills. The use of local and regional materials broadens the horizons of students and develops their cognitive interest. If you don't understand your local culture and don't love it, you won't be able to understand and love another culture. Only those who feel the beauty, might and wealth of the Motherland, understand and respect the customs and traditions of their people and take care of them, can understand and respect the culture of other ethnic groups.

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УЧЕБНЫЙ ДИАЛОГ КАК СРЕДСТВО ФОРМИРОВАНИЯ КОММУНИКАТИВНЫХ КОМПЕТЕНЦИЙ ПОДРОСТКОВ В ПРОЦЕССЕ ИЗУЧЕНИЯ КРАЕВЕДЕНИЯ

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Аннотация. В проведенной статье были рассмотрены способы формирования коммуникативных компетенций. В ходе работы были применены такие методы как беседа, дискуссия. В работе рассмотрены вопросы проблемы коммуникации. Также проведен эксперимент, в ходе которого были рассмотрены несколько форм диалога. В современном образовательном пространстве особое значение приобретают психосоциальные проблемы, связанные с процессом общения, особенно с его коммуникативными аспектами.
Ключевые слова: учебный диалог, коммуникативные компетенции, диагностика, средство учебного диалога, сензитивный период, краеведение.
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УДК 34.03

THE PHENOMENON OF THE INTERNET FAKES

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Abstract. The article is devoted to the problem of fake news and fake information which is understood as messages fabricated to discredit some person or organization and designed for viral distribution in social networks. Disinformation becomes like a virus easily clinging to the reader and undermining the reputation of both the object of an information attack and the news distribution channel itself.
Keywords: fakes, false information, misinforming, ill-considered action, dignity, reputation, uncertainty, fraud.

Recently, the harm from fakes on the Internet is gaining huge momentum. This is directly related to the development of the Internet, Internet resources as well as social networks where people can exchange any information at high speed. The problem lies in the fact that it is almost impossible to eliminate fakes completely, but it is possible to significantly limit their effect.

The goal of the research is to determine the essence of fakes, to analyze fakes and to combat false information.

The objectives are:

- Identify fake social media sites
- Analyze false information based on examples from media space
- Determine the cause of the fakes
- Offer an optimal fight against them
- Identify the reason why citizens are targeting fakes

The Internet is teeming with fakes, and by fakes we mean not only false information, but also sites that imitate well-known resources. The media do not shy away from spreading often deliberately false information about something in order to attract an audience with interesting content.

Disinformation and low-quality journalism emerged quite a long time ago, with the development of Internet resources, the speed and scale of the spread of malicious content is progressing. In this respect, we are not just clarifying that the content is malicious. Thanks to the availability of the Internet, every day people are faced with contradictory news — whether it's the pregnancy of a celebrity and the end of her career, the threat of military aggression or a new strain of virus. Information in its essence has always been a powerful tool that determines the mood in society. Fakes by their nature are completely or partially unreliable information, and as a result, in the process of spreading them to the masses, citizens are oversaturated with false data, which is very difficult to accept it, since the information is distorted or invented very convincingly.

At first glance, it may seem that fakes are a harmless phenomenon that does not entail serious consequences, but this is not the case. Fake news sows panic, encourages unrest and rash actions, misleads, deceives and forms a persistent sense of anxiety and uncertainty in people. This is a hidden type of crime that is difficult to recognize.

According to a PRNEW study.IO, 90% of the audience can't distinguish reliable news from fake news. Citizens unknowingly become peddlers of fakes, spreading and commenting on false information.

At best, this can lead to minor consequences, but it happens when one or another false information of a serious nature gets to the masses, and then the consequences are irreversible.

So regarding this, in 2020, the whole world was plunged by a terrible virus — the coronavirus and its various stamps, but thanks to the developed medicine, there was a way to deal with it. Vaccination, stimulating the appearance of antibodies in the human body, at that time was the only way to really overcome the virus and its consequences. However, mass vaccination was prevented by a flurry of fakes, which overwhelmed news channels and Internet sites with disinformation about the side effects of Sputnik V, up to a change in human DNA. One country after another began to refuse to purchase a vaccine, or citizens themselves refused to be vaccinated because of the threat they had read from the Internet. The consequences of such refusals were impressive and irreparable: people died not from the vaccine at all, but from a virus that progressed due to the refusal of vaccination, but as a consequence of the lack of antibodies to fight harmful microbes.

Using a certain example, you can see exactly how a fake works. So in the spring of 2020, in Britain, they tried to set fire to 20 cell towers due to the appearance of a rumor that 5G is spreading coronavirus. And even earlier, arson was committed by people exposed to fakes. As a result, the communication transmission equipment used by emergency services and several mobile operators was destroyed, thereby someone lost, perhaps, the hope of salvation.

Richard Belzer wrote in his book "UFOs, Kennedy and Elvis" that conspiracies that you do not have to be crazy to believe, if you tell a big enough lie often enough, people will believe that it's true, even if it's nonsense.

They disinform citizens not only about mass events, but also about individuals. In this case, the honor, dignity and business reputation of citizens may be affected, which in turn is protected by law. Using the example of the foreign newspaper The Sun, which in April 2018 wrote an article about the film "Fantastic Beasts", in which Johnny Depp was described as "beating his wife", due to the fact that Amber Heard accused him of abuse, there was no confirmed evidence to recognize her words as valid at that time, as well as grounds for the dissemination of this information.

Thus, in part 2 of Article 152 of the Civil Code of the Russian Federation, responsibility for the dissemination of information discrediting the honor, dignity and business reputation of a citizen is specified.

Moreover, there is the responsibility for the public dissemination of deliberately false information about circumstances that pose a threat to the life and safety of citizens of the Criminal Code of the Russian Federation article 207.1.

In order to resist fakes and not become their victims, you need to understand that fakes can be ordered (intentional) and spontaneous (unintentional). The latter are most often folk art, appearing out of thoughtlessness, out of a desire to play everyone or out of love for the art of trolling. With the help of loud and provocative topics (around which falsifications most often revolve), fake authors often try to attract traffic in social networks or on websites.

The most dangerous of all are terrorist fakes, which have recently been increasingly found even in small Russian cities. These include, for example, reports of false mining, fictional crimes of a particular group of people, terrorist attacks, war, attacks, murders. Sometimes various "destructive forces" from abroad are accused of spreading such fakes, but sometimes even ordinary schoolchildren may be the culprits. In the latter case, the introduction of preventive measures in schools is required to enlighten students about the consequences of their actions, what kind of punishment this will lead to.

We conducted a survey among the population of different age categories living in the territory of Ulan-Ude and found out that citizens younger than fourteen and older than sixty are more susceptible to fake information, due to the lack of their own experience of the former and the credulity and information illiteracy of the latter, since the older generation in the age of the absence of the Internet was brought up in a different way, "used to believe in the word" — such a reason was given by an elderly woman interviewed by us.

Citizens from 14 to 60 are less susceptible to fakes. But even they are being faked.

What is the reason? We studied the opinions of psychologists and came to the conclusion that the human brain is designed in such a way that it is always in search of a threat, imaginary and real. Therefore, it is very easy to go along with your emotions instead of spending time and effort on curbing your own fear and finding a rational behavior option. People are caught on such emotional hooks as catastrophization, generalization, and xenophobia. Everything that is connected with the division into strangers and their own, the polarization of the world, are very primitive levers that people, especially anxious ones, are guided by just on the machine.

A group of scientists from the RANEPA, studying the features of the Russian infodemia, identified the following reasons for the viral spread of fakes at the moments of disasters:

• distrust of government institutions and official sources of information;

• maintaining social connections through the exchange of rumors;

• lack of a sense of control over life;

• the tendency in a stressful situation to share even the information that is doubted, regardless of gender, age and level of education.

To recognize fakes, it is necessary to check the source from which the false information came, check official sources, evaluate comments under the news, if any, and of course maintain critical thinking.

Fakes often turn into different types of fraud, since fakes can be not only posts, news, videos, pictures, but also accounts in social networks and even sites imitating well-known resources.

We have personally encountered one of these.

To sum up, you should not click on any links sent to you in a personal email or social network message. To verify the reliability of the data obtained, it is worth turning to the original source, and that is, go to the official website of the Internet resource to find out information about it. Thus, the organization "Immortal Regiment" does not accept donations, you can find out by going to the website and calling the hotline. In most cases, an authenticity icon in the form of a blue check mark should be located near the official website.

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ФЕНОМЕН ФЕЙКОВ В СЕТИ ИНТЕРНЕТ

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Аннотация. Статья посвящена проблеме фейковых новостей, которые понимаются как сфабрикованные для дискредитации какой-то персоны или организации сообщения, рассчитанные на вирусное распространение в социальных сетях. Дезинформация становится похожа на вирус, легко цепляясь к читателю и подрывает репутацию как объекта информационной атаки, так и самого канала распространения новости.

Ключевые слова: фейки, ложная информация, дезинформация, необдуманные действия, честь, репутация, неопределенность, мошенничество

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УДК 316.776.34

PROMOTION OF THE ChSMA BRAND IN THE EDUCATIONAL SERVICES MARKET

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Abstract. Nowadays increasing the competitiveness of University is of great importance and applications are considered efficient. The authors used Tit Tok application as an advertising tool to promote the Chita State Medical Academy brand in educational service market. The analysis of advantages and disadvantages are presented.

Key words: Tik Tok, promotion, Chita State Medical Academy, advertising strategies.

Background. Currently, the sphere of education is developing extremely dynamically. Universities are granted the right to freely carry out entrepreneurial activities, with the problem of searching for new sources of increasing the competitiveness of the university being of great importance. The Ministry of Education and Science of the Russian Federation considers advertising strategies helpful for attracting applicants to universities. It distinguishes TikTok as one of the most efficient tools. Due to the peculiarities of the algorithms of this application, advertising on this service can spread at a high speed to the target audience in a short time. It is this advantage that many corporations use when marketing their brand. The platform can become an effective way to tell applicants about student life at Chita State Medical Academy (ChSMA) and share educational content with them, increasing the level of interest and desire to enroll in a local university.

Objective. We aimed to analyze the possibilities of the TikTok service for promoting the CHMA brand in the Internet space by advertising the brand on this platform, thereby trying to interest a potential applicant in the prestige of obtaining medical education at this university. Tasks:1) to study Internet advertising platforms used in the field of education; 2) shoot a series of promotional videos dedicated to the CHMA brand and share them on the TikTok platform; 3) conduct statistical and comparative analyses based on a social survey of the target audience (applicants); 4) verify the effectiveness of using this platform in brand marketing based on the data obtained.

Materials and methods. The study consisted of several stages:1) study of the phenomenon of advertising in the information environment, its history, advantages and disadvantages;2) editing and gluing of the footage using mobile video editors (in particular, the Cap Cut program); 3) publication of the edited material on social networks; 4) a social survey of 184 students from grades 10-11 of secondary schools, based on their familiarization with the finished videos and then filling out a questionnaire containing questions about their general impressions after viewing the advertisement; 5) analysis of the data obtained and confirmation or refutation of the hypothesis about the effectiveness of the method of short videos in terms of perception of advertising information.

Results. According to the results of the survey, the majority of respondents (57.6%) were studying in the 10th grade at the time of the study. 90.8% of respondents considered the Internet and social media to be the most attractive type of advertising. 64.1% of respondents saw ads for CHMA in social networks, and 9.2% — outdoor advertising, and only 6.5% watched the ads on TV. 44.6% of respondents rated their first impressions of our advertising as "good". Comparing the overall impressions of a traditional two-minute video and short videos, respondents put TikTok videos in the first place according to almost all criteria (graphic part, brightness, memorability, creativity, simplicity, attention-grabbing, unobtrusive and emotionality). However, in terms of trust in advertising and informativeness, according to respondents, the traditional video won. 54.9% of respondents after viewing the advertisement had a desire to watch other videos about the Academy, 33.7% wanted to include the Academy in the category of priority, 31% of respondents wanted to visit the Academy's website and 28.8% wanted to come to the Open Day. The traditional video and TikTok videos evoked positive emotions among respondents (58.7% and 81%, respectively). The majority of students (41.3%) described our advertising in one word as "creative", 26.6% considered it "pleasant". In comparison with the advertisements of other universities, respondents considered our advertising "much better" (43.5%). Most of all in our advertising, the students liked its creativity, informativeness, musical and visual accompaniment, unusual format, extraordinary message of information, design, memorability, brightness, brevity and conciseness, simplicity of execution and pleasant presentation of information. The disadvantages were the lack of textual information.

Conclusion. This study confirmed our hypothesis that advertising on social networks in the format of short videos with memorable visual and musical components can be effective with the competent use of its creation tools (video editors). The modern generation of teenagers prefers to see online advertising on social networks, which they use daily. This fact should be adopted by novice and professional marketers and SMM managers, because only the correct use of the advantages of short videos will help to present your brand in the most successful and attractive form for the end consumer.

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ПРОДВИЖЕНИЕ БРЕНДА ЧГМА НА РЫНКЕ ОБРАЗОВАТЕЛЬНЫХ УСЛУГ

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Аннотация. В настоящее время повышение конкурентоспособности университета имеет большое значение, и приложения считаются эффективными. Авторы использовали приложение Tik Tok в качестве рекламного инструмента для продвижения бренда Читинской государственной медицинской академии на рынке образовательных услуг. Представлен анализ преимуществ и недостатков.

Ключевые слова: Tik Tok, продвижение, Читинская государственная медицинская академия, рекламные стратегии

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УДК 32.019.5

THE IMAGE OF POLITICIANS IN SOCIAL NETWORKS

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Abstract. The paper considers the results of the research devoted to the image of politicians in the social networks. Modern politicians use different sources of information including social networks to attract voters' attention. The author analyses the social networking service "TikTok", whether it helps politicians to create positive image and become popular among young people.
Keywords: image, politicians, "TikTok", social network, platform, video, subscribers.

The image of a political leader is created in public consciousness. It is important for every politician to have a good political image. "Political image is the image of a political leader, politician or party in public opinion and consciousness, affecting the credibility and ranking its bearer. Political image is the basis for creating the relationship between the politician and voters. The components of the image of a political leader can be formed with the help of mass media, means of agitation and propaganda" [1].

The goal of the project is to research the role of social networks in creating a politician's image in social networks.

The objectives are:

– to consider the role the social networks in the life of politicians;
– study the history of the social network TikTok;
– to define the influence of social networks on the voters on the example of TikTok;

The image makes it easier for the voters to choose a politician among candidates. It helps a political leader to have support from the voters. Now, most of the support for politicians is in the Internet, in social networks. Every year there are more and more users of social networks, and their popularity is spreading all over the world. At the present stage of human development, it is difficult to imagine anyone without access to the Internet and the use of social networks. So nowadays, the image of politicians is created in social nets. Due to such popularity of social networks, there is a tendency to attract various representatives of the society with the help of them.

Social networks allow the population to be more informed about political and social events. Unlike traditional news channels, mass media: newspapers, magazines, websites, social networks expand the range of information; give an overview from all sides. Thanks to the networks, voters can keep up to date with the latest news and react to them quickly, express their opinions on various events taking place in the world, on the activities of candidates, put likes or dislikes on publications and comment them. It allows more active communication between voters and politicians.

«TikTok» is a new social network in which users upload short videos from 15 to 60 seconds. «TikTok» was founded in 2018 and managed to gather an audience of over 800 million users worldwide in a year and a half. This new platform is very popular especially among young people; the number of users is growing up every year.

«TikTok» has become one of the main means of exchanging political messages in the 21st century. It has become a new and invincible source for creating political echo chambers with its politically intuitive algorithm unlike any other. Therefore, it is interesting to track the popularity of politicians in this network. In particular, to find out if they are registered in TikTok and shoot videos. In addition, it is important to track their popularity by mentioning them in videos and by hashtags.

«TikTok» is a popular social network in the United States of America. The USA is on the first place according to the number of users on the platform, and Russia is on the fourth place.

Many American politicians are active on «TikTok», mostly they are democrats or left-leaning independents, including Senator Jon Ossoff of Georgia, Senator Bernie Sanders of Vermont, Senator Ed Markey of Massachusetts, Representative Ilhan Omar of Minnesota and the mayors of two of America's largest cities, Lori Lightfoot and Eric Adams.

Mr. Markey has cultivated the following way of shooting videos on «TikTok». He combines serious videos, for example, his introducing the Green New Deal with Alexandria Ocasio-Cortez and Cori Bush with videos about his daily routine such as boiling pasta in acknowledgment of "Rigatoni Day". The comments to his videos show his popularity among young people. "When I post on TikTok, I'm having fun online and talking with my friends about the things we all care about," Mr. Markey wrote in his e-mail. "I listen and learn from young people on TikTok. I'm with them" [2].

Russian politicians use the service for posting videos about their work, memes that are popular among young people. Sergey Voropanov is a Russian politician and the mayor of Vologda. He has a personal profile in «Tiktok» and almost 119 thousand subscribers. His videos are about the history of Vologda and facts about the town, about the results of his work. His videos get a large number of likes and positive comments. Sergey Voropanov's popularity has been growing thanks to his image in «Tiktok».

Fedot Tumusov is a deputy of State Duma from the Fair Russia party. Now, he has almost 130 thousand subscribers in «Tiktok». His videos often have a comic character; they are very popular among young people. However, the comments evaluate the approach, but not the activities of the politician. He talks about his proposals to the bills of the State Duma, and the work of the party. Many people criticize the politician, as they do not see his activities, but only videos.

Another politician in "Tik tok" is Alexander Osipov. The governor of the Trans-Baikal region has almost 23.5 thousand subscribers. The governor said that he had joined the network for developing the platform in the Trans-Baikal region. The videos are rather informative and give mostly information about the region. Osipov has the right strategy; he creates his image by combining entertaining videos with informational ones. His subscribers wish him great success, good luck in his activities. He is becoming popular among young people, creating the image of a person who knows modern technologies.

The head of the Republic of Buryatia, Alexey Tsydenov, does not have his own profile. However, he has a fan-account with 3 thousand subscribers. They write good comments on his activities and videos.

Conclusion:

As we see, modern politicians use social networks actively to attract young voters and to be popular among them. They are registered in Tiktok, which is very popular nowadays especially among young people. They shoot different videos to attract their attention. Politicians create their image using modern technologies. It makes them closer to young people. In modern society, the influence on voters is magnified due to the numerous channels of information, including social networks. Political leaders should be constantly on the mind for effective interaction with voters. No matter, what information– positive or negative is given, it helps him to be widely known.

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ИМИДЖ ПОЛИТИКОВ В СОЦИАЛЬНЫХ СЕТЯХ

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Аннотация. Статья посвящена результатам исследования имиджа политиков в социальных сетях. Современные политики используют разные источники информации, включая социальные сети для привлечения внимания электората. Автор проанализировал платформу «TikTok» для выяснения роли социальных сетей в создании положительного имиджа политиков.
Ключевые слова: имидж; политик; ТикТок; социальная сеть; платформа; видео; подписчики.
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УДК 004

DEVELOPMENT OF DIGITAL CERTIFICATES OF UNIQUENESS IN RUSSIA. DOES THE NEW TECHNOLOGY HAVE A FUTURE?

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Abstract. This article describes a new technology for the protection of digital art, its sale and exchange. The analysis of the development of this technology in Russia and its future is also carried out. The evaluation and characterization of NFT (Non-Fungible Token) is given.
Keywords: a non-interchangeable token, blockchain, virtual money, new technologies, virtual communication, digital rights.

Not so long ago, people didn't even think that technology would become so firmly embedded in our lives. And now we can't imagine ourselves without them. The Internet, phones, virtual communication, cryptocurrency — all this is no longer new to us. The virtual world is absorbing us more and more. This has affected many areas of our lives. But what do you say that art has also reached a new technological stage of development and its authenticity can be confirmed by using NFT?

In 2021, the new technological breakthrough of the year was the creation of a non-interchangeable token. Foreign mass media posted new information about the sale of various tokens for fabulous money day by day. This could not fail to attract the attention of both experienced investors and ordinary people who want to make money. This is not the end of the possibilities of NFT, since first of all this technology was created for novice artists. If not, so long-ago people sold their paintings in stores, at auctions or in other ways, now you can sell your creation without leaving home. Also, at all times, the main problem of any creative person was to prove originality and ownership. Now, thanks to the introduction of blockchain technology, a new solution is proposed — the creation of a non-interchangeable token attached to an object, the presence of which proves ownership. The commercialization of intellectual property in the large business sector is widespread in the West, but in Russia it has not yet acquired such a wide influence, due to the existence of reasons that somehow prevent this. It is important to analyze each of them, which will make it possible to make a forecast of the development of new technology in Russia [1, 10].

The object of research: NFT (non-interchangeable token) or digital certificate of uniqueness in Russia.

Subject of research: NFC development in Russia.

The goal of the scientific project is to study the development of NFC technology in Russia.

The objectives are:

1) to determine the theoretical aspects of the technology under study
2) to analyze the development of NFT
3) characterize and evaluate the digital certificate of uniqueness

The concept of NFT

NFT has a relatively young history and is closely related to modern cryptographic realities. The first experiments with NFT began in the 2010s based on the Bitcoin blockchain scripting language, the most popular cryptocurrency. However, the creation of the first smart contracts and NFT tokens began only in 2017, already based on the Ethereum blockchain.

The token has become a solution to a long-standing problem: after its release, the world of cryptocurrencies finally began to offer not only virtual money, such as bitcoin or ether, but also valuable digital items that can be bought with cryptocurrency. Before that, only physical things were sold for cryptocurrency.

Each original digital item is unique as long as it exists in a single copy — in order to fix this uniqueness and not confuse the original item with its copies, an NFT is needed [1-2, 2].

So, what is blockchain, non-interchangeable tokens, and how does it all relate to art, music, games and property rights?

Indeed, it is difficult for a person far from the world of technology to understand and accept these definitions. But in fact, everything is quite simple here. Let's take an example, let's say you have some kind of bill, you lent it to your friend, after a while he returns it to you, but to be precise, he returns any bill equal to the one you gave, based on this we can say that it was interchangeable. No one has lost anything from the fact that he did not give you the same bill. But if there was an autograph of a famous person on this very bill that you borrowed, then this would already be an irreplaceable bill, because there is no autograph on others of the same kind. And your bill already has great value, which means it can be sold. This is the NFT, presented in the form of a bill.

Here are the definitions of this technology, which is given on the popular English-language forum Reddit: NFT (Non-Fungible Tokens) as a term, it means that every digital token on the network is unique. Each token contains a small amount of data that is unique to this token. These are just small data containers that move across the blockchain between addresses [1, 3].

The token can exist in various forms.: JPEG, GIF, MP4, even to music. This token, confirming ownership of the "source" file, is stored in a block chain, which is a permanent registry that can be accessed from any computer around the world. NFTs are designed to give something that cannot be copied: ownership of the work (although the artist can still retain copyright and reproduction rights, as is the case with physical works of art).

So, we have some kind of non-interchangeable token, but how will it get ownership without the help of patents, you ask. This is where we will come across the concept of blockchain. As you noticed above, we have dealt with the word "non-interchangeable", but there is one more thing left — a token. So, the token is the designation of an entity in systems running on the blockchain. It will store all the information about the product you want to sell. And the token itself is stored in the blockchain.

Blockchain (literally "chain of blocks") is the technology underlying the operation of cryptocurrencies. It organizes a database consisting of a chain of blocks, each of which stores information about the previous block. This database is decentralized, which means it is stored on all computers of the system participants, and all completed transactions are immediately displayed on all computers. This system is more difficult to hack, it is transparent and secure.

Blockchain technology itself is not new, but its active integration into the art world has begun recently and in recent years there have been many startups using blockchain tools to authenticate and create unique digital art, sell traditional art objects of individual or collective ownership. The first Verisart art certification platform was launched in 2015 by British entrepreneur and collector Robert Norton (former co-founder of the Sedition art platform for digital artists and director of Saatchi Online).

The buyer of the NFT object receives a blockchain certificate, which is stored in a digital wallet and confirms the ownership of the object. Information about this property and any subsequent changes to it will be available to all participants of the system in an open and transparent form. The work of art itself, be it animation, image or video, continues to live on the Internet in open access [3,11].

Such functionality brings digital art out of the "gray" zone of online trade to the market of qualified exchange of art objects. This revolutionary transformation of the market will have a synergetic effect: the authors of cryptographic art objects will not only gain access to a wide and solvent audience, but also become participants in a civilized intellectual property market, where the copyright of the creator is already protected by blockchain technology.

The procedure for creating your own token

In order to create your own token, you first need to have a virtual wallet.

In the process of analyzing the available virtual wallets, MetaMask was chosen because it turned out to be the best in terms of use and intuitive. It's easy to register, the registration stages are basic. The main thing is to remember a seed phrase consisting of 12 words in a certain order. MetaMask offers a simple and secure way to connect your balance to blockchain applications.

Next, choose the platform for creating NFT.

There are a large number of them. But it is convenient for a beginner to choose Opensea, because any kind of unique tokens are sold here, and there is also an informative blog where seller ratings and many other useful data are published. Before registration, the platform requests a virtual wallet, and the first free transaction is carried out to initialize it. After determining the wallet, the standard registration steps are passed: user data, profile description. You need to upload your own collection consisting of digital art that you want to sell.

You also need to choose a blockchain.

The most common underlying network for non-interchangeable tokens is Ethereum, but moving NFT to the ETH network is expensive. One of the best alternatives is Polygon, where services are much cheaper. However, the first transaction will be paid anyway, since the platform needs to initialize your wallet. At this stage, difficulties arise, because it is not possible for a simple artist to pay for the first transaction, worth from $ 30 without outside support. For this purpose, associations are created, the purpose of which is to provide financial assistance to aspiring artists. Naturally, not for free, at least 5% is taken from the sale of each token, not counting the fact that 2.5% is taken by the site where you placed your creation. This is at best, since no one is immune from failures.

Status and development of NFT in Russia

The creation of a national crypto art market in the Russian Federation is not only an economic task. Its solution is also in the field of national security; the possible lag of the country in the development of blockchain technologies, the use of foreign exchanges for transactions in the field of intellectual property; the dependence of the protection of national intellectual content from foreign intermediaries and aggregators can not only lead to irreversible consequences for the national creative industry, but also create a critical dependence on unfriendly digital operators.

The Russian economy and the state need their own legislation in the field of blockchain, where the creative industry will be given a special place. The Ministry of Culture of Russia, Rospatent, the Ministry of Education and Science of the Russian Federation, and other agencies related to the protection and implementation of intellectual property require a state program of mass tokenization of digital art objects owned by the state of digital copies of documents of the Archival Fund of the Russian Federation; digital copies of works of art and objects of tangible and intangible heritage.

The implementation of the state tokenization program will create a global market for Russian digital cultural heritage and heritage; provide copyright and commercial protection of the rights of Russian authors whose works are actively circulated on the Web; provide additional income to cultural institutions of the Russian Federation and the Russian economy as a whole in the medium term through commercialization and protection of the national crypto art market. The Russian Federation needs an effective methodology of work in the field of crypto art and the training of qualified specialists for the field of crypto art and crypto culture.

An urgent need is to prepare a legislative initiative to regulate the crypto art market. At the moment, NFT tokens issued on foreign blockchain platforms are not subject to regulation by Russian legislation. The legislative initiative should contain measures to regulate the domestic crypto art market and synchronize it with international digital platforms. The adoption of such a legislative initiative will allow the Russian Federation to become a locomotive and a "trendsetter" in the most dynamically developing digital art industry, ensuring the protection of the rights of the state and Russian authors to works of digital art and creating a domestic crypto art exchange in the future [16-17,8]

Currently, the digital space is a full-fledged sphere of society's life, covering its social, cultural, economic and spiritual components. At the same time, due to the obvious "virtuality" of the digital space, modern legislation established to regulate the material sphere of society's life cannot be fully transferred to the digital sphere. The digital space is not only an "exchange platform", for the regulation of which it is sufficient to administer the transactions and information exchange processes performed on it, but also a full-fledged sphere of society's life, including individual objects. Such objects can represent both economic value and any other value that things of the material world have for their owners, that is, in fact, things, but not in the material, but in the digital dimension. In this regard, the rights to such digital things need to be protected, for example, as it was proposed, by including digital things (objects) in the list of objects of civil law and extending the provisions of civil legislation on property law to them.

NFT is a field of disputes between lawyers. Legal relations in the field of digital art entail certain financial obligations. In addition, there are issues in the field of intellectual property, problems in civil and criminal law, data protection. So far, experts have come to the conclusion that NFT implies ownership, but not use. NFT is not stocks, not bonds, not the right to participate in capital, not the right to receive dividends, and the fact that they can be traded requires at least basic standardization. Today it is important that all issues related to ownership are clearly spelled out in the smart contract. For example, what rights are sold when selling tokens. The rights of both the buyer and the original author are not fully protected in the modern conditions of the absence of special legal regulation. However, it is worth considering the fact that the NFT market has appeared quite recently and controversial issues have yet to be resolved.

Thus, the NFT phenomenon is a clear example of the fact that the current norms of civil legislation do not contain universal tools for regulating the digital sphere, which makes it difficult to qualify both objects within the digital sphere and legal relations arising in it (or through it), in connection with which it seems quite effective to introduce the concept of "digital thing" into civil legislation. (object)" and the extension to it of the provisions of civil legislation on property law, this will contribute to the predictability and stability of turnover within the digital space [3-4,10]

As mentioned above, NFT is not so common in our country and not only for legislative reasons.

There are the following controversial points:

1) The token encodes a link that sends the user to the platform on which the object is hosted. If the platform is hacked and the graphics are removed, NFT is useless.

2) When selling NPC items, part of the profit should go to the creator, but in different countries there is a different approach to rewarding the author. For this reason, a contradiction may arise between a seller and a buyer from different countries.

3) The token owner places his personal data on the network. It's not entirely clear how protected they are.

4) The purchase of a digital object does not guarantee the right of commercial use [2,6]

In conclusion, we can conclude that NFT began to spread and develop abroad in 2020, but in Russia it is not so well-known phenomenon. From the available Russian sources, it is impossible to put together a complete picture and give a clear answer to the question: "Is there a future for this technology in our country?" However, it can be said with certainty that in the near future there will be many enthusiasts who will be interested in this type of earnings. As well as beginners or already experienced artists who will try to master a new platform for the dissemination of art. In any case, every new technology has a chance to develop, but the risks can also be huge. A promising start does not mean a stable and profitable future at all. At the moment, the development of digital certificates of uniqueness is not so widespread, there are many reasons for this, described above, but perhaps in 5 years, this technology will join our ranks. In the meantime, we can only wish good luck to the discoverers and, if there is an opportunity and desire to join them.

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РАЗВИТИЕ ЦИФРОВЫХ СЕРТИФИКАТОВ УНИКАЛЬНОСТИ В РОССИИ.
ЕСТЬ ЛИ БУДУЩЕЕ У НОВОЙ ТЕХНОЛОГИИ?

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Аннотация. В данной статье представлено описание новой технологии защиты цифрового искусства, его продажи и обмена. Также проведен анализ развития этой технологии в России и его будущего. Дана оценка и характеристика NFT (Non-Fungible Token, не взаимозаменяемый токен).

Ключевые слова: невзаимозаменяемый токен, Интернет, блокчейн, виртуальные деньги, новые технологии, виртуальная коммуникация.
Научный руководитель: доцент, кандидат филологических наук, Шагланова Елена Андреевна.

УДК 159.9

THE THOUGHT PROCESS OF CHILDREN WITH INTELLECTUAL DISABILITY

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Abstract. The problem of studying children's thinking has always been significant and is the focus of attention of many educators, psychologists, philosophers, etc. But if a child has a delay or incomplete development of the psyche, manifested by a violation of intelligence, this issue becomes of particular importance and its solution has, thus, not only developmental, but also correctional significance. This article discusses the features of the thinking process of younger schoolchildren with mental retardation.

Keywords: thought process, intellectual disability, visual-imaginative thinking, perception, correction, schoolchildren.

In Russia, the number of children with developmental disabilities is constantly increasing due to the deterioration of the environmental situation, the socio-economic crisis, the growth of alcoholism with its devastating consequences for the family, and therefore for the development of the child.

Of the 35 million children, 1.5 million belong to the category of children with disabilities and need special education. 280 000 children are enrolled in 1 905 special educational institutions for children with hearing impairment, visual impairment, orthopedic impairment, speech or language impairment, intellectual disability, specific learning disability, etc. 211 000 children attend special (correctional) classes and 2 500 children are enrolled in educational institutions. Currently, 38% of children with various developmental disabilities are integrated into the general education environment.

In this study, we will try to find out the features of the thought process in children with an intellectual disability. Kids with this type of disability have below-average intellectual ability. They may also have poor communication, self-care, and social skills. Down syndrome is one example of a condition that involves an intellectual disability.

An intellectual disability is not a disease. You cannot catch an intellectual disability from anyone. It is also not a type of mental illness, like depression. There is no cure for intellectual disabilities. However, most children with an intellectual disability can learn to do many things. It just takes them more time and effort than other children.

The purpose of the study is the peculiarities of the thought process of children with an intellectual disability.

The objectives are:

– to give a psychological description of children with intellectual disability
– to consider set of recommendations aimed at developing the thought process in primary school,
– to determine the features of the thought process of children with intellectual disability.

Materials and methods:

– analysis of psychological and pedagogical literature;
– observation;
– experiment.

We used two techniques: "Nonsense" and "Seasons" by N.S. Nemov. 16 children aged 8-9 took part in the experiment.

The "Nonsense" technique was designed to evaluate a child's visual-imaginative thinking. A participant was shown a picture with animals in unusual situations (fig. 1). While looking at the picture a child was given the following instructions: "Look carefully at this picture and tell me if everything is in its place and is drawn correctly. If something seems wrong to you, out of place or incorrect, point it out and explain your choice. Correct the mistakes" [5, c. 98].

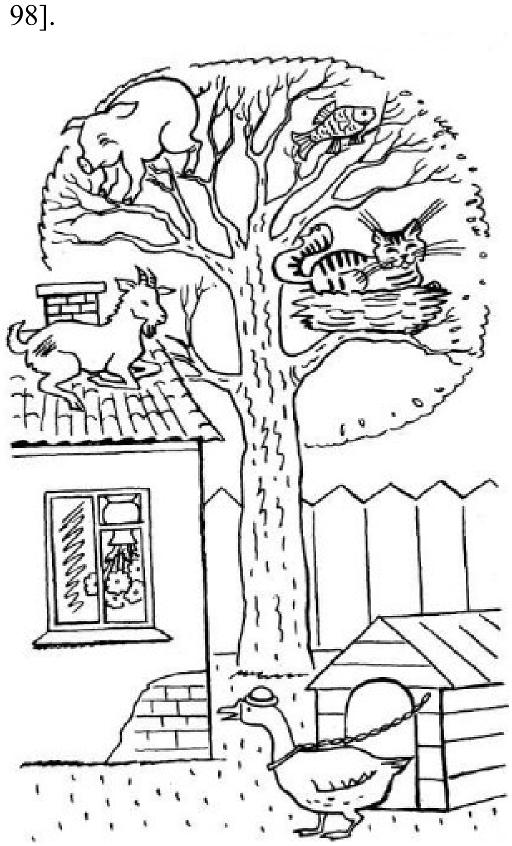

Figure 1. The picture from the "Nonsense" technique

The "Seasons" technique is aimed to measure the child's ability to find cause-and-effect relations and to assess the level of speech development. Four pictures with different seasons are laid out in front of a child (fig. 2). They have to define each season and to explain why they think so. [5, c. 98]

Figure 2. The picture from the "Seasons" technique

The thought process is cognitive behavior in which ideas, images, mental representations, or other hypothetical elements of thought are experienced or manipulated. In this sense, thinking includes imagining, remembering, problem solving, daydreaming, free association, concept formation, and many other processes. The thought process is said to have two main features: 1) it is implicit, that is not directly observable but must be inferred from actions or self-reports; and 2) it is symbolic, it seems to involve operations on mental symbols or representations, the nature of which remains obscure and controversial.

In young schoolchildren intellectual disability is mainly demonstrated in the immaturity of the emotional and volitional spheres. Children are emotionally unstable, too excitable, or, on the contrary, passive and apathetic. Undoubtedly, these features negatively affect the level of development of children's thought process, since its development requires a lot of effort and concentration on the part of the child. [5, c.104]

They do not have such abilities as analysis, synthesis, comparison, they cannot understand the reasons for other people's actions, build constructive interaction, and they are not able to take part in games that require emotional maturity and inclusiveness.

The most common distinguishing features of children with intellectual disability, presented by A.Ya. Antsupov, are:

1) physical helplessness, isolation of children;
2) lack of knowledge about the ways to resolve the conflict;
3) inadequate self-esteem;
4) misunderstanding of students' positions in the social space;
5) speech specificity;
6) preference for mechanical activities;
7) high level of anxiety, excitability or apathy [2, c. 102].

Children with intellectual disability understand the tasks slower. Their perception is distorted, which has a great impact on the acceptance and display of the outside world. This feature significantly complicates the thought processes: it is difficult for such children to establish cause-and-effect relationships, they cannot perceive an object as a whole, therefore they isolate individual, most obvious features from it. All this affects the pace of the task which is significantly reduced. Such children often tend to confuse graphically similar letters, numbers, objects, sounds similar in sound, words, etc. Children with intellectual disabilities also have pronounced attention deficiencies, which manifests itself in its instability, slow switching, and difficulty in attracting and distributing it. These features do not allow a child to concentrate on any object for a long time.

For the reliability of the data, two methods are used, they are different in the type of task, but their results allow us to identify the level of development of visual and imaginative thinking of primary school children with intellectual disability.

The “Nonsense” technique showed that 34% of children have an average level of development of visual-imaginative thinking. These children mentioned all the mistakes that were in the picture, but they were able to explain only a few problematic situations. The majority, 66% of children, have a low level of visual-imaginative thinking. Three children noticed almost all the mistakes, but after being asked to explain, they could not do it.

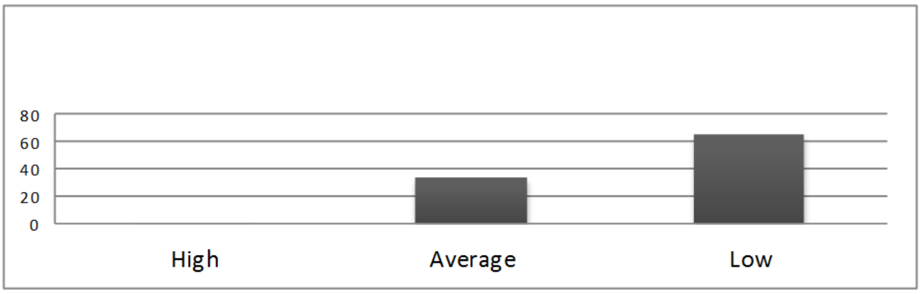

Figure 3. The results of the "Nonsense" technique, %

The results of the "Seasons" technique are the following features: 33% of children have an average level of visual-imaginative thinking, these children correctly identified the seasons and named 3-4 signs, in general. Other 33% of children had a low level of visual-imaginative thinking development. A very low level of visual-imaginative thinking development was also revealed — 17%. No children with a high level were identified.

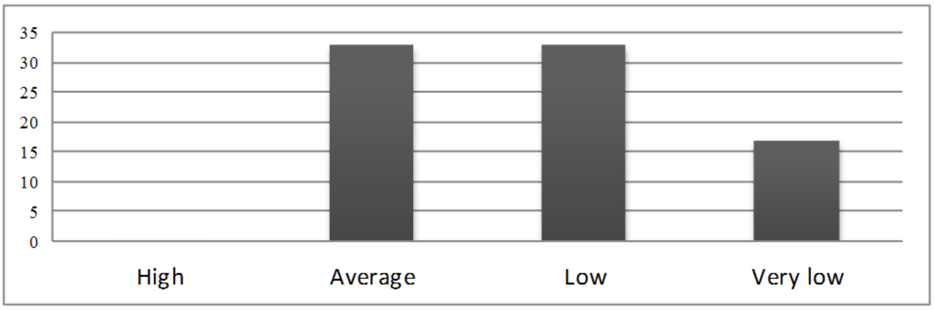

Figure 4.The results of the "Seasons" technique, %

Thus, according to the results of the study, we can say that 66% pupils have a low level of development of visual-imaginative thinking. 34% of primary school children, the level of development of visual-imaginative thinking is at an average level. This suggests that the level of the thought process in most children is at a low level.

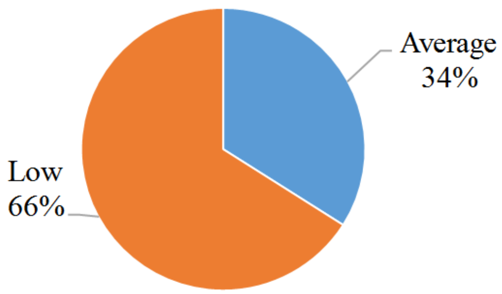

Figure 5. The level of development of visual-imaginative thinking
of primary school age with intellectual disability

To sum up, it is necessary to say that four children who had a low level of visual-imaginative thinking needs the help of a specialist. During the testing children were under observation. We can say that participants who showed low level of visual-imaginative thinking were often distracted by minor details and signs, they did not notice important things in the task. When the children explained the situations, they formally described the plot in short sentences with poor vocabulary.

For further favorable development of the level of visual-imaginative thinking, correctional work is necessary.

We consider it appropriate to use the following methods of thinking development for this category of children.

Method of correction of analytical activity and mental synthesis. Children have to imagine and describe the situation with the changed habitual characteristics of time connections (following, preceding, coincidence), for example, it is necessary to imagine and describe the situation of lightning without thunder.

Methods of attention correction. They find differences, repeat movements, compare pictures, correct errors in the text, etc.

The technique of perception correction. It is necessary to graphically reproduce the meaning of some words according to the instructions of an adult; draw fantastic characters, for example, a firebird in a magical garden; draw the outline of the drawing for the child with dots and ask him to circle.

Conclusion

The thought process differs from other psychological processes in that mental work is directly related to solving a problem situation, a particular task. Unlike perception, the thought process goes beyond the sensory data. It acts as a complex mental activity in the form of processes of analysis and synthesis, abstraction and generalization.

A significant developmental disability indisputably indicates a great need for special pedagogical work for the formation of intellectual operations in children, the development of mental activity skills and stimulation of intellectual activity.

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МЫСЛИТЕЛЬНЫЙ ПРОЦЕСС ДЕТЕЙ С УМСТВЕННОЙ ОТСТАЛОСТЬЮ

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Аннотация. Проблема изучения детского мышления всегда была значимой и находится в центре внимания многих педагогов, психологов, философов и т.д. Но если у ребенка задержка или неполное развитие психики, проявляющееся нарушением интеллекта, этот вопрос приобретает особую важность и его решение имеет, таким образом, не только развивающее, но и коррекционное значение. В данной статье рассматриваются особенности мыслительного процесса младших школьников с задержкой психического развития.

Ключевые слова: мыслительный процесс, умственная отсталость, визуально-образное мышление, восприятие, коррекционная работа, дети школьного возраста.

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УДК 62

SECURITY AND PRIVACY ON THE INTERNET

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Abstract. This article describes the means of information protection in the modern world, as well as ways for the user to protect their data independently. The analysis of information security tools and modern encryption keys was also carried out.
Today, electronic computing technology is widely used and almost everyone uses various resources: messengers, online banks or Government databases that store a huge amount of personal information about us. Attackers can use this information for their own purposes. Also, none of us is protected from system failures, as a result of which we may lose important files for us. In order to protect personal data, as well as files and other information from leakage and irretrievable loss, there is the concept of information security.
Keywords: information security; information protection; means of information protection; methods of information protection; user; confidentiality

The goal of research is information security and means recognized to protect the user on the Internet.

Subject of research: The development of information security in Russia.

The purpose of the scientific project is to study the development of information security technologies in Russia.

The objectives are:

1) to consider the theoretical aspects of the technology under study
2) to analyze the development of information security
3) to characterize and evaluate the means of information protection

Conclusion: Summing up, it was concluded that in modern realities, sufficient awareness of the threats of data hacking and methods of their protection is important for all Internet users. Therefore, today every person needs to learn the basics of information security and have an idea of how to protect their data. In addition, after analyzing the results obtained from the survey, the most common means of information protection were identified.

Information is one of the most valuable resources of any company and any person that needs to be protected properly. The topic under study is relevant due to the fact that information, as well as other values, may be under significant threat of hacking by intruders. There are great risks in the field of state security, in addition, ordinary users may suffer from unauthorized access.

There are two types of impacts on information security — intentional and accidental. Intentional impacts are the actions of the violator, which he performed specifically in order to undermine the reliability of information systems. Usually the violators are employees of the companies in which they work, competitors or individuals. Who were hired specifically for these purposes. The reasons for intentional impacts can be different, whether it is dissatisfaction with an employee, curiosity, or competition. Accidental impacts in the operation of information systems occur extremely often and at all cycles of the system's life. They may occur due to errors in the work of personnel and employees, due to various interference, due to environmental influences, errors in the software itself (software), technical failures, power outages or due to any natural disasters.

To begin with, let's consider the term information security itself. So, information security is a comprehensive protection of information and the infrastructure that supports it from any accidental or fraudulent influences that can lead to damage to the information itself, its owners or the infrastructure that it supports [1]. The main task of information security is to minimize the damage caused by intruders. In addition, the necessary tasks are the prevention and prevention of these impacts.

There are two types of impacts on information security — intentional and accidental. Intentional impacts are the actions of the violator, which he performed specifically in order to undermine the reliability of information systems. Usually violators are employees of the companies in which they work, competitors or persons who were hired specifically for these purposes. The reasons for intentional impacts can be different, whether it is dissatisfaction with the employee of the company in which he works, curiosity or competition. Accidental impacts in the operation of information systems occur extremely often and at all cycles of the system's life. They can occur due to errors in the work of personnel and employees, due to various interference, due to environmental influences, errors in the software itself (software), technical failures, power outages, or due to any natural disasters [2, p. 3-4].

Today, due to the rapid development of information technology, the emergence of computer viruses and other reasons, software methods of information protection, such as VPN, are most in demand among Internet users. A VPN defines a private network within a public network for receiving and transmitting information. Another popular means of protecting information is antivirus programs that protect against computer viruses and restore infected or lost files. Other methods of protecting data privacy are firewalls that control access to the network and cryptographic programs that convert information into encrypted code. In addition, many companies adopt the establishment of clear regulations and rules for working with confidential information and the punishment for their violation, which makes it possible to clearly define the boundaries of what is allowed in the handling of data. This is the most basic way to control the reliability of data privacy.

Since the early 2000s, cyber threats have become relevant for everyone: starting from the largest state information systems to the computers of ordinary citizens. A cyber threat is an illegal penetration or threat of malicious penetration into a virtual space to achieve political, social or other goals.

In addition, many companies adopt the establishment of clear regulations and rules for working with confidential information and the punishment for their violation, which makes it possible to clearly define the boundaries of what is allowed in the handling of data. This is the most basic way to control the reliability of data privacy. Traditionally, the main growth factor for the Russian market is mandatory compliance with the requirements of legislation in the field of information security and relevant regulatory requirements. The regulatory framework in the field of information security in Russia is being improved, therefore, customers and suppliers (manufacturers of information security products, integrators, auditors, consulting and service companies) need to ensure compliance with modern requirements.

Now many companies are moving to a new technological level, which, of course, has its impact on information security requirements. It is believed that the rapid growth of the economy-forming enterprises contributes to the development of the information security market. The growing urgency of threats that are associated with the effect of cyber attacks on the infrastructure of companies, the possibility of leaks of confidential information (including for reasons of changes in the organization of many enterprises and corresponding changes in their infrastructures when transferring most of the employees to work remotely) and data compromise has led to the fact that both large and small and for medium-sized businesses, it has become necessary to approach the issue of ensuring the required level of information security based on a comprehensive risk assessment. This is implemented through investments in improving data protection subsystems, which allows personnel to be much more knowledgeable in the field of information security, improve and modernize information security management processes, more actively involve specialized specialized companies that provide services in the field of practical security analysis, as well as services in the field of threat analytics, event analysis, and identification and investigation of incidents.

Today, due to the rapid development of information technology, the emergence of computer viruses and other reasons, the most popular among Internet users are software methods of information protection, such as VPN (virtual private network) — a virtual private network that combines several devices by tunneling traffic over another network connection. Let's consider the principle of VPN operation. A VPN defines a private network within a public network for receiving and transmitting information. There are several levels of VPN implementation. Usually a VPN connection is deployed at the network level and below, since the use of cryptography at these levels allows the use of transport protocols unchanged, such as the TCP protocol (The Transmission Control Protocol is a transport protocol that performs the function of data transmission control and controls their safety, UDP (User Datagram Protocol — the main task of this protocol is — specify the sender and recipient ports). Users of the Windows operating system use the term VPN to designate one of the implementations of a virtual network — PPTP (Point-to-point Tunneling Protocol) — a tunnel protocol that allows a computer to establish a secure connection with a server by creating a special tunnel in an unsecured network. In most cases, to create a virtual network, the encapsulation of the PPP protocol (Point-to-point protocol — a protocol that establishes a direct connection between two network nodes) is used in another protocol — an IP address (Internet Protocol — an identifier that allows information to be transmitted between devices on the network) [3].

VPN technology has recently been used not only to create private networks, but also by some providers to provide Internet access. With the proper level of implementation and the use of special software, a VPN network can provide a high level of encryption of the transmitted information[5].

Next, consider the VPN structure. A VPN consists of two parts: an "internal" (controlled) network, of which there may be several, and an "external" network through which the connection passes through encapsulation. Data encapsulation is a process that adds the contents of an additional protocol header to the data before transmission. It is possible to connect to a virtual network of a separate computer. The connection of a remote user to a VPN is made through an access server connected to an internal and external network. When connecting a remote user, the access server requires going through the identification process, and then the authentication process. After successfully passing the identification and authentication processes, the remote user (remote network) is authorized to work on the network, that is, the authorization process takes place.

In addition to VPN, another means of information protection is also used — antivirus programs that protect against computer viruses and restore infected or lost files.

Three groups of methods are used to protect against viruses:

1) Methods based on the analysis of the contents of files (both data files and files with command codes). Such as scanning virus signatures, as well as integrity checks and scanning suspicious commands.

2) Methods based on tracking the behavior of programs during their execution. They consist in recording all events that threaten the security of the system and occur either during the actual execution of the code being checked, or during its software emulation.

3) Methods of regulating the procedure for working with files and programs.

The main types of antivirus programs include:

1) Detector programs perform the functions of searching and detecting viruses in RAM and on external media, and when detected, they issue a corresponding message. There are universal and specialized detectors.

2) Doctor programs (phages) not only find files infected with viruses, but also "treat" them, that is, they remove the body of the virus program from the file, returning the files to their original state. At the beginning of their work, phages search for viruses in RAM, destroying them, and only then proceed to the "treatment" of files. Among the phages, polyphages are distinguished, that is, doctor programs designed to search for and destroy a large number of viruses. Given that new viruses are constantly appearing, detector programs and doctor programs are rapidly becoming obsolete, and regular updates of their versions are required.

3) Audit programs are among the most reliable means of protection against viruses. Auditors remember the initial state of programs, directories and system areas of the disk when the computer is not infected with a virus, and then periodically or at the request of the user compare the current state with the original one. Detected changes are displayed on the monitor screen. As a rule, the comparison of states is made immediately after the operating system is loaded. When comparing, the file length, the cyclic control code (the checksum of the file), the date and time of modification, and other parameters are checked.

4) Filter programs (watchmen) are small resident programs designed to detect suspicious actions during computer operation that are characteristic of viruses.

5) Vaccine programs (immunizers) are resident programs that prevent infection of files. Vaccines are used if there are no doctor programs "treating" this virus. Vaccination is only possible against known viruses. The vaccine modifies the program or disk in such a way that it does not affect their work, and the virus will perceive them infected and therefore will not be introduced. A significant disadvantage of such programs is their limited ability to prevent infection from a large number of different viruses [6].

Another method of protecting data privacy is a firewall. A firewall is a traffic filtering tool that controls access to the network. There are hardware and software firewalls.

Hardware firewalls are separate devices installed between local and global networks. Sometimes a hardware firewall is a separate computer dedicated for these purposes. Two network cards and the necessary software are installed on this computer.

A software firewall is software installed on a computer in order to protect against network threats. No other devices are needed to install a software firewall. But the firewall must be installed on all computers on the network.

To identify the most popular means of information protection, a survey was conducted among university and college students (Diagram 1).

According to a survey conducted among Internet users, most of them today use a VPN to protect information. Another common means of data protection are antivirus programs. Despite this, the respondents also stated the shortcomings of these methods of information protection that they use. So, according to the survey results, the significant disadvantages of VPN for users are the likelihood of IP and DNS leaks in case of errors in their configuration, as well as some difficulties in installing and configuring them on gadgets for an inexperienced user. The shortcomings of antivirus programs for the surveyed audience were the slowing down of a computer, smartphone or other device during use, as well as the slowing down of devices when using several antiviruses at the same time. Although these methods of information protection have their disadvantages, they are the most popular, effective and easy to use for the common user.

Distribution of respondents' answers to the question: "What means of information protection do you use?" (in% of the number of respondents)

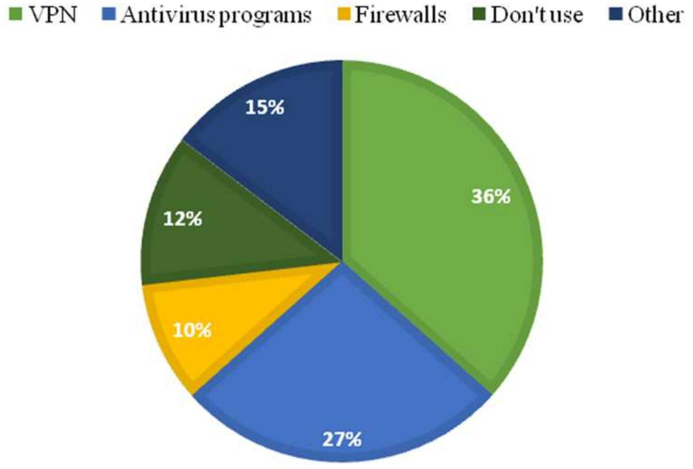

Diagram 1.

These measures to protect the confidentiality of information are the first line of defense, preventing threats from intruders, allowing to stop crimes and punish the perpetrators. Also, these data protection methods are aimed at those who may accidentally damage or delete valuable information, as well as protect it from hacking.

At the present time, confidential information can increasingly be threatened due to the appearance of a large number of virus-infected software, the increase in hacker attacks and other threats. Hence, there is a need to develop and implement various measures designed to protect data.

Summing up, it was concluded that in modern realities, sufficient awareness of the threats of data hacking and methods of their protection is important for all Internet users. Therefore, today every person needs to learn the basics of information security and have an idea of how to protect their data. In addition, after analyzing the results obtained from the survey, the most common means of information protection were identified.

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БЕЗОПАСНОСТЬ И КОНФИДЕНЦИАЛЬНОСТЬ В ИНТЕРНЕТЕ

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Аннотация. В данной статье представлено описание средств зашиты информации в современном мире, а также способы, как пользователю защитить свои данные самостоятельно. Также был проведен анализ средств защиты информации и опрос среди студентов ВУЗов и СУЗов для выявления наиболее востребованных средств защиты информации.

Ключевые слова: информационная безопасность; защита информации; средства защиты информации; методы защиты информации; пользователь; конфиденциальность
Научный руководитель: доцент, канд. филол. наук, Шагланова Елена Андреевна.

УДК 327

SPORT AND POLITICS

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Abstract. The paper considers the development of sport in the XX–XXI centuries. The main problem of nowadays is penetration of politics into the sport. Sport is considered to be an instrument for political influence on society. A striking example of it is increasing number of doping scandals on the international arena.
Keywords: sport, politics, the Olympic movement, doping scandals, soft power politics, sport diplomacy.

Sport plays an important role in the life of people of all countries. Sport also helps to develop partnership and cooperation between states. There are many examples of successful partnership and friendly relations between countries started with the cooperation in the field of sport.

Sport has a direct impact on people. It is not only for healthy way of life, but it promotes patriotic feelings of citizens, the growth of investments, the development of the country's sports infrastructure, attraction of tourists, creates the image of the country abroad.

Unfortunately, politicization of sport has been taking place since the twentieth century. Politics has been penetrating deeper into sports; it is increasingly becoming an instrument of political propaganda and manipulation of the consciousness of millions of the world's population. It is becoming an effective means of political confrontation for international authority and leadership on the world stage.

The goal of the research is defining the relationship between sport and politics in different specific historical periods.

The objectives are:

1) to analyze and summarize the materials of scientific literature devoted to the research topic;

2) to describe the facts of using sport as an arena for political confrontation;

3) to conduct a survey to find out relation of young people to the problem of using politics in sport.

Methods of research are scientific literature analysis, comparative method, a survey.

Sport is actively involved in the sphere of international relations. International sports competitions become a meeting place for heads of state, during which negotiations are held on issues of bilateral relations. States use sport to increase their prestige, strengthen their position on the international arena, and strengthen their influence at the regional and global levels. Sport creates the opportunity for peaceful dialogues in peaceful conditions.

The international sport movement has faced many problems since its foundation. One of the most difficult problems — the problem of racial discrimination, was almost completely solved by the beginning of 1990. People regardless of skin color, national minorities began to participate in the most famous international competitions.

The Olympic movement is considered to be the most popular in the world with a well-developed system and clear management. The International Olympic Committee has more than two hundred national Olympic committees in different countries. The victories of the national teams at the Olympic Games and World Championships are great achievements of national importance.

In regards to politics, sport has a possibility to strengthen the bonds between different cultures and bind them together as one body. The idea of using sport as a tool of public diplomacy in the context of "soft power" is not new. Joseph Nye defines "soft power" as a form of political power, the ability to achieve desired results based on voluntary participation, sympathy and attractiveness, as opposed to "hard power", which implies coercion. Thus, considering sport as a tool of "soft power", states get the opportunity to use sport to promote their cultural heritage, history, demonstrate national pride and economic achievements. An example of the realization of such an opportunity is the Sochi Olympics. The 2014 Olympic Games changed the image of the state: people from different countries not only learned more about Russia, its culture and people, but also saw the results of economic development. It was a kind of advertising of political and economic power of Russia, creating a good image on the international arena.

One of the most striking examples characterizing sport as a tool of cultural diplomacy in the conditions of the Cold War was the meeting of the US table tennis team with the Chinese team. After this tournament, the US President Richard Nixon was invited by Mao Zedong. Later Chinese Prime Minister Zhou Enlai wrote: “Sport has never been used before as an effective tool of international diplomacy”.

Other interesting examples of bilateral reconciliation are: "cricket diplomacy" in the Indo-Pakistani conflict; "basketball diplomacy" in the Greek-Turkish conflict, as well as efforts of the civil society institutions in Israel and Palestine, which tried to form the so-called "Peres Team for Peace", consisting of 25 Israeli and Palestinian athletes to participate in the 2011 Australian Football League Cup competition.

This experience was repeated in November 2011, when Qatar hosted a table tennis competition. Two Korean teams, teams from India and Pakistan, as well as teams from the USA and Iran, who played in pairs, took part in this tournament under the auspices of the International Table Tennis Federation (1PT) and the Peace and Sport Foundation headquartered in Monaco.

However, sport may be used also as means of political propaganda. Sport may divide the world into irreconcilable sides. Olympic is often the biggest example of using sport for diplomatic means. Sport acts as a means of demonstrating the advantages of one system over another. Political competition is shifted to the sport arena.

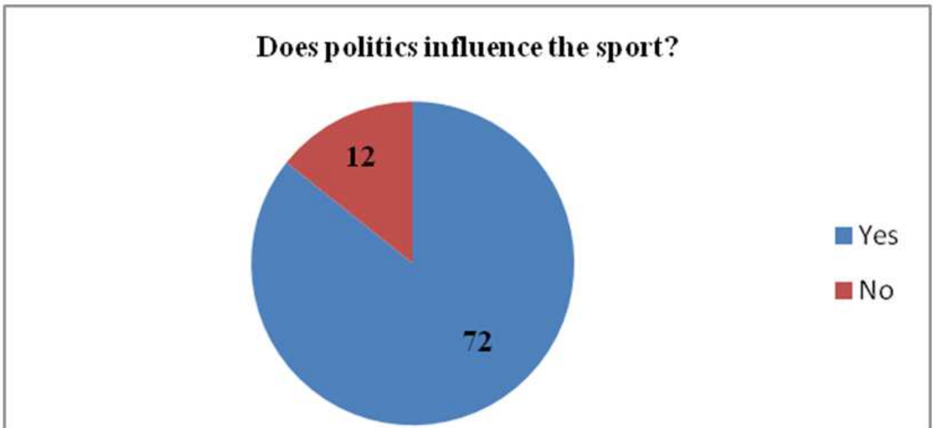
A striking example of the political background is the Olympic Games in Munich in 1972, when the Israeli team suffered from the result of a terrorist attack. All sportsmen remember the Olympic Games in Moscow in 1980, when the USA president ordered his athletes to boycott the games. He persuaded to boycott a number of other countries: Canada, Germany, Japan, South Korea and Turkey. It is example of direct political pressure through sport. Soviet athletes did not take part in the Olympic Games in Los Angeles in 1984 in response to it.

Russia is always famous for its great achievements in all kinds of sport. But doping scandals and discrimination against Russian athletes are being discussed more and more often, especially in the last decade. Unproven accusing many leading athletes of using banned drugs influenced the physical and moral condition of sportsmen. It was especially acute in the "meldonium war". The "meldonium scandal" seriously affected the image of Russia as a sports power, negatively affected the training schedule and the reputation of Russian athletes. Meldonium was synthesized in the 70s of the XX century in the USSR. It is still actively used by athletes from Eastern European countries for the prevention of cardiovascular diseases.

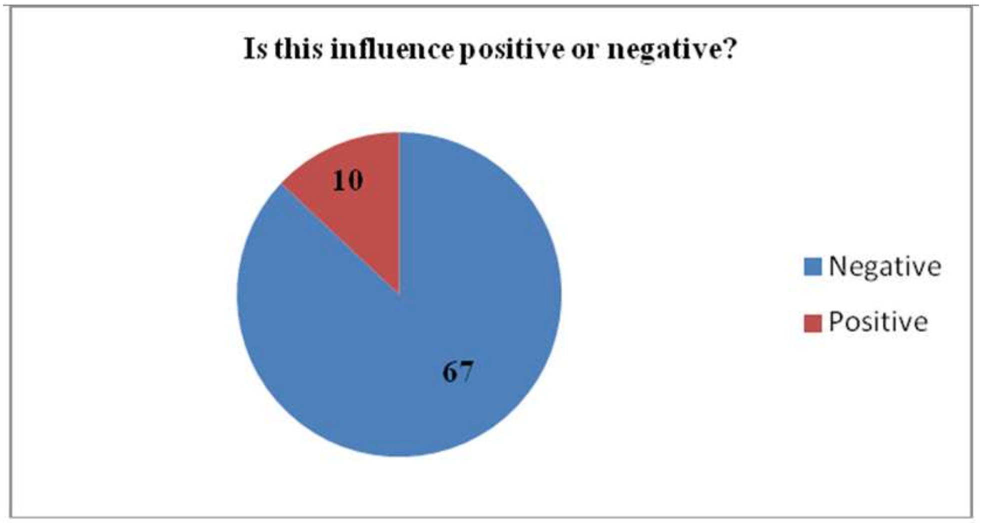
The athletes from the Russian Federation are prohibited to participate in Olympics and World Championships under the flag and anthem of the Russian Federation until December 2022. At the same time, the Olympic and Paralympic Games, as well as the World Championships cannot be held on the territory of Russia during this period.

As we see, politics may have both positive and negative influence on sport. It is possible to use sport for uniting people from all over the world. At the same time, politics may bring states to confrontation through sport.

A sociological survey was conducted among young people (18-30 years old) to reveal their relation to the impact of politics on sports. 84 respondents took part in the survey. The first question was “Does politics influence the sport?” 72 respondents (85,7 %) answered “Yes”. 12 respondents (14,3 %) have the opposite opinion “No”.



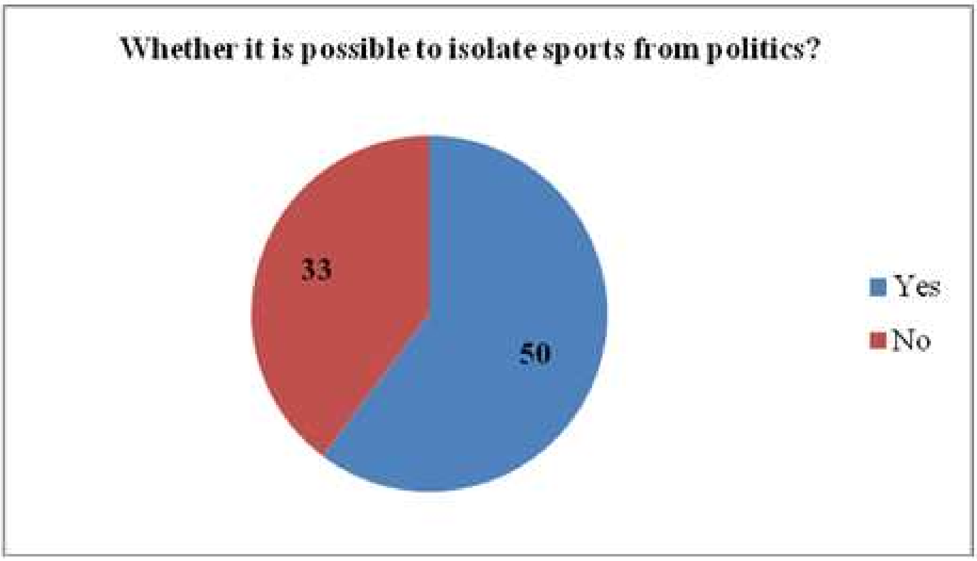
The second question was “Is this influence positive or negative?” 67 respondents (87 %) consider the impact of sports on politics negative, 10 people consider (13 %) positive.



The respondents were asked to give examples of impact of politics on sport. The most popular examples are the following:

- the Olympic Games 2022;
- the deprivation of the Russian team of the national flag and anthem,
- doping scandals;
- scandals in figure skating at the 2022 Olympics in Beijing, associated with Kamila Valieva;
- the European Championship 2022 (the Russian team was not allowed to participate);
- the Paralympic Games in Beijing (Russian and Belarusian teams were not allowed to participate);
- the boycott of the 1980 Summer Olympics in Moscow;
- the boycott of the 1984 Summer Olympics in Los Angeles.

The next question of the survey was “Whether it is possible to isolate sports from politics?” 50 respondents (60,2 %) answered positively, 33 respondents (39,8 %) negatively.



According to the questionnaires, it is impossible to isolate sport from politics. Some respondents suggested creating an institute of sports, introducing special laws and changing international documents of sports organizations or even creating an independent organization, an anti-doping committee, reforming existing international organizations, limiting the influence of politicians on sport.

Conclusion:

Throughout history, sports have usually been seen as leisure for the majority of the population, separate from serious matters of politics and influence. However, sports have always played some role in the distribution and use of power, particularly as a show of national strength on an international stage. Today’s athletes are taking more of the political power that comes with their platform and using it to explore and amplify their agendas. "Sport is out of politics" is a statement that most likely is the desire of the organizers of the international sports movement to separate sport from politics, and this is almost impossible to do. Most often, sport is an instrument of political pressure, lobbying for their interests, and a large number of problems remain acute at present time. Sports and politics have always been in a complex relationship in each specific historical period.

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СПОРТ И ПОЛИТИКА

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Аннотация. В результате исследования был рассмотрен спорт конца 20-21 века, одной из главных проблем которого является его перенос со спортивных арен в политическую сферу. Спорт стал рассматриваться как инструмент политического воздействия на общество. Ярким примером проникновения политики в спорт стали допинговые скандалы, которые все чаще стали возникать на международной арене.
Ключевые слова: спорт; политика; олимпийское движение; допинговые скандалы; политика мягкой силы; спортивная дипломатия.
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УДК: 008

STEP INTO THE FUTURE

© **O. A. Zhilyaeva, V. O. Vasilieva, E. N. Kosolap**
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Abstract. Humanity is moving forward thanks to the development and improvement of technologies. The paper draws attention to anthropogenic changes in the natural conditions of the planet caused by technological progress and its impact on the health of humanity. The technological process can't be stopped, but a man is able to guide it in the right direction and preserve the balance of morality and progress.
Keywords: technological progress, public health, Nano technologies, balance of morality and progress.

The aim of this paper is to make a review of the book and to assess the impact of technological progress on the life of a modern person.

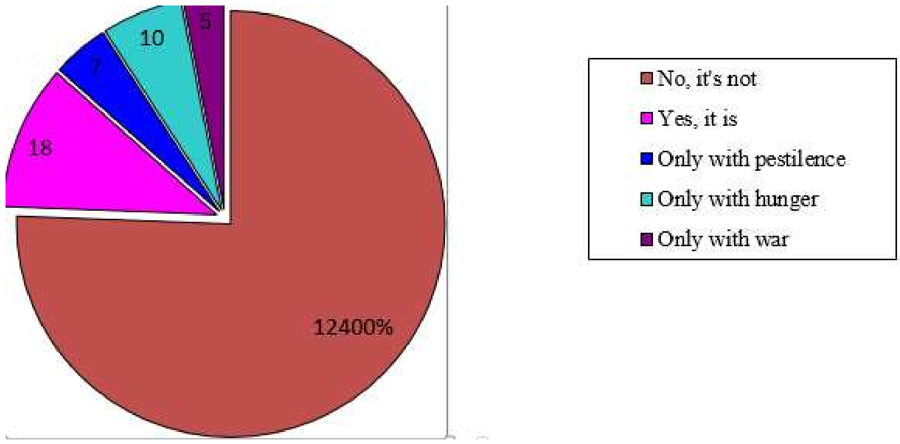
The objectives are:
- review of the book «Homo Dues» (Y.N. Harari);
- conducting of the survey among the residents of the Russian Federation;
- studying of the respondents' opinions on influence of progress on the life of people.

Materials and methods. The research was based on the book of the author Yuval Noah Harari. Yuval Noah Harari is a military historian and medievalist, Professor of the Faculty of History, Hebrew University, Jerusalem, and the bestselling author. The Internet survey included 164 residents of Russia. Abstract-analytical, statistical and comparative research methods were used to obtain reliable data.

Mankind has been haunted since ancient times by three major disasters: hunger, war, and pestilence. Previously, all of these scourges caused the death of a huge number of people. Mass hunger, constant wars in the struggle for territory, the plague pandemic, the Spanish influenza epidemic inspired fear and helplessness to humanity. But man is able to control these disasters now. Now wars tend to be informational. In the future, most men and women are likely to lose their military and economic value. The advanced armies of the 21st century rely primarily on the latest achievements of technologies. Instead of unlimited reserves of "cannon meat," countries will have enough only a small number of well-trained personnel, fewer special forces super-fighters and even fewer — specialists who know how to create and use ultra-complex and super-efficient equipment and technologies. The vast armies of the last century are being replaced by high-tech armed forces using drones and cyber servers, and generals are increasingly trusting the most responsible solutions to algorithms. Cyber warfare can only last a few minutes. The duty lieutenant of the Cyber Command, noticing something wrong, will immediately call his commander, who, in turn, will contact the president. But when he reaches for the red button, the war will already be lost. In seconds, a sophisticated cyber-attack can disable the power grid, destroy all flight control centers, cause many accidents at nuclear plants and radiation-chemical plants, destroy police, army and intelligence communications networks, and erase all financial records, so trillions of dollars will disappear without a trace and no one will know who owned what.

Most epidemics are suppressed and eradicated from the face of the Earth. The coronavirus pandemic, for instance, is declining now. Humanity has developed a vaccine, and since December 2020, large-scale vaccination has been successful.

The total share of starving people in the world is 8.9%. The interviewed people were asked during our questionnaire: "Can it be argued that humanity has dealings with hunger, war and pestilence?" The results are as follows: no, 75.5% failed (124/164); yes, 11% coped (18/164); only 6.1% coped with hunger (10/164); managed only epidemics 4.3% (7/164); coped only with wars 3% (5/164).

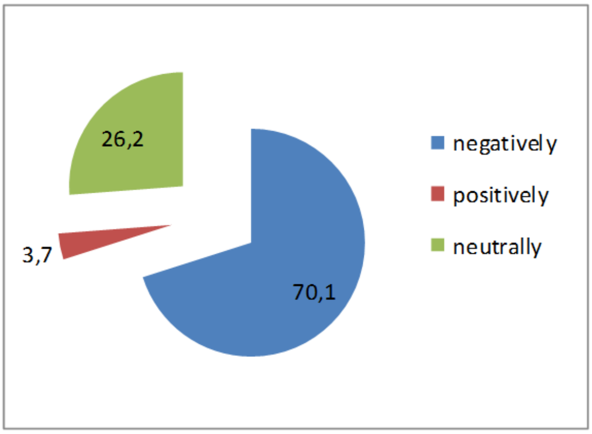


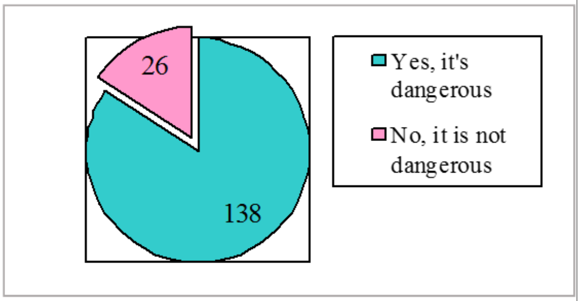
Humanity is moving forward thanks to the development of technology and its improvement. Replacing the physical labor of people with automated algorithms simplifies the activities of each person daily. The following positive qualities of technology of the world are distinguished: saving time and preserving public health, accelerating various processes, improving the quality of products. There are also negative influences: the deprivation of work of people in a certain profession, due to the replacement of their work with cars, the need for advanced training, and the aggravation of the environmental situation.

For thousands of years, the influence of human society on the natural environment has been immaterial. For the first time, science drew attention to anthropogenic changes in the natural conditions of the planet only in the second half of the XIX century in the era of the formation of capitalist relations. In the XX century, as a result of the powerful consumption of almost all types of natural wealth — minerals, land for agriculture, forests, seafood, water, air — the problem of their shortage sharply worsened. According to UNEP, almost 2 million hectares of soil have undergone various degrees of degradation in the world. The real threat was the pollution of the Earth's water and air shells, the need for food and energy is increasing. Every year, 1 billion tons of pollutants (without carbon dioxide) enter the atmosphere, and 17 billion tons enter the hydrosphere. As part of industrial waste, about 15% comes from toxic waste containing heavy metals and other poisonous substances. The sector of global pollution that is growing fastest today is electronic waste, dangerous to human health and the environment. According to the National Center for Snow and Ice Research (NSIDC) at the University of Colorado (USA), there is a sharp decrease in the area of summer ice cover in the Arctic. This will lead to an increase in the level of the world's oceans, flooding of the coastal zone and the ingress of pollutants into the water, and the death of marine biocenoses. The modern world is mainly based on high technology. However, the use of high technology entails significant costs in the form of negative environmental impacts. The aspects and implications of the use of advances in science and technology can be good and bad, depending on their impact on the environment.

Our next question was: «Do you think the overall computerization of the world can be dangerous to humanity?» The results showed that 84.1% (138/164) see a danger to mass computerization.

Technological progress is actively included in every sphere of human life. The opinions of the respondents to the question «How do you feel about the fact that human activity will possibly be completely replaced by the work of machines? » were as follows. The majority of them assessed it negatively — 70.1 per cent (115/164); neutrally — 26.2% (43/164) and positively — 3.7% (6/164).





A pressing problem of medicine today is the coronavirus pandemic. In 2020, for the first time in the world, adenovirus vaccines, such as the Russian Sputnik V, Oxford, Chinese Covidence and others, entered widespread use. And also for the first time revolutionary mRNA vaccines were recorded, this type includes, in particular, vaccinations of Pfizer/BioNTech and Modern (USA). In addition, new drugs, new diagnostic methods have been developed that detect diseases in the initial stages of development. In 2020, in connection with the coronavirus pandemic and the need to limit live contacts between people, there was a sharp jump in the development and use of remote telemedicine technologies. Many specialized doctors around the world began to advise remotely, wearable devices that remotely transmit the necessary indicators of the patient's condition began to be used for diagnosis.

In addition, development continues in the field of prosthetics. The latest invention is the bionic eye, which was developed by scientists at the Hong Kong University of Science and Technology. An artificial eye in its structure is similar to a human one and is able to see. Now scientists are faced with the task of "docking" the artificial retina with the visual part of the human brain. In the future, the bionic eye will give its owners noticeable advantages — it will allow you to see in the dark, and the quality of the picture in daylight will be much better than in ordinary human vision. Now, various organs and tissues are printed, in particular bone, cartilage implants are successfully created, that is, the printing of auricles, heart valves, vascular tubes, skin, and bone tissue for transplantation. Ahead in the 3D printing industry are the development of complex biological products, which contain fats, carbohydrates, vitamins.

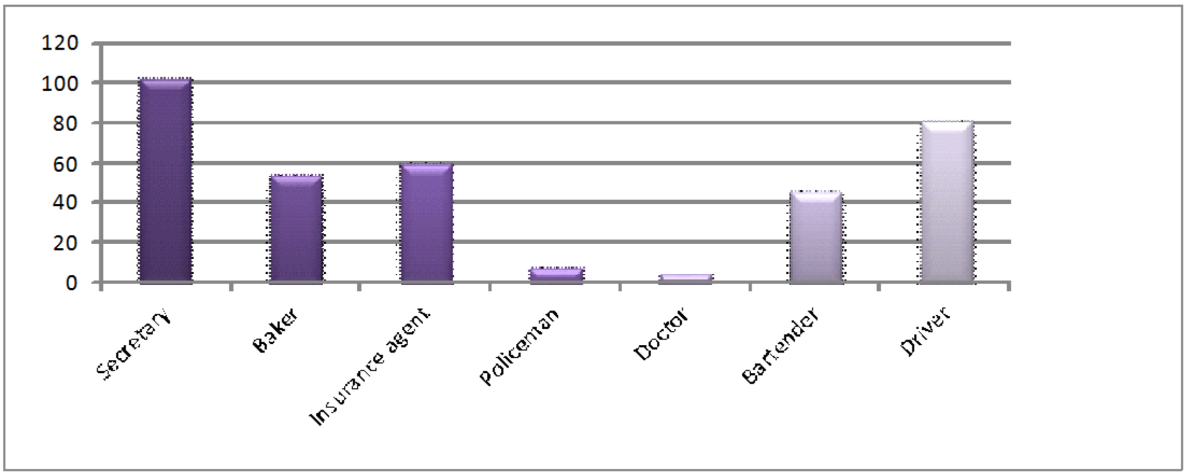
Back 120 years ago, people moved mainly on horses, then cars supplanted horses. There is a possibility that the same fate awaits drivers. In our time, unmanned vehicles have already been created, which in the future can displace ordinary cars and electric vehicles. If this happens, then in the future people may be forbidden to drive cars and transfer traffic control to computer algorithms. This makes it possible to connect all vehicles to a single network, thereby reducing the likelihood of accidents on the roads.

In the early 2000s, the world embraced a "Nano technological boom": the world's leading economies entered the race and repeatedly increased investments in research in this area, and in the USA Nano technologies became the most funded scientific project in history after the space program of the 60s. In Russia, the peak occurred in 2010-2011 years. Today, Nano technologies are used in many areas. Nano materials (for example, graphene) are actively tested in the military industry, including when creating body armor and high-strength work wear. For civil purposes, graphene is used in the production of heat-resistant kits for electric power companies and fire services. Another promising application of Nano technologies, including Nano materials, is microelectronics and semiconductors. Modern Nano materials allow you to create complex electronic devices of a new generation, which can be used in the production of computers, including quantum ones, for medical diagnostics, high-speed data transmission and much more.

Furthermore, equipment is gradually replacing a man; automated factories are replacing manufacturing. As a result, some professions disappear, become irrelevant. So, the world risks to drop 47% of professions.

99% probability that by 2033 telephone marketing specialists and insurance agents will give way to algorithms; 97% — cashiers; 96% — chefs; 94 per cent of law clerks and waiters; 91% — guides; 89% are bus drivers and construction workers. There are also reliable professions, for example, archaeologists, because it includes a complex system of images and does not generate much income. However, new professions will also appear, for example, a designer of virtual worlds.

We asked a similar question among those interviewed in Russia: "What professions will disappear in the near future to your mind?" The most popular answer was the secretary (62.2%), followed by the driver (49.4%), the insurance agent (36.6%), the baker (32.9%), the bartender (28%), the policeman (4.9%), the doctor (3%).



In fact, a doctor in the foreseeable future can be replaced with certain algorithms. Back in 2011, Watson was created — an artificial intelligence system. This system has tremendous potential advantages over doctors "made of flesh and blood." Firstly, artificial intelligence is able to store information about all diseases and medicines known to mankind. It can supplement this database daily not only with the results of recent research, but also with medical statistics provided by all world clinics and hospitals connected to the system. In turn, a living doctor is not able to equally understand all diseases and medicines or be aware of all recent articles in all medical journals. Secondly, Watson will be perfectly familiar not only with every link of your genome and every episode of your medical history, but also with the genomes and medical stories of your parents, brothers, sisters, cousins, neighbors and friends. Watson will instantly check whether you have recently visited a tropical country, whether you suffer from frequent gastrointestinal disorders, and whether there have been cases of bowel cancer in your family. Unfortunately, the doctor cannot remember all your past ailments and examinations. Thirdly, Watson will never disconnect due to overwork, hunger or unhealthy, and he will have a lot of time for you. You will be able to sit quietly at home on the couch and answer hundreds of his questions, describing in detail your feelings. The doctor may be overworked, or hungry, or even unhealthy, which will affect his concentration. Therefore, the doctor may be wrong and misdiagnose or prescribe inactive treatment.

Some believe that even if algorithms are able to outperform doctors in purely professional terms, they will never be able to replace their human relationship. If the results of the tomography show that you have cancer, one prefer to find it out from a sensitive machine that will pick words specifically to your personality type and your feelings. Remember that organisms are algorithms, and Watson will be able to diagnose your emotional state with the same accuracy with which it diagnoses your tumors. An ordinary doctor guesses the emotional state of the patient by external signs, such as facial expression or voice intonation. Watson will be able not only more accurately than a person to read these external signs, but also to analyze numerous internal indicators hidden from human perception. By matching information about your blood pressure and brain activity with the mass of other biometric data, Watson will accurately determine how you feel. And thanks to the statistics formed on the basis of millions of previous social contacts, it will be possible to say exactly the words that you need to hear, and precisely the tone that the situation demands. For all their praised emotional sensitivity, people often succumb to their own emotions and react incorrectly. For example, if the interlocutor is embittered, they begin to scream, and if frightened, they panic. Watson is insured against this. Devoid of emotion, he will always tune in to your emotional state in the best possible way.

Drivers, as well as doctors, are susceptible to emotions and stressful factors. For example, a taxi driver can enjoy music tiding through the busy city streets. His consciousness can expand when he contemplates the stars in awe and reflects on the secrets of the universe. But the system does not need any of this from the taxi driver. She needs one thing: to ensure the quick, safe and cheap transportation of passengers from point A to point B. And the unmanned vehicle will soon cope with this much more successfully, although he does not enjoy the music and does not reverence before the miracle of being. If in the future people are forbidden to drive not only taxi drivers, but in general any cars will be entrusted with computer traffic control algorithms, then people will then be able to connect all vehicles to a single network, thereby reducing the likelihood of accidents on the roads.

Some economists predict that sooner or later ordinary, non-modernized people will become absolutely useless. Robots and 3D printers are already replacing workers in previously manual industries such as sewing men's shirts, and "multi-smart" algorithms will also do with white collars. Bank clerks, insurance agents and tour agents, who until recently seemed immune from automation, fell into the risk zone. How much will the tour of agents need if we use a smartphone to buy tickets and order hotels from the algorithm? The answer is not rosy.

Conclusion. Technological progress has become an integral part of our lives. Various new opportunities have become available to mankind. The technological process can't be stopped, but a man is able to guide it in the right direction and preserve the balance of morality and progress.

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ШАГ В БУДУЩЕЕ

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Аннотация: Человечество движется вперед благодаря развитию и совершенствованию технологий. Данная работа привлекает внимание к антропологическим изменениям в природных условиях нашей планеты, вызванных технологическим прогрессом и его влиянием на здоровье человечества. Технологический прогресс невозможно остановить, но человек способен направить его в нужное русло и поддержать баланс морали и прогресса.

Ключевые слова: технологический прогресс, общественное здоровье, нано технологии, баланс морали и прогресса.

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УДК 159.99

THE PROBLEM OF PERSONALITY DEVELOPMENT IN ADOLESCENCE

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Abstract. The article is devoted to the problem of personality development in adolescence. It should be emphasized that the problem of personality development has always been relevant. The teenage period is considered as the most important one from the point of view of human adaptation in society. Based on the conducted research, the age characteristics of adolescents and their distinctive behavioral traits are considered in this article, as well as what underlies and is the reason for the complexity of this age.

Keywords: personality, adolescence, the age characteristics, behavioral traits, the reason for the complexity, the formation of identity and self-awareness.

Adolescence is one of the most difficult childhood ages, which is a period of personality formation. At this age, the foundations of morality are formed, social attitudes, attitudes towards oneself, people, and society are formed. In addition, at this age, character traits and basic forms of interpersonal behavior are stabilized.

As at any age, the personality of a teenager undergoes certain changes, having specific age characteristics. Knowledge about these features is very important for parents, teachers, psychologists, teachers and all specialists working with children, because they will help to understand the inner world of the child and establish harmonious trusting relationships with him. This is very important, since teenagers are one of the most socially vulnerable strata of society, which needs professional help and support from specialists.

The goal of the research is to study the patterns and features of personality development in adolescence.

The objectives of study:

– to study the theoretical aspects of personality development in adolescence:

a) to get a general idea of personality in psychology;

b) to study the features of the formation of the personality of a teenager;

– to determine the psychological features of adolescent development;

– to characterize the moral development of personality in adolescence.

Subject of the research: features of personality development in adolescence.

Materials and methods: projective methods "Non-existent animal", "Self-portrait".

In order to more fully reveal the question of personality development in adolescence, we need to gradually reveal two important aspects, firstly, to consider what a person is in the broad sense of the word, and secondly, to consider how a personality develops in adolescence, that is, to determine the age characteristics of a personality in adolescence age.

Personality psychology is a branch of science that allows you to understand the essence of a person's nature and individuality.

Modern scientists still cannot give a single definition of personality. The reason for this fact lies in the complexity and diversity of the phenomenon that is designated by the concept of personality. The main theories of personality include many different views and hypotheses about the development of personality. Foreign psychology designates five significant theories of personality: psychodynamic, phenomenological, dispositional, behavioral, cognitive. So let's briefly consider each of them.

1. Psychodynamic theories of personality. Sigmund Freud, within the framework of his theory of "classical psychoanalysis", formulated the most important principles of the psychodynamic theory of personality.

In his opinion, the main driving factor of personality development are innate instincts, which are combined into two large groups — the instincts of life (Eros) and the instincts of death (Thanatos) [5. p. 189].

2. Phenomenological theory of personality. This theory supports the idea that human behavior can be understood only in terms of its subjective perception and cognition of reality.

3. Dispositional theory of personality. The concept of this theory is that a person has certain predispositions that manifest themselves in certain reactions to the circumstances. Prominent representatives of this theory are Gordon Allport, Hans Eysenck and Raymond Kettel [4. p. 114].

4. Behavioral theories of personality. Personality is the experience that a person has acquired in life, what he has learned.

5. Cognitive theories of personality is that a person is a researcher trying to understand what is happening to him and predict what will happen to him in the future. The American psychologist George Kelly developed this approach to personality.

After the main theoretical aspects of personality theories have been considered, we can proceed to the description of the personality problem in psychology.

Who is such a person? Man is the most incomprehensible phenomenon of all that exists in the world and the most interesting subject for himself. He acts as a multidimensional and complexly organized being.

Traditionally, three main categories of concepts have been established in Russian psychology, which reflect three aspects of human existence: "individual", "personality", "individuality". In his works, A. N. Leontiev very consistently distinguished these concepts [3. p. 98].

Man, as an individual appears in his natural, biological features. A person, as a person, is represented in his social beginning. Personality is a basic category of psychological science, and practically the most widely used concept. In the concept of personality, they put the idea of a more developed level of human subjectivity.

There are two main meanings in the meaning of the word "personality".

Firstly, this is the most obvious meaning — the discrepancy between a person's own characteristics and the content of the role that he performs.

Secondly, it is the social typicality of the role played, its openness to other people.

Now we will reveal the question that concerns the peculiarities of the formation of a child's personality in adolescence.

In 1904, Stanley Hall published a two-volume monograph on adolescence. It was then that the beginning of research aimed at highlighting the specific features of this age was initiated. He was one of the first to come up with a proposal to consider this period as a transition from childhood to adulthood. A specific feature of this age period is the duality of mental life. This ambivalence manifests itself in a sudden change of mood from cheerfulness to despondency, as well as in a sharp transition from self-confidence to shyness and cowardice, from selfishness to altruism, from sociability to isolation, etc. The main thing for a teenager is the acquisition of psychological neoplasms: the formation of identity and self-awareness.

The emergence of new interests leads to the restructuring of the old and the emergence of a new system of motives, which changes the social situation of adolescent development, which in turn leads to a change of leading activities, the result of which are new psychological neoplasms of adolescence. What is the new leading activity, and what are the psychological acquisitions of adolescence? This is communication that helps a teenager to go beyond school and look for himself there. Communication allows him to constantly relate himself to his peers and form self-esteem. Outside of communication and without it, it is impossible to find your place in the world of peers and adults. In communication and through it, norms of social behavior, norms of morality are adopted, relationships of equality and respect for each other are established. And if communication at school does not satisfy a teenager, then he seems to psychologically "leave" her, i.e. it seems to him that real life is found only outside of school. The focus of the psychological life of a teenager is communication, and study takes a back seat. Thus, the change of types of leading activity in adolescence becomes clear [3. p. 178].

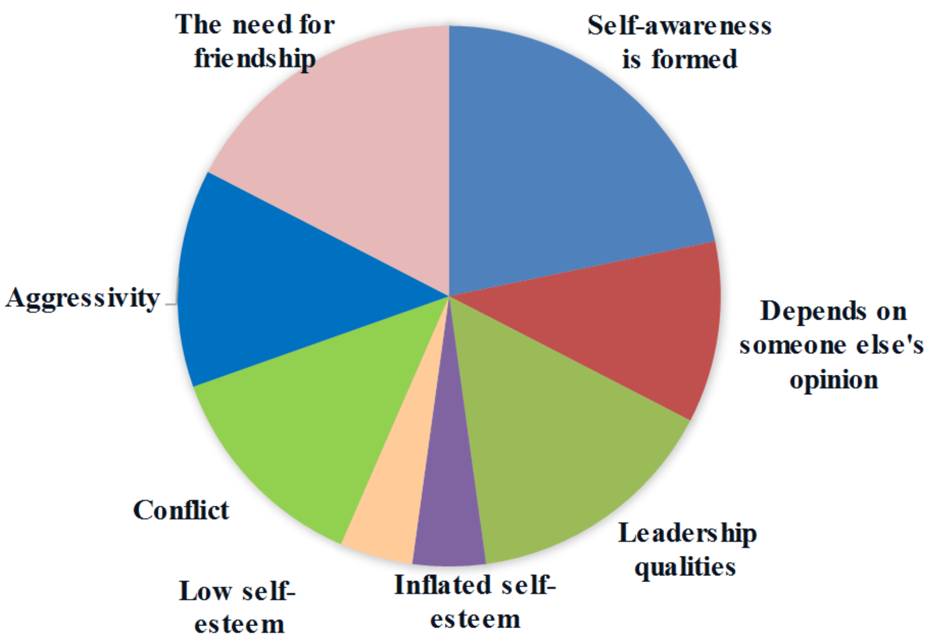
The main psychological neoplasm of this age period includes self-consciousness of the individual, the formation of which would be impossible without communication.

Teenagers continue to improve their theoretical thinking, which then gives priority positions to logical thinking. Mnemic processes are being actively improved — arbitrary and mechanical memorization; arbitrary attention; imagination; speech, including internal; divergent and convergent thinking.

Summing up, it should be noticed once again that the teenage period of development is not for nothing considered a turning point, transitional and critical, marking the transition to adulthood. The peculiarities of the course of adolescence, undoubtedly, leave an imprint on the rest of life.

20 teenagers took part in practical research. Participation was on a voluntary basis.

Results of research on projective methods



Conclusion: This research was devoted to the study of personality development in adolescence and highlighting the features of its development. The topic we are studying will never lose its relevance, because adolescence is considered one of the most difficult and difficult childhood ages, which is a period of personality formation. And specialists need to know about these features in order to establish a harmonious relationship with a teenager.

In the course of research, we came to some conclusions:

1. Firstly, adolescence is one of the most difficult childhood ages, because it is a period of personality formation.

2. Secondly, a personality in adolescence has a number of specific features, such as a practically formed self-consciousness, a pronounced need to establish trusting relationships with peers and belonging to a reference group; the presence of a conflict between the desire to be like everyone else and the simultaneous desire to stand out, often due to a change in behavior for the worse (demonstrativeness), as well as the instability of the emotional background with the predominance of negative emotions and frequent conflict relationships with adults;

3. Thirdly, in addition to the general age-related features of personality development in adolescence, much also depends on individual characteristics, for example, the type of temperament, character, etc.

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ПРОБЛЕМА РАЗВИТИЯ ЛИЧНОСТИ В ПОДРОСТКОВОМ ВОЗРАСТЕ

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Аннотация: Статья посвящена проблеме развития личности в подростковом возрасте. Следует подчеркнуть, что проблема развития личности была актуальна всегда. Наиболее важным с точки зрения адаптации человека в социуме является именно подростковый период. На основе проведенного исследования рассматриваются возрастные особенности подростков и их отличительные поведенческие черты, а также то, что лежит в основе и является причиной сложности этого возраста.

Ключевые слова: личность, подростковый возраст, возрастные особенности, поведенческие черты, причина сложности, формирование идентичности и самосознания.

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УДК 159.9

THE EMOTIONAL SPHERE OF PRIMARY SCHOOL CHILDREN

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Abstract. This article focuses on emotional sphere and describes the features of emotional development of children at primary school. Leading methods are the method of observation, psychological testing and questionnaires. The author declares the necessity for organizing pedagogical support for the development of the emotional sphere such as art therapy which makes it possible to develop emotional sphere in three directions: understanding emotions, expressing emotions, and regulating emotions.

Keywords: psychology, emotions, emotional sphere, anxiety, primary school children.

The emotional sphere is an important component in the development of younger schoolchildren because neither communication not interaction are effective if its participants are not able to “read” the emotional state of another and to manage their emotions. Understanding your emotions and feelings is an important element in the development of a growing person's personality.

In this study we will try to find out the features of the emotional sphere of primary school children.

The purpose of the research is the features of the emotional sphere of primary school children.

The objectives are:

– to analyze the psychological and pedagogical literature and determine the features of the development of the emotional sphere of primary school children;

– to identify the features of the emotional sphere of children of primary school age.

Materials and methods. To describe the emotional sphere and its components a literature review was done. To define peculiarities of the emotional sphere we used the method of "School anxiety" by A. Phillips, the method of Well–being, Activity and Mood (WAM) by V.A. Doskin, N.A. Lavrentieva, V.B. Sharai, M.P. Miroshnikov, and the method of "Differential scales of emotions" by K. Izard.

A significant number of works by foreign and Russian researchers are devoted to the content and structure of the concept of "emotional sphere". According to scientists S.L. Rubinstein, L.A. Wenger, L.S. Vygotsky, D.B. Elkonin, A.V. Zaporozhets, A.N. Leontiev, etc., the emotional sphere is primarily an expression of character, temperament, manifested in certain feelings and emotions [1, p. 9].

Emotion is a complex reaction pattern, involving experiential, behavioral, and physiological elements, by which an individual attempts to deal with a personally significant matter or event. The specific quality of the emotion (e.g., fear, shame) is determined by the specific significance of the event. For example, if the significance involves threat, fear is likely to be generated; if the significance involves disapproval from another, shame is likely to be generated. Emotion typically involves feeling but differs from feeling in having an overt or implicit engagement with the world [2].

Emotions are states associated with the assessment of the significance for an individual of the factors acting on him and expressed, first of all, in the form of direct experiences of satisfaction or dissatisfaction with his actual needs. The emotional sphere of a person is a wide range of experience and feelings. It performs a number of functions, such as stimulating, regulatory, elimination of information deficit, the main one among which is evaluation [5, p. 120].

During the analysis of psychological and pedagogical literature on the research topic, we identified the following features of the emotional sphere of primary school children:

– easy responsiveness to events and the coloring of perception, imagination, mental and physical activity with emotions,

– spontaneity and frankness of expressing one's experiences, joy, sadness, fear, pleasure or displeasure

– emotional instability, frequent mood swings, a tendency to short-term and violent affect.

The empirical basis of the study is the Municipal budgetary educational Institution "Ust-Barguzin secondary school named after K.M. Shelkovnikov". The study involved 8 schoolchildren (6 girls and 2 boys 9 years old) of the 3 “A” class.

A. Phillips' school anxiety questionnaire refers to standardized psychodiagnostic methods and allows us to assess not only the general level of school anxiety, but also the qualitative originality of the experience of anxiety associated with various areas of school life.

The test consists of 58 questions. Each question requires an unambiguous answer “Yes” or “No”.

The results of the study are shown in Figure 1. Thus, the optimal level of anxiety was detected in 62,5% of participants, an increased level — 25%, a high level of anxiety — 12,5%. High or increased levels of school anxiety demonstrate that it is necessary to develop a course of actions to restore the normal emotional background of the child and maintain a positive self-attitude. In this case, first of all, in-depth psychodiagnostics of anxiety symptoms of a student and work with a psychologist are recommended.

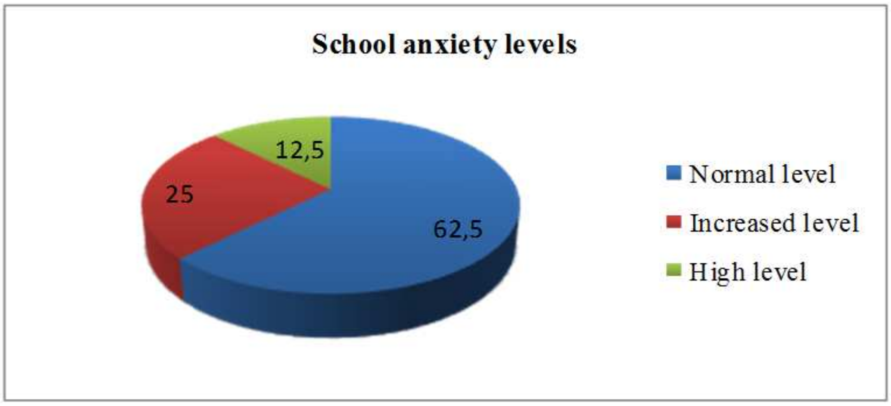

Figure 1. School anxiety results according to Phillips method

The WAM questionnaire is a blank test that designed for a rapid assessment of well–being, activity and mood. Respondents are asked to correlate their condition with a number of signs on a multi-stage scale which consists of indices (3 2 1 0 1 2 3) and is located between thirty pairs of words of opposite meaning, reflecting mobility, speed and pace of functions (activity), strength, health, fatigue (well-being), as well as characteristics of the emotional state (mood). A respondent have to select and mark the figure that precisely reflects their state at the time of the examination.

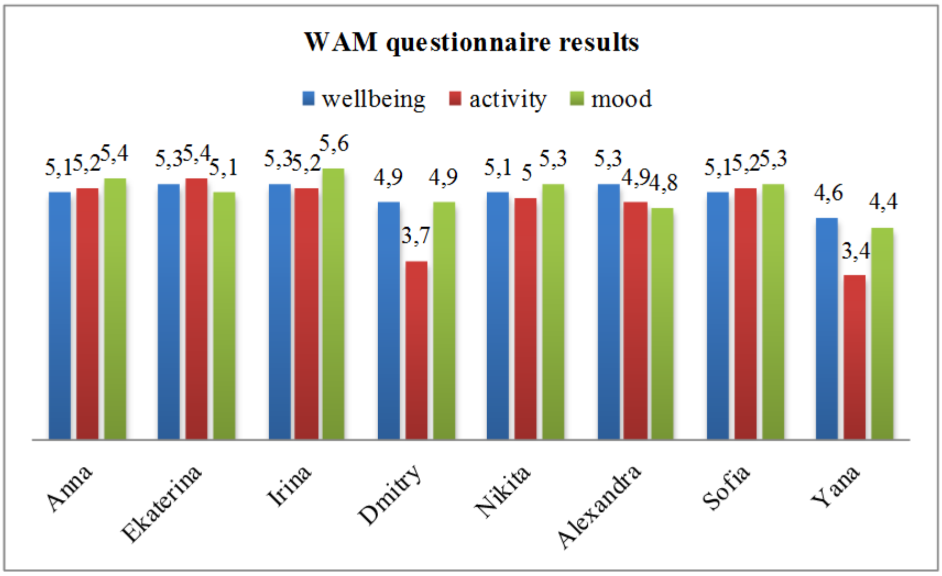

Figure 2. WAM questionnaire results.

The diagram (fig. 2) provides an overview of well-being, activity and mood. It is observed that the activity of two children is at a low level — 3,7 and 3,4 points. That means the teacher needs to carry out work to activate the activities of schoolchildren. The technique also showed that, in general, the emotional state of 75% of children is safe: their well-being, activity and mood are normal.

The method "Differential scales of emotions" by K. Izard allows us to study emotional deviations, identify dominant emotions and assess the presence or absence of depressive symptoms and depression in general.

The blank version of the study of fundamental emotions is a set of emotions (interest, joy, surprise, grief, anger, disgust, contempt, fear, shame, guilt), where each of them corresponds to three specific emotions in terms.

Each emotion expressed in terms, the subject must evaluate on a four-point scale, depending on the extent to which it manifests itself at the moment.

As a result of the study, it was revealed that children of primary school age have generally developed positive emotions (joy, interest). Among the negative emotions fear and guilt prevail (fig. 3).

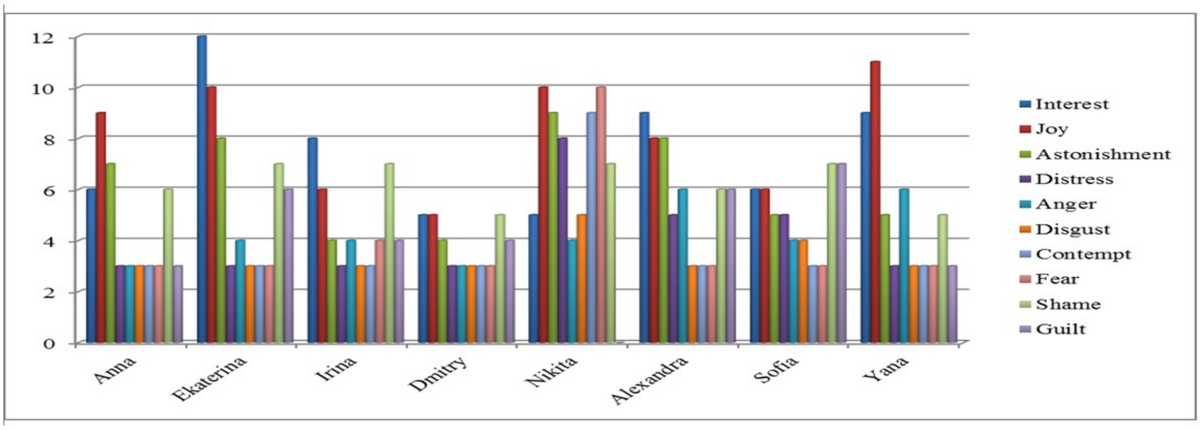

Figure 3. The results of differential scales of emotions

Conclusion

Thus, the study of the features of the emotional sphere in children of primary school age showed the presence of joy, interest, activity. In general, there is a favorable emotional sphere in children of primary school age. However, fear and guilt are the most frequent among negative emotions.

To prevent aggressive behavior, it is necessary to develop the skills of positive communication, interaction with other members of society, the ability to find alternative peaceful ways to resolve conflicts.

The younger school age is characterized by the fact that the child has a new status: they become a student, the leading activity is changing from a game to an educational one. The new social situation of development toughens the living conditions of a younger student and can be stressful for him, lead to changes in emotional states, an increase in mental tension, which affects physical health and behavior. Using art therapy as a therapeutic method, it is possible to have a positive impact on the development of the emotional sphere of primary school children. We can stop violations of the emotional sphere, reduce the level of aggressiveness, susceptibility to fears, emotional stress, anxiety. Art therapy normalizes the internal emotional state of a child, helps understand emotions.

In addition, conducting art therapy sessions with children contributes to providing a child with a socially acceptable way out of aggression and other negative states, developing a sense of internal self-control and imagination, increasing self-esteem, which has a positive impact on the emotional development of the child.

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ЭМОЦИОНАЛЬНАЯ СФЕРА ДЕТЕЙ МЛАДШЕГО ШКОЛЬНОГО ВОЗРАСТА

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Аннотация. В данной статье рассматриваются особенности формирования эмоциональной сферы детей младшего школьного возраста. Основными методами исследования выступают метод наблюдения, психологическое тестирование и опрос. Для полноценного развития эмоциональной сферы детей необходимо организовать педагогическое сопровождение, например, арт-терапию, которая позволяет помочь ребятам понимать, выражать и управлять своими эмоциями.

Ключевые слова: психология, эмоции, эмоциональная сфера, тревожность, дети младшего школьного возраста

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УДК 34.09

THE SCHOOL SHOOTING PHENOMENON

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Abstract. In recent times we tend to hear more about incidents of school shooting in Russia and in the world. For the past 4 years only there were 6 different shootings and attacks in different educational institutions in our country. The concern is growing amongst the students and population in general. In our work we would like to depict various details of this horrible phenomenon and look through the solutions that the legislation provides and, finally, give our own opinions.

Keywords: School shooting, columbine, act of armed violence by students, school shooters, phenomenon of school shooting.

The tragedies associated with school shooting incidents in Russia have increased our attention to attempts to understand the dynamics and factors that underlie such events. The shooting gathered massive media attention and sparked national debate on gun violence. As a result, some schools began taking extra security precautions, on the 2nd of February 2022 Supreme Court of Russian Federation declared movement "Columbine", also known as "school shooting" terrorist and banned its activities in Russia. General prosecutor`s office said to journalists that movement "Columbine" is based on "ideology of violence and pursues the goals of massive losses of live, intimidation of the population and destabilization of the situation in Russia through massive acts of violence".

The goal of the research is to analyze the current situation with school shooting in Russia and learn more about personal and environmental factors and how they affect the school shooter destructive behavior.

So, what exactly is School shooting? School shooting, in the typical case, an event in which a student or a third party at an educational institution (an elementary, middle, or high school or a college or university) shoots and injures or kills at least one other student or faculty member on the territory of that institution. Such incidents usually involve multiple deaths. Rampage school shootings are a type of school shooting where no single or specific individual is targeted by the shooter. This is a growing phenomenon that is causing concern around the world. These types of violent incidents are not classified as crimes of a terrorist nature, but they have reasons for inclusion, since they have similar mechanisms.

The origins of human violence are complex. Thinkers, historians, and scientists have explored the issue for centuries, but there is no such simple answer. The roots of a violent act are multiple and difficult. The mix of factors varies according to the individual and the circumstances. Understanding violence after it has occurred is difficult enough. Trying to assess a threat and keep it from being carried out is even more of a challenge.

The first incident of school shooting that attracted public attention was the shooting at Columbine High School in Littleton Colorado, in 1999 that brought particular urgency to the issue. In that attack, two students — Eric Harris and Dylan Klebold — killed 13 people before taking their own lives. The name of this school subsequently began to be used as a term synonymous with the concept of school shooting. This phenomenon, which originated in the United States, has recently spread to other countries.

In Russia, the first resonant armed attack occurred on the 3rd of February 2014 at school №236 in Moscow. After that, acts of school shooting were registered on the 5th of September in 2017 at school №1 in Ivanteevka, on the 17th of October at the Kerch Polytechnic College, on the 11th of May 2021 at gymnasium №175 in Kazan, on the 20th of September in 2021 at the Perm State National Research University, and on the 19th of January 2018 at school №5 in Ulan-Ude.

After our analysis of these cases we can provide a brief summary of the statistics.

Since 2014 till present day there were 8 different attacks on educational institutions in Russia. 40 people have lost their lives, 176 people were injured, 5 out of 8 cases were with the use of firearms. In all of the cases attackers were either the students of these institutions or their graduates. For comparison in the United Stated of America since 1989 were 21 incidents of mass shootings in educational institutions. 187 people have lost their lives, 215 were injured, in all of the cases the attackers have used firearms. In 15 out of 21 cases attackers were either the students of these institutions or their graduates. The statistics in the USA shows that 4 or more people died in each incident. Such difference is explained by firearms legislation in Russia and the USA. Russia has stricter laws on regulating civilian firearms market.

Given the prevalence of such shootings many journalists focused on identifying the major risk factors for becoming a school shooter. Most studies identified extreme social rejection and bullying as key risk factors. Social rejection, perpetrated by peers, often included romantic rejection. Bullying took numerous forms, both verbal and physical, and was heavily characterized by actions and words meant to humiliate the victim. Other research-identified risk factors included the availability of guns and the consumption of violent media.

Educators, mental health professionals, legislators, law enforcement officers, parents, students, and the rest of the public all share a sense of frustration and helplessness and a compulsion to take some quick action that can prevent similar incidents in the future.

In a knee-jerk reaction, communities may resort to one-size-fits-all policies on preventing or recreating to violence. One response to the pressure for action may be an effort to identify the next shooter by developing a "profile" of the typical school shooter. This may sound reasonable, but in practice, trying to draw up a "checklist" of warning signs to detect a potential school shooter can be shortsighted, even dangerous. Such lists, publicized by the media, can end up unfairly labeling many nonviolent students as potentially dangerous or even lethal. The issue facing educators, law enforcement agencies, and the wider public is not how to predict school violence. Reliably predicting any type of violence is extremely difficult. Predicting that an individual who has never acted out violently in the past will do so in the future is still more difficult.

At this time, there is no research that has identified traits and characteristics that can reliably distinguish school shooters from other students. Many students appear to have traits and characteristics similar to those observed in students who were involved in school shootings.

The above facts testify to the developing trend of school shootings acts and show the international nature of the phenomenon. The danger of school shooting as a social phenomenon is due to the purposeful implementation of violence with the use of weapons, the result of which is the death or serious harm to the health of a group of people. Such a form of manifestation of aggression as an armed attack in an educational institution becomes for adolescents a model of behavior that they want to repeat, all this indicates the deepest severity of the problem.

American psychologist Peter Langman divides shooters into three types: psychotics, traumatics and psychopaths. The traumatized shooters all came from broken homes. They suffered physical and/or sexual abuse. Each hat at least one parent with substance abuse problems, and each had at least one parent with a criminal history.Unlike the traumatized shooters, the psychotic shooters all came from intact families with no histories of abuse, or parental incarceration. The psychotic shooters exhibited symptoms of either schizophrenia or schizotypal personality disorder, including paranoid delusions, delusions of grandeur, and auditory hallucinations. The psychopathic shooters also came from intact families with no histories of abuse or significant family dysfunction. They demonstrated narcissism, a lack of empathy, a lack of conscience, and sadistic behavior.

On the other hand, psychologist Denis Davydov and his colleague Kirill Khlomov in their study, conclude that the study of shooters in terms of psychopathology is not based on facts and is not productive in preventing similar situations in the future. Davydov says that there is no exact psychological portrait of the shooter, and any deviations do not reveal a tendency to school shooting in a teenager. Media discussion of the mental state of shooters and remote diagnosis by invited experts breed stereotypes that any other person with similar problems can arrange a shooting.

Modern research shows that people with mental illness are more likely to become victims of aggression rather than act as aggressors. Society often attributes such deviant behavior to a mental disorder, however, such an approach stigmatized people with mental problems and distracts from real problems.

In conclusion we would like to have a look at what government and educational institutions provide in an attempt to solve this problem. State Duma after the cases of shootings at schools sped up the process of changing the civilian firearms legislation. New amendments in the Federal Law on the firearms came into force on the 1st of April 2022. One of the amendments states that civilians can have a right to acquire weapons only after reaching the age of 21. This, of course, will make a process of acquiring weapons a bit more complicated, but will not solve the problem at once.

To minimize the risks of being attacked by school shooters, institutions should have more reliable security system than they have now. There is often only 1 security guard in the whole building and it is simply not enough, at least two guards are needed, for example, one will be patrolling the floors of the building, the other will be checking students at the entrance. The next measure to prevent school shooting is ID verification. We should note that the process of ID verification is frequently skipped at our university and as a result almost any person that looks like a student can pass through the security guard. Metal detectors are another safety measure that can be used too. We also think that students should be able to consult the psychologists because nowadays students deal with burning out, bullying, other problems and trying to solve all of it by themselves or with help of their parents. It would be great if mental treatment was more accessible and people`s care of their mental health became more important. Summarizing all of the above, we can clearly see that school shooting is a real threat that should be dealt with. Although in our country this issue not so widespread, the tendency shows that the situation could worsen if urgent preventive measures are not taken.

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ФЕНОМЕН СКУЛШУТИНГА

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Аннотация. В недавнее время мы стали чаще слышать об инцидентах стрельб в школах и высших учебных заведениях России и мира. Только за последние 4 года в нашей стране произошло 6 разных атак на образовательные учреждения. Среди студентов и населения в целом растет волнение. В этой работе мы бы хотели немного подробнее разобрать этот ужасный феномен и рассмотреть решения данной проблемы, которые предлагает законодатель и предложить свои.
Ключевые слова: Скулшутинг, Колумбайн, акты вооружённого насилия студентами и школьниками, нападения на школы, школьный стрелок, феномен скулшутинга.
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УДК 004.04

THE OBJECT DETECTION AND IDENTIFICATION SIGNIFICANCE IN THE MODERN WORLD (ON THE EXAMPLES OF OPEN CV TECHNOLOGY)

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Abstract. Computer vision and artificial intelligence are one of the most demanded areas in the modern IT world. The development of computer science and the advent of many image processing technologies raise such questions as whether it is possible to teach a machine to identify and recognize images because our brain can identify something faster, when we know enough information about the object. We can certainly say that there is an item that we need when we see only some part of that object. But there is another question: “How to teach a machine to distinguish that?” This paper will discuss the object detection and identification significance on the example of «Computer vision» technology with the Open CV source.
Keywords: Detection and identification technologies, facial recognition, Computer vision technology, Open CV, YOLO algorithms, Convolutional Neural Networks.

First experiments in the field of computer vision were in the 1950s, they were some first neural networks to detect the edges of an object and to group simple objects into categories like circles and squares. In the 1970s, the first commercial use of the computer vision was to interpret printed text using optical character recognition. This was used to interpret written texts for blind people. Computer Vision is the field pertaining to making sense of imagery. Images are just a collection of pixel values; with computer vision we can take those pixels and gain understanding of what they represent. [6])

In the 1990s when the internet evolved, making many images available for analysis, facial recognition programs developed. These growing amounts of data have helped machines to identify special people in photos and videos.

The goal of the research is to show how useful detection and identification technology can be.

The objectives are:
– Introducing to the technology OpenCV
– Introducing to the YOLO algorithms
– The main application of these technologies
– Technology perspectives in the future

Today, several factors have come together to revive computer vision: Firstly, mobile technology with cameras has filled the world with photos and videos. Secondly, computer power has become more accessible. Thirdly, the device for computer vision and analysis has become widely available. The impact of these advances in the computer vision field is impressive. The accuracy of identifying and classifying objects has increased from 50% to 99% in less than a decade. Modern systems are faster and more accurate than people in detecting and responding to visual cues.

Computers assemble visual images in the same way that you can put together a puzzle. Think about how you put together the puzzle. You have all the parts, you need to put them together into a single picture. This is how neural networks for computer vision work. They distinguish many different parts of an image, identify edges, and then model the subcomponents. Using filtering and a series of actions through deep network layers, they can put all the pieces of an image together, just like you do with a puzzle. The computer does not receive the final image of the puzzle, but often sees hundreds or thousands of related images in order to learn to recognize specific objects. Instead of teaching the computer to look for whiskers, tails and pointy ears to recognize a cat, programmers upload millions of photos of cats and then the model learns the cat's various characteristics on its own.

Computer vision works in three main steps:

1. Image Acquisition. Images, even heavy ones, can be obtained in real time using video, photos or 3D technologies for analysis.

2. Image Processing. Deep learning models automate much of this process, but models are often trained by first receiving thousands of labeled or pre-identified images.

3. Image understanding. The last stage is the interpretation stage, when the object is identified or classified. [1]

Today's AI (Artificial Intelligence — a methodology used in Machine Learning to determine which one of several used models has the highest performance) systems go further and take actions based on image understanding. There are many types of computer vision that are used in different ways: Image segmentation breaks the image into multiple areas or fragments for a separate study. Object detection identifies a specific object in an image. Advanced Object Detection recognizes multiple objects in a single image: football field, attacker, defender, ball, and so on. These models use X,Y coordinates to create a bounding box and identify everything inside it. Face recognition is an advanced type of object detection that not only recognizes a human face in an image, but also identifies a specific person. Edge detection is a technique used to detect the outer edge of an object or landscape in order to better determine what is in the image. Pattern recognition is the process of recognizing repeating shapes, colors, and other visual indicators in images. Image classification groups images into different categories. Feature matching is a type of pattern detection that matches similarities in images to help classify them. Simple computer vision applications only use one of these methods, but more complex ones, such as computer vision for self-driving cars, rely on different methods to achieve their goal.

OpenCV (Open Source Computer Vision Library) is an open source computer vision and machine learning software library. OpenCV was built to provide a common infrastructure for computer vision applications and to accelerate the use of machine perception in the commercial products. Being a BSD-licensed product, OpenCV makes it easy for businesses to utilize and modify the code.

The library has more than 2500 optimized algorithms, which includes a comprehensive set of both classic and state-of-the-art computer vision and machine learning algorithms. These algorithms can be used to detect and recognize faces, identify objects, classify human actions in videos, track camera movements, track moving objects, extract 3D models of objects, produce 3D point clouds from stereo cameras, stitch images together to produce a high resolution image of an entire scene, find similar images from an image database, remove red eyes from images taken using flash, follow eye movements, recognize scenery and establish markers to overlay it with augmented reality, etc. OpenCV has more than 47 thousand users and an estimated number of downloads exceeding 18 million. The library is used extensively in companies, research groups and by governmental bodies.

From 2000 to 2008, OpenCV was developed and supported mainly by Intel, and the Nizhny Novgorod branch of the corporation from the very beginning played a leading role in shaping the image of the library. In the early years of its existence, OpenCV rapidly expanded in breadth, acquiring basic functionality such as basic data structures, image processing algorithms, basic computer vision algorithms, image and video input and output. Already at that time, algorithms for detecting human faces (cascade classifier), searching for stereo matching, optical flow, and others were implemented. However, in 2004, Intel almost stopped supporting the library. Many project participants, who by that time had already established themselves as experts in the field of computer vision, did not want to retrain, and left the company.

The project received a second powerful impetus to development with the advent of Willow Garage, whose main goal is to create a personal robot With the support of Willow, a team was formed that started a significant revision of the library. It was as a result of these efforts that OpenCV acquired the C++ and Python API, the features of the second module, a new architecture, a CMake-based build system, a BuildBot-based continuous integration system, improved documentation, great tutorials, and a host of other innovations.

We can talk about the third significant stage in the life of the library, which came with the advent of NVidia. In 2010, this company supported the creation of a CUDA-optimized version of the library. The first public result was the implementation of a stereo matching algorithm capable of real-time video processing in Full HD resolution (1920x1080 pixels). To date, OpenCV_gpu is a full-fledged module that has found application in many industrial applications. In addition, OpenCV has been enriched with a Java API, a built-in performance testing system and a number of improvements. [2]

Now we need to determine what computer vision is and why we need it.

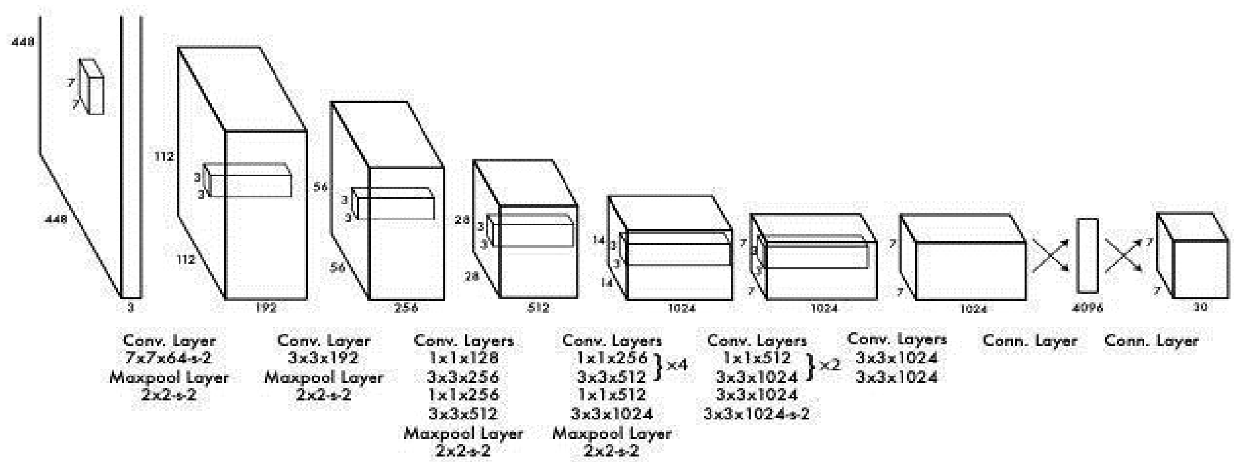
Computer vision basically deals with anything that humans can see and perceive. There are so many tasks that we humans do subconsciously that we hardly think are even worth mentioning. However, for a computer to learn to perform or even try mimicking such things is very difficult, simple example: imagine looking outside a window, what can we see? We might be sitting in the office building and seeing traffic outside, but we never wonder how we recognize something or someone. Do we know how we can look at someone and know who they are? We see subconsciously that we are identifying objects in any image we see, then we try to find what relation exists between the object to identify the scene or a place, only then we get an idea of what is happening in an image.

Sometimes we can also look at an incomplete image and use our knowledge and previous experience to determine what is missing and what is missing from it. About a CV (computer vision) we can perform various tasks like object detection, classification image and image reconstruction.

In brief object detection is the ability to detect an object or identify an object in any given image correctly, then we have image classification which basically means to identify what class the object belongs to. Image captioning is nothing but looking at an image and describing what is happening in an image.

Last but not least we have image reconstruction. In image reconstruction we basically have the ability to identify what is missing in an image in order to reconstruct it now that we have gone through object detection and gain knowledge of what we can for with it. In general on the subject of open source tool called as OpenCV is a huge open source library for computer vision machine learning and image processing and now it plays a major role in real-time operation which is very important in today's system by using OpenCV we can pre-process images videos to identify objects faces or even handwriting of a human being when it is integrated with various libraries such as Numphy Python is capable of processing the OpenCV array structure for an analysis also OpenCV tool use to pre-process our data.

So, moving ahead let us now see how convolutional neural networks work okay so what is convolution neural network CNN (Convolutional Neural Network — the most common type of network used in computer vision. By combining many convolutional layers, it can learn about more and more complex concepts. The early layers learn about things like horizontal, vertical, and diagonal lines and blocks of similar colors, the middle layers learn about combinations of those features like textures and corners, and the final layers learn to combine those features into identifying higher level concepts like “ears” and “clocks”.) It’s a machine learning algorithm that can take in an input image, assign importance to an object and then be able to differentiate between one object and the other CNN, and works by extracting features from the images. Any CNN consists of following three things an input layer which is a grayscale image then we have the output layer which is the binary or multi-class labels and then we have hidden layers which contains convolution layer Relu and then we also have pooling layers finally we'll be having artificial neural network in order to perform the classification it is very important to understand artificial neural network or an in order to perform multi-class classification.



Picture 1: “YOLO object detection algorithm”

Making headway I will introduce YOLO algorithm (YOLO — You Only Look Once, a family of single-shot learner object detection models providing state of the art results for object detection as of fall 2020, [6]) (see picture 1), now we might be wondering why do we have two different families for object detection right well you see there's a lot of difference between YOLO family and CNN based approach. In the CNN based it focuses mostly on division of an image into parts and then assign probability values to those part and whichever part has a highest probability it's where we consider an object to be present whereas, the YOLO framework focuses on the entire image as a whole and predicts the bounding boxes and then calculate the class probability to label the boxes. The family of YOLO framework is very fast as compared to CNN YOLO algorithm has evolved over the years it first started with YOLO v1 this model is also called as YOLO unified and the reason behind this is that it unifies object detection and classification model together as a single detection network this was first attempt to create network that can detect real time objects very fast YOLO only predicts limited amount of bounding boxes to achieve the goal the YOLO algorithm has improved over the years now we have YOLO v2 and the latest version — YOLO v3. YOLO v1 framework makes several localization error and YOLO v2 improves this by focusing on recall and localization the YOLO v2 uses batch normalization anchor boxes high resolution classifiers fine gradient features and multi-level classification and also it uses something called as darknet all these features made YOLO v2 better than v1. Darknet is a pre-trained model and here YOLO v2 was using darknet 19 which means it contained 19 convolution layer 5 max pool layer and a soft max layer for object classification the latest model of YOLO is YOLO v3 this model is a fastest and most accurate object detection model it accurately classifies the object by using logistic classification compared to SoftMax which was used in YOLO v2 this makes us capable of making multi-label classification YOLO v3 which also uses darknet 55 as a feature extractor you see over here YOLO v3 makes use of darknet 53 which means that there are 53 convolution layer as a result of this it can make more accurate predictions of an object. Now we know what object detection is and what YOLO algorithm is and how to work with OpenCV. [8]

Conclusion: Thus, Computer Vision is a rapidly growing field of research, already transforming many industries as well as everyday life. The accuracy of pattern analysis and recognition is steadily increasing, allowing the creation of increasingly complex commercial applications.

Nowadays there are several fields of further development of the direction of computer vision:

1. Progress of industrial CV-systems. Computer vision is used to create medical devices, pharmaceuticals, foodstuffs, automobiles, and others. Allowing for a high level of quality control.

2. Cloud Deep Learning systems. DL (Deep Learning — a machine learning technique that teaches computers how to learn by rote (i.e. machines mimic learning as a human mind would, by using classification techniques) [6] algorithms and neural network classifiers make it possible to systematize and distinguish images received from computer vision systems faster and more accurately. Accordingly, an increase in the number of such developments is also indicated.

3. Robotics. Industrial robots are used more and more, so the demand for CV systems for robots will also grow.

4. Increasing requirements for optical parameters for computer vision. Now there is a trend to increase the clarity and resolution of CV-images. more high-quality optics are needed, therefore, various innovative solutions are being developed and implemented, for example, micro lenses for each pixel. The goal is clear — to completely increase the operation parameters of optical systems that, if we talk about traditional solutions, have reached their technological limits.

5. Application of thermal images for control of production processes. Previously, thermal cameras were used in security video surveillance and for military purposes. Today there is a trend to use thermal imaging in combination with computer vision — this will allow the detection of anomalies in the production process that are not visible to the human eye and traditional CV systems.

About OpenCV, the modern look of the library is the result of a long evolution. The project keeps pace with the rapidly evolving field of computer vision. Several world-class companies participated in the formation of the library at once, and it is too early to talk about the completion of its development.

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РОЛЬ ТЕХНОЛОГИИ ОБНАРУЖЕНИЯ И ИДЕНТИФИКАЦИИ ОБЪЕКТОВ В СОВРЕМЕННОМ МИРЕ (НА ПРИМЕРАХ ТЕХНОЛОГИИ OPENCV)

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Аннотация. Компьютерное зрение и искусственный интеллект — одно из самых востребованных направлений в современном ИТ-мире. Развитие информатики и появление множества технологий обработки изображений порождают много вопросов, например: «Можно ли научить машину идентифицировать и распознавать изображения, так как наш мозг может идентифицировать что-то быстрее, когда мы знаем достаточно информации об объекте?» Мы с уверенностью можем сказать, что есть предмет, который нам нужен, когда мы видим только часть этого предмета. Но возникает другой вопрос: «Как научить машину эту часть различать?» В данной статье будет рассмотрена значимость обнаружения и идентификации объектов на примере технологии «Компьютерное зрение» с открытым исходным кодом CV.
Ключевые слова: технологии обнаружения и идентификации, распознавание лиц, технология компьютерного зрения, OpenCV, алгоритмы YOLO, сверточные нейронные сети.
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УДК 291.16

COMMON ARCHAIC IDEAS IN BURYAT SHAMANISM AND LAMAISM AS A BASIS FOR INTERACTION

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Abstract. Lamaism and shamanism are the main religions of the Buryats, which retain their importance in modern times. Their conflict-free close interaction gives uniqueness and reflects the national characteristics of the Buryat people. The article highlights similar ancient religious ideas and attitudes that could be the basis for building a harmonious system of interaction between Lamaism and Buryat shamanism
Keywords: lamaism, shamanism, religions, Buryatia, syncretic form, deities.

Shamanism and Lamaism are Buryat religions that have retained their significance in modern times. Lamaism is a Tibetan form of Buddhism that began to spread on the territory of Buryatia in the 17th century. The preaching activity of the Lamaists among the Buryat population led to the formation of the first Buddhist community in the territory of Buryatia in the 18th century, consisting of 150 people [1, p. 128].

The goal of the research is to highlight the foundations for building the interaction between Lamaism and Buryat shamanism.

Object — religious ideas and cults of the Buryat people.

The subject is similar ancient religious ideas in Lamaism and Buryat shamanism.

The research. The history of the formation of religions was studied, what worldview, cultural and religious attitudes were included in the structures of these religions. Further, these structures were compared and the most common, most important elements were identified, which served as the basis for building interaction between Lamaism and shamanism.

The active stage of the spread of Lamaism in Transbaikalia began in the 19th century. At that time, Lamaism was considered by the local authorities as a religion that could replace shamanism among the Buryat population, which they then perceived as a primitive and ancient religion. At the beginning of the century, rapid construction of datsans began — Kyrensky and Barguzinsky (1817), Alarsky (1814) and Aginsky (1811), Tokchinsky and Guneisky (1802) [2, p. 37]. During this period, Lamaism had a significant impact on the cultural and religious worldview of the Buryats. But the widespread development of Lamaism in the region did not lead to a weakening of the shamanic faith. Tibetan Buddhism and shamanism existed relatively quietly side by side and were able to build a harmonious system of interaction, which is preserved in modern times.

The basis for building the described system was the fact that Buryat shamanism and Tibetan Buddhism, before their interaction, already had a syncretic form and were built on similar archaic ideas.

Buryat shamanism was formed in the Bronze Age, and was not the first religion of the Buryat people [3, p. 348]. His ritual and ideological systems were built on the basis of long-established religious ideas. Pre-shamanistic beliefs included developed animistic views, trade, natural, tribal and family cults.

The Buryats believed that the whole world was filled with spirits, and mountains, forests, fields, rivers, lakes had their own master. In order to take advantage of the gifts of nature, a person had to pray and bring an offering. Thus, the gift exchange of people with nature was built. Usually they presented pieces of food, sprinkled milk, tied ribbons or scarves to a tree.

In the minds of people there was an indivisibility of the material and sacred worlds, success in the ordinary world was directly related to the built relationship with the world of spirits. Any activity had its patron: Anda Bara — gives a blessing for hunting, Suher-noyon — ezhin of the barnyard, Bukha-noyon — the patron of agriculture, Zayan-sagan Boho-muya, Daban Kholo, Khara Soohor, Buren — blacksmith gods, etc. [4, p. 31].

One of the main places in the pantheon of deities was occupied by Sahyada-noyon — the ezhin of the hearth, while the fire itself was endowed with cleansing functions. [5, p. 241]. In the life of the Buryats, a lot depended on the hearth — the well-being of the family, economic activity, communication with the spirits of ancestors — almost all rituals were accompanied by making a fire and offering to the ezhin. The peculiarity of the pre-shamanic time was that any person could communicate with the world of deities, this did not require an intermediary.

The clan cult was expressed in the ideas of the Buryats about the guardians of the clan, who became their dead relatives. For their reverence, family prayers were held at ancestral places, usually near a large mountain or deep in the forest. In this case, the cult of ancestors merged with the cult of nature, the patrons of the area appeared [6, p. 184].

The constant close communication of people with the sacred world gave rise to many rules in the culture of the Buryats — there was a taboo of certain actions and words, a special attitude was built towards animals, birds, nature, the appearance of a huge number of rites of worship of the deities of the locality and dead ancestors.

With the spread of shamanism, the shaman among the Buryats was able to assume, in whole or in part, all the most important functions of the tribal priest, which were previously performed by the elders of the clan, heads of families. The shaman has become a necessary mediator between the ordinary and the sacred worlds.

Almost all the functions of the shaman appeared due to “the inclusion of previous forms of religion in shamanic practices” [6, p. 186]. In the trade and nature cult, now not every person could directly communicate with the world of spirits, this role gradually passed to the shaman. Also, he was present at all significant events of the Buryat people — weddings, births of children, funerals, he asked the spirits for blessings. [7, p. 277].

In the natural cult, the "masters of the area" and their significance in the role of family and personal patrons of people were replaced by the cult of shamanic ongons. Now the spirits of the deceased shamans who were buried in the mountains, in the forest (in the habitats of pre-shamanic deities) became patrons of the localities [8, p. 118-119].

In addition, all pre-shamanic deities were included in the shamanic pantheon, and now they were located in a strict hierarchical system, headed by Huhe Munhe Tengeri — the Eternal Blue Sky.

As already noted, the other main religion of the Buryats is Lamaism. Lamaism, like Buryat shamanism, is a syncretic system that included some elements similar to the pre-shaman beliefs of the Buryats.

The syncretic basis of Lamaism is explained by the fact that it was formed in Tibet under the significant influence of the religion developed and widespread among the Tibetans — Bon-po. In the study of E.I. Kychanov notes that Lamaism is the result of the merging of Buddhism of the 7th-10th centuries. in India and local Tibetan beliefs and cults [9, p. 226]. The Bon Po religions and Buddhism have a colorful and long history of interaction. As a result, some rituals, deities, religious attitudes and beliefs were adopted by Buddhism.

According to Bon-po beliefs, there are many vengeful spirits in the world that should be respected and revered, otherwise their anger will bring people a lot of misfortune and trouble. All mountains, rivers, lakes and trees had their owners, and for any activity a person had to receive a blessing from the spirits. The spirit of the hearth, Ghab Lha, was of great importance among the Bones, so it was impossible to disrespect the fire — throw hair, rags into it, pour water on it [9, p. 165].

As you can see, these features are very similar to Buryat shamanism. In addition, both in shamanism and in the Bon-po religion, the world was divided into three parts — Heaven, Earth and the Underworld, and trees were considered as a container of spirits, from where the idea of the world tree comes from. Bonts often performed rituals in nature; this did not require temples, just like the Buryat shamans.

The reflection of the syncretic form of Lamaism is expressed in the presence of several groups of deities in it. The first includes Buddhist deities: nirvanic and tandric forms of buddhas, bodhisattvas, pratyekabuddhas, shravakas; to the second — non-Buddhist deities headed by Heruka, whose cults were included by Buddhism in their system back in India; to the third — the deities of the traditional beliefs of the Tibetans, typologically similar to the beliefs of various peoples of Central Asia. Tribal and individual deities, patrons of fishing and economic activities were assimilated [8, p. 154–155].

The existence of two extreme groups demonstrates the result of the interaction of Buddhism with various local religious beliefs of the peoples of India, Tibet, Mongolia, and later the Buryat people.

Conclusion. Buddhism came to the region in the form of Lamaism, that is, the already intertwined beliefs of Buddhism and the traditional religion of the Bon-po Tibetans, quite similar to the Buryat pre-shamanic beliefs. Under the influence of the Bon-po, new deities appeared in the Buddhist pantheon, reflecting the worldview of the Bons and some of their rituals associated with the natural cult. As a result, by the beginning of the spread of Lamaism in the territory of residence of the Buryat people, similar elements were included in the structure of shamanism and Lamaism.

Thus, the lamaists and shamanists had a basis for building a conflict-free coexistence. Over the long history of interaction, some ritual and ideological elements have been borrowed. As a result, Lamaism and Shamanism are now the main religions of the Buryats, which reflect their national characteristics, and their continued close interaction makes the culture of the Buryats unique in the modern world.

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ОБЩИЕ АРХАИЧЕСКИЕ ПРЕДСТАВЛЕНИЯ В БУРЯТСКОМ ШАМАНИЗМЕ И ЛАМАИЗМЕ КАК ОСНОВА ВЗАИМОДЕЙСТВИЯ

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Аннотация. Ламаизм и шаманизм являются основными религиями бурят, сохраняющими свое значение и в современное время. Их бесконфликтное тесное взаимодействие придает своеобразие и отражает национальные особенности бурятского народа. В статье выделяются сходные древние религиозные представления и установки, которые могли бы стать основой для построения стройной системы взаимодействия ламаизма и бурятского шаманизма.

Ключевые слова: ламаизм, шаманизм, религии, Бурятия, синкретическая форма, божества.

Научный руководитель: Цыренжапова С. Д., канд. пед. наук.

УДК 159.9

DISPLAYS OF AGGRESSION DURING PRIMARY SCHOOL YEARS

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Abstract. The article is devoted to the actual topic of aggression in children of primary school age. Aggressive children are a common phenomenon in the modern world. Aggressive behavior is aimed at causing harm to one's own health, people, animals, objects. It is based on negative emotions, the desire to harm. The article discusses various approaches to the concept of aggression, the reasons for its appearance, the main types. The study of the aggressive behavior of younger schoolchildren was made. The results of the study show that physical and verbal aggression predominate among younger students. Aggression causes the need to defend themselves or satisfy their needs in a situation where a child sees no other way out than a fight or verbal threats.
Keywords: aggressive behavior, primary school students, emotions, anger, physical aggression, verbal aggression.

The urgency of this problem is determined by the increased attention to the manifestations of aggression of younger students on the part of teachers, psychologists and parents. In modern society, the problem of the manifestation of aggressive behavior of children of primary school age is relevant. The growth of aggressive tendencies, the spread of violence and cruelty observed in the children's environment are of concern to teachers and parents. In early and preschool childhood, aggressive manifestations occur in a significant number of children as a reflection of the weak socialization of the individual and their lack of socially accepted communication skills. Gradually, under the influence of communication with others, destructive forms of interaction are replaced by new socialized forms of behavior. This determines the relevance of studying the problem of aggression in children and the process of formation of aggressive behavior, as well as finding ways to correct it.

Studies of the aggressive behavior of children of primary school age were carried out by foreign and domestic scientists: A. Bass, L. Berkovits, K. Lorenz, I.A. Furmanov, T.G. Rumyantseva and others. They offer various methods and means of correcting the aggressive behavior of younger students. The reasons for aggressive behavior, the authors call violations in the motivational and emotional-volitional spheres, also the cause is a violation of emotional ties in the family. Aggression is one of the most striking manifestations of emotion, characteristic of all age groups, including children. The most important factors in the formation of aggressive actions of children are the cultural context, parents and the child himself. This phenomenon is associated with anger, the desire to harm, negative attitudes and actions [3].

The manifestation of aggression of children in educational institutions is a problem that worries parents and teachers more and more. Often, children of primary school age do not have the tools to get out of negative situations, except for assault, swearing, threats, etc. One of the most important tasks of psychology is the early diagnosis and correction of the aggressive behavior of children of primary school age, since it is during this period that the main personal characteristics are laid.

The purpose of the study: to study the characteristics of aggression in children of primary school age.

Subject: features of aggressive behavior in children of primary school age.

The objectives are:

- to define the essence of the concept of aggression;
- to consider the causes of aggressive behavior in childhood;
- to determine the types of aggression;
- to describe the research methodology;
- to analyze the results of the study.

Methods and materials. The current study was conductedin the municipal autonomous educational institution "Progymnasium№108" in Ulan-Ude. The participants were 15 schoolchildren: 8 boys and 7 girls. The average age of the respondents is 10.We used the L.G. Pochebut questionnaire and the "How will you do" questionnaire by G. Eysenck's to get empirical data.To explain the nature of aggression, its types and reasons of aggressive behavior a literature review was done.

The word "aggression" (from Latin*aggressio*"to attack") means feelings of anger and hate that may result in threatening or violent behavior. This phenomenon is associated with negative emotions, motives (the desire to harm), attitudes (racial prejudice) and destructive actions. In psychology, the term "aggression"means behavior aimed at harming others physically or psychologically. It can be distinguished from anger in that anger is oriented at overcoming the target but not necessarily through harm or destruction [3].

F. Allan considers aggression as an internal feature that gives a person the opportunity to resist stressful circumstances [1, p. 16]. E. Fromm defines aggression more broadly as causing damage not only to a person or animal, but to any inanimate object in general [4, p. 24]. R. Baron and D. Richardson believe that aggression is any form of behavior aimed at insulting or harming another living being who does not want such treatment [1, p. 16]. A. Basho considers aggression as a kind of reaction, as a result of which another organism receives painful stimuli [2, p. 154]. Despite the differences in the definition of the concept of aggression by different authors, the idea of causing harm to another subject is almost always present.

There are the following types of aggression:

– physical aggression — the direct use of force to cause moral and physical damage to the enemy.

– indirect aggression — aggression, in a roundabout way directed at another person (gossip) or directed at no one.

– verbal aggression — the expression of negative feelings both through the form (scream, screech) and through the content of verbal responses (curses, threats).

– direct aggression — aimed directly at the object that causes irritation, anxiety or excitement: open rudeness, the use of physical force or threats of reprisal.

– self-aggression — when a person is not at peace and in harmony with himself; they have nopsychological defense mechanismsor weakened ones; they are defenseless in an aggressive environment.

There are many reasons for aggressive behavior in primary school children, so parents and teachers should pay special attention to their child.

The three main reasons for aggression are:

1. Family is a common cause of children's aggression. If the childhood of a child is accompanied by aggressive behavior of parents in everyday life situations, then as a result, he develops a sense of danger and hostility of the world around him, the child begins to show aggression, and it becomes the norm of his life.

2. Influence of the teacher. One of the reasons for the aggressive behavior of younger students may be the influence of a teacher who induces an aggressive background in the behavior of students with their irritability and suspicion as an example of aggressive behavior for children.

3. Individual characteristics of a child. This may be hyperexcitability — the state or condition of being unusually or excessively excitable, a tendency to affective outbursts, etc.

Thus, knowing the reasons the aggression of children of primary school age, we can prevent this deviation, it is much easier than taking the child out of this state.

The purpose of this empirical study was to study the displays of aggression in younger students as part of the educational and cognitive process.

Based on the above goal, the following methods were chosen for the empirical study: aggressiveness test (L.G. Pochebut Questionnaire), G. Eysenck's "How will you do" test (based on the "Unfinished sentences" method).

In the questionnaire by L.G. Pochebut we identified the usual style of behavior of children in stressful situations and features of adaptation in the social environment. It is used in the work to identify not only the degree, but also to clarify the type of aggressive actions being manifested. The results of diagnostics of aggressive behavior according to the form of manifestation are divided into 5 scales: verbal, physical, objective, emotional aggression and self-aggression. Thus, the results of this technique will help us to obtain data for determining the level of aggression of younger schoolchildren.

According to the data obtained during the study, we see that one girl has a high degree of aggression and, accordingly, low adaptive capabilities. Three girls have an average level of aggression and adaptability. The other three have a low degree of aggression and a high degree of adapted behavior. (fig. 1).

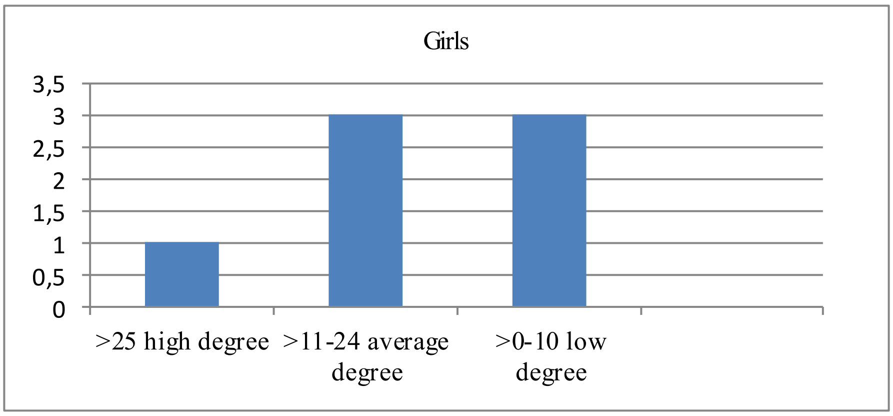

Figure 1. Levels of aggression (girls)

Two boys showed a high degree of aggression and low adaptive capabilities. Four have an average level of aggression and adaptability. Two guys have a low degree of aggression and a high degree of adapted behavior (fig. 2).

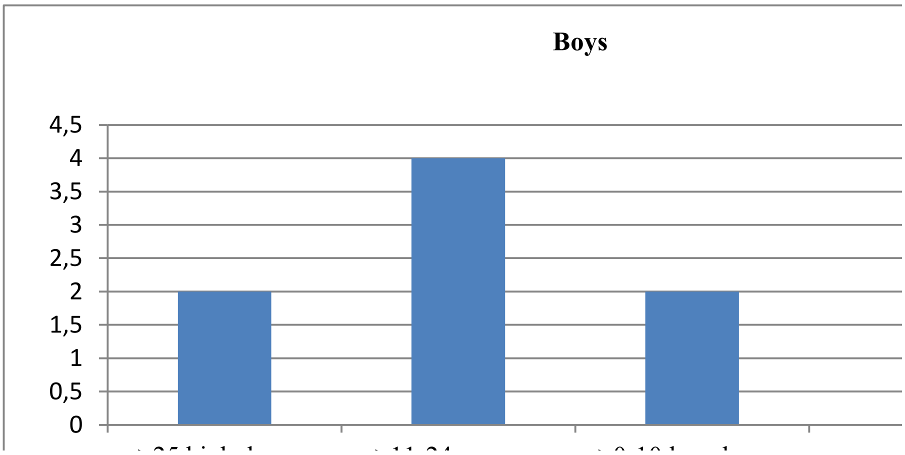

Figure 2. Levels of aggression (boys)

The aggressive behavior of girls is often characterized with low self-esteem, high suspicion and provocation towards their peers. In boys, aggressive behavior is manifested in the struggle for power, to be an authority among others, the desire to infringe on the dignity of another in order to emphasize one's superiority. At primary school age, the initiators of aggression are no longer individuals, but groups of children, aggressive behavior is becoming less sporadic and more and more organized.

So, the obtained results indicate that the level of objective aggression and self-aggression is observed in girls, while in boys the degree of physical aggression and self-aggression is higher.

In the methodology "How do you do" we identified the psychological characteristics of children's behavior in different situations. In this technique, the subject is required to complete the existing sentence. 8 schoolchildren took part in this experiment, 4 of them were girls and 4 were boys.

The technique diagnoses the psychological characteristics of children's behavior in frustration situations, i.e. in situations where the child is in a state of disappointment, feels a sense of hopelessness. In this technique, the subject is required to complete the sentence that has the beginning.

Thus, the results of this technique will help us obtain data on how children act in situations of frustration, and what forms of aggression they use in this case.

The results of the diagnostics by the method "How will you act". According to the results obtained, in three boys, physical aggression prevails over verbal. The acts of aggression are manifested in specific physical actions directed against a person, or they cause harm, fight, break, throw objects; only in one boy does verbal aggression prevail over physical aggression; he tries to express negative feelings through the content of verbal responses (threats, swearing). In all girls, verbal aggression prevails over physical. Girls express aggression in verbal form, they can scream, insult (fig. 3).

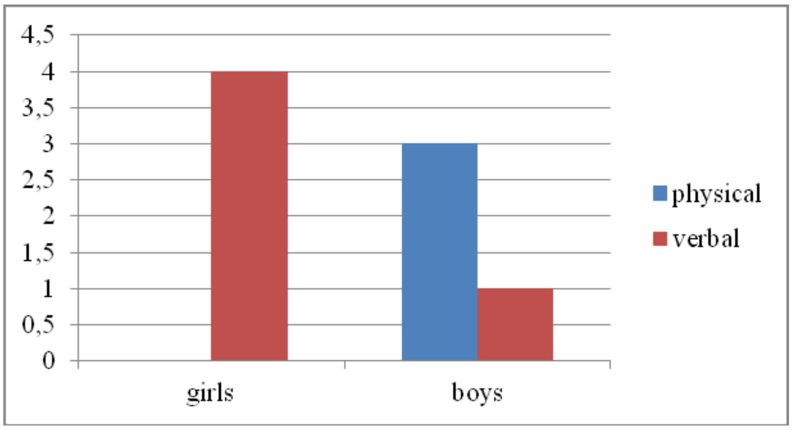

Figure 3. Forms of aggression

Conclusion.

The problem of aggressive behavior of children of primary school age is of keen interest in modern society. Many researchers in our country and abroad dealt with the problem of aggression. Adaptation to school, interaction with peers, insufficient level of education in the family, alienation from adults — all this is a prerequisite for the aggressive tendencies of younger students

In children of primary school age, all types of aggression are manifested: verbal, physical, indirect. Younger schoolchildren who are prone to violence are distinguished by the fact that they are characterized by a high frequency of aggressive actions, their focus on physical pain or suffering of their peers, and the predominance of physical aggression. Children who observe aggression in adults tend to behave aggressively in relationships with others.

The main reasons for the manifestations of children's aggression are: the desire to attract the attention of peers; the desire to get the desired result; the desire to be in charge; protection and revenge; the desire to infringe on the dignity of another in order to emphasize one's superiority.

Analysis of the results showed that physical, verbal aggression and self-aggression are present in the behavior of children and are at a sufficiently high level, which of course does not contribute to the correct communication skills in the classroom and with peers.

Our study once again confirms that aggressive tendencies are currently on the rise in society. Since aggression begins to manifest itself in childhood, the problem of aggression in younger students remains relevant. We can say that younger students are characterized by aggressive behavior, in various forms of its expression.

Thus, it can be said that the manifestation of child aggression in an increased or high form can be avoided, taking into account all the factors that may contribute to the development of child aggression.

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ПРОЯВЛЕНИЕ АГРЕССИИ У ДЕТЕЙ МЛАДШЕГО ШКОЛЬНОГО ВОЗРАСТА

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Аннотация. Статья посвящена актуальной теме агрессии у детей младшего школьного возраста. Агрессивные дети — это распространённое явление в современном мире. Агрессивное поведение направлено на причинение вреда собственному здоровью, людям, животным, предметам. Основано на негативных эмоциях, желании навредить. В статье рассматриваются различные подходы к понятию агрессии, причины её появления, основные виды. Было проведено исследование агрессивного поведения младших школьников. Результаты исследования показали, что у младших школьников преобладают физическая и вербальная агрессии. Агрессия вызывает необходимость защищать себя или удовлетворить свои потребности в ситуации, когда ребёнок не видит иного выхода, кроме драки или словесных угроз.

Ключевые слова: агрессивное поведение, младшие школьники, эмоции, озлобленность, физическая агрессия, вербальная агрессия.
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УДК 00.004

COMPUTER GAMES AS A PHENOMENON OF MODERN CULTURE

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Abstract. The paper considers whether it is impossible to imagine today a person who did not know about computer games and did not play them, the role they occupy not only in our lives, but also in world culture. The article analyzes if they influence the cultural development of some countries, why they are treated with prejudice somewhere and why computer games can be called the property and phenomenon of world culture. This study aims to find out the answers to these questions
Keywords: videogames, arcade, RPG, shooter, phenomenon of culture, art.

A video game is a "game using images generated by electronic equipment" [11] or "a kind of games in which the computer plays the role of a host or a partner in the game, and the game situations arising during the game are reproduced on the display screen or TV". [12]

We can say that computer games appeared by accident. It happened in 1958 at the Brookhaven National Laboratory. Laboratory employee William Higinbotham presented the first ever electronic ping pong to the visitors of this famous scientific organization. Here is how this story is described on one thematic Russian site: “Back in 1958, physicist William Higinbotham decided to prove to his friends that real science is not only interesting, but also fun. Having spent 3 weeks of time and having written off a fair amount of radio components from the funds of his native laboratory, he assembled a certain device and connected it to an ordinary oscilloscope, stylized rackets and a ball were not slow to appear on the device screen. The creator dubbed his brainchild Tennis for Two and immediately restricted access to it. There were too many who wanted to spend working time on unprecedented entertainment, as expected, Tennis for Two did not receive an oscilloscope, it is not a piano, you will not find it under every bush.”

4 years later, in 1961, the programmers of the famous Massachusetts Institute of Technology created another game on their computers. It was called "Space Wars" and was developed as a way of computer simulation of military operations. You can still play different versions of this game in some models of cell phones today.

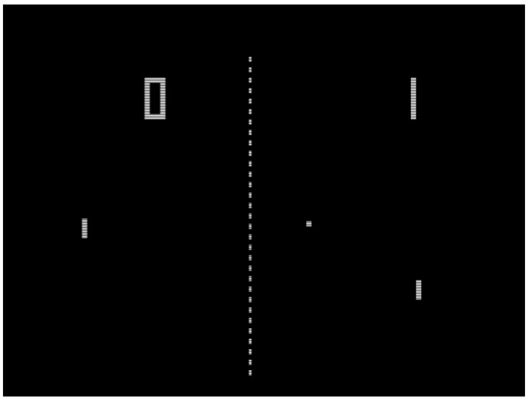
In the 1970s, electronic games quickly became a business. The father of this business is Nolan Bushnell (he founded the first company to produce a new type of game, which he called Atari, Inc.). Already in 1972, his famous “pong” broke into the world of gaming entertainment. It was the first game console with which 2 players could throw a ball over the grid on the screen, trying to keep it in the red field. So, it’s not for nothing that this type of game was called and is called electronic or video games.

The goal of research is analysis of the impact of computer games on modern culture.

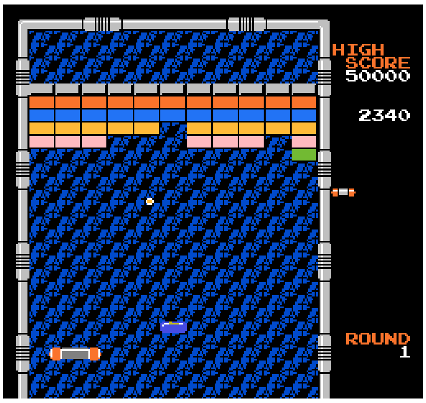
The objectives are:

- Analysis of the impact of computer games on human life
- To determine of the influence of computer games on world culture.
- To carry out theoretical analysis of whether the game is an art.

From the history of video games to their cultural history. In the 1970s, video games became one of the most popular forms of entertainment. They were played at home or in bars and cafes, where they were set up as slot machines in corridors that resembled an "arcade". Hence the name of the very first genre of electronic games — “arcade” (the very first games, such as “Space Wars”, “Pong”, “Pokemon”, “Arkanoid” are all arcade games).



Picture 1



Picture 2

Picture 1 — Old arcade game “Tennis for Two”

Picture 1 — 80's classic game “Arkanoid”

In the 2nd half of 1970, 2 more specific genres of video games were invented. These are adventure games (“RPG” (Role-playing game)) and simulations. If adventure games belong to a long-standing genre of popular culture — adventure stories (in literature, cinema, theater), then simulators represent a very original achievement, something completely new that electronic games brought with them to the world of entertainment. The first graphical demo of an airplane simulator was shown by Bruce Artwick, the father of this video game genre, in 1978. Another great, but not at all original genre of video games, “logic games” or games are intellectual exercises. The famous Tetris comes to mind here.

In 1992, first-person “shooter” games came out that conquered the world. They implemented the latest revolutionary computer graphics technologies at that time. This game and this genre have included an element of violence in the formula for the popularity of video games. Moreover, they gave violence a "taste" of entertainment. Violence. received the level of the leading theme of popular culture, quickly became a source of new social problems.

Also, in parallel, *sports games* and games called *strategy games* got more and more success. The development of the Internet has added an original genre of online network games here depending on the genre. An audience of players who prefer certain genre varieties of games is also being formed. As new games develop, different genres are mixed in a particular game, often giving it more originality and appeal.

Several risk factors associated with exposure to the human body can be selected:

- problems caused by the presence of electromagnetic radiation,
- vision problems,
- problems associated with muscles and joints,
- stress, depression, and other nervous disorders that cause emissions to the human psyche.

It should be noted that in each manifestation of risk, the risk is in direct proportion to the time spent working at the computer or being close to it.

Videogames also have a positive effect on a person and his body. It manifests itself in the following:

- get a level of knowledge of the English language,
- improved coordination,
- development of logical thinking,
- high intelligence,
- creativity is shown.

Video games feature in many spheres of life. The facts collected below are an example of this:

- The story surfaced in 2011. Chinese prison inmates were forced to play World of Warcraft for 12 hours a day in order to earn gold and resell it to other players for real money. The funny thing is that prison administrators got off with a fine, proving that such work brought much more benefits and money to the budget of correctional institutions than the usual work of prisoners.
- According to the Guinness Book of Records, the oldest gamer is Hamako Mori, who uses the nickname Gaming Grandma. The 90-year-old granny even has her own YouTube channel, where she currently has 466 thousand friendly followers.
- In China, it is illegal to play games that involve killing other people.
- The Tetris effect or the so-called Tetris syndrome was first investigated in 1994. This effect occurs in some people who pay a lot of attention and time to the same type of actions in computer games, as a result of which images typical for this game appear in a dream and in real life. That is, if a player has spent a long time in Tetris, there may be such an effect that he will begin to see figures in real life. Have you ever noticed involuntary thoughts associated with computer games applicable in life.
- Rockstar's stealth action Manhunt caused a huge controversy at the time of its release in 2003 due to the abundance of violence in the game. As a result, the entire circulation of the game was confiscated in Germany in 2004, with the wording (The game presents killing people as fun). In the same year, the game was banned in Australia.

At the moment, video games are firmly entrenched in our minds. Movies, TV series, music, and even books — much of this is either dedicated to video game universes or concerns them. Games are the best way to convey a story to a person, immerse him in an unreal world. After all, only games have the technology to support immersiveness — the effect in which a person feels part of the virtual world. Most often this aspect is manifested in RPG games, but representatives of other genres successfully use immersiveness. Many games have gained great fame in our world — Super Mario, World of Warcraft, The Legend of Zelda, Sonic The Hedgehog and many other games that have become classics, along with books by Tolkien or music by Mozart. Another trace of the influence of video games on our world is the story of the burned–

down Cathedral of the Mother of God in Paris. The essence of the story is that the Cathedral from the game Assasin's Creed: Unity, developed by the French corporation Ubisoft, is.

Can computer games be considered a modern art form? To answer this question, you need to understand what is called culture and art. In the classical sense, a work of art is objects that represent something beautiful that can occupy a person and evoke aesthetic feelings. In the popular understanding, art is all objects that contribute to distraction from everyday routine, which cause an emotional response and contribute to entertainment. If we analyze computer games from this side, then they can be called a bright representative of mass modern culture. Most likely, the people who consider them art, just mean exactly that. Games have the ability to transfer a person to a fantasy world where he feels free to act. A person gets involved in joint activities, ceases to be a passive observer and actively influences current events. Almost all computer games represent artistic images, but at the same time they represent a different kind of art from the generally recognized one.

Getting into the world of virtual reality itself causes a special sensation in a person. Many people take games seriously, believing that the actions taking place in them completely depend on the actions of the player. That's because of the emergence of such feelings, a computer game can be called art. However, there is another point of view. Computer games cannot be called a full-fledged art form, but at the same time it is also wrong to declare that they are not related to it. For the game to become part of the culture, the author-compiler needs to work on the aesthetics of the game, which can later lead to the creation of an artistic direction.

D.V. Galkin noted that "computer games are part of the widest world of games with their own history of game forms and the special content of the experience gained by a person in the game. Computer games are associated with the hybridization of artistic and technological objects. Along with computer graphics and web design, these games are techno-artistic hybrids in which the technological basis serves not only as a tool for creating an artistic product but is included in the artistic content and aesthetic properties of the work."[7]

Today, many computer games claim to be works of art. It is important to fix the aesthetic dimension of modern computer games, their artistic aspect.

The cultural resource of modern computer games is underestimated today. The necessity of this study is that it is a representation of "electronic culture". Electronic culture is the newest area of modern culture associated with the intensive development of information and computer technologies in the late XX — early XXI centuries. It includes "virtual reality", numerous Internet phenomena, art (net-art), new interactive audiovisual works of art, various new types of art that directly appear together with the invention of the latest information technologies.

The program that creates the effect of the player's presence in the virtual world is a "graphics engine". "Game world" — the content of the virtual world. Different game worlds can use the same graphics engine. With the help of vision, a person acquires most of the information about the world, therefore, computer graphics provide the main contribution to the creation of the presence effect. How much it will be more real depends on how much a person will be absorbed in this game.

Computer graphics are created by artists whose work can sometimes really be called art, because the virtual world they created is very real. And there are games in which the graphics are very primitive and after a few games the desire to play disappears. The more advanced the technique, the less it imposes restrictions — the more accurately popular games will reflect the needs and properties of the human soul. To date, computer games are the newest psychological source of information. A computer player gets used to moving from one virtual world to another, quickly perceiving unfamiliar situations and adapting to them. In an actively changing society of the XXI century, developed intellectual flexibility will ensure adaptation to new, unexpected realities.

Thus, virtual reality, on the one hand, is a form of perception; on the other hand, it is a form of construction, and this ability turns out to be culturally determined, filled with recognizable images of a particular cultural tradition (for example, the medieval entourage of fantasy computer games):

Are video games art? There is no exact answer. Two opinions have been considered on this matter.

One of the first to radically answer this question was Roger Ebert, an American film critic who once received the Pulitzer Prize for research work in the field of cinema. In November 2005, in one of the Internet blogs, Ebert spoke negatively about the film Doom (based on the computer game of the same name) and stated that video games have nothing to do with art. [10]

“Video games are “inherently miserable compared to movies and literature. The reason for this is the very structure of the video game: games require the actions of the players, which is the opposite of the functioning of communication in serious films or literature, in which the author is always the main one. <...> I am ready to believe that video games can be beautifully designed, elaborated to the smallest detail, attractive, interesting and visually beautiful. But I am sure that the very technology of this media prevents video games from transcending the level of technical prowess and reaching the status of art. In my memory, no one in the academic environment has even tried to compare video games with the work of great playwrights, poets, filmmakers and composers. That the game can have some degree of artistry as a visual experience, I admit. But most video game gamers waste the precious hours we have to make ourselves more cultured, educated, and empathetic.” [3]

Ebbert's opinion was supported by Hideo Kojima, the creator of the cult video game Metal Gear Solid:

“Art is what the artist is the source of. If 100 people walk by and don’t look, and one person suddenly notices and is fascinated by the work, this is art. But video games are not made for one person. They are designed to ensure that 100 or more people equally enjoy the gaming features laid down by the developers. Their work is a service. Not art. <...> You can create a car that will be so unusual that you won't have to drive it, it will be like art. A real car, like a video game, is interactive, it is designed so that people can drive it. 100 or more people can drive their cars using 100 different ways to drive them. Someone will ride together. Someone will go along the coast or into the mountains. Such a machine will be controlled by all people who want it, but it is absolutely not art. [4]

The opposite position was expressed by the English writer and director Clive Barker:

“Obviously, Ebert has a preconceived notion about video games, and, more importantly, what they can become <...> I think the main mistake of Roger Ebert is that he does not recognize as art everything that has even a slight variability in the narrative < ...> if there is no complete authorial control over the creation of a work, it is not art. Which is completely wrong. <...> Artists must take into account the fantasies of the players, not only their own ones. Let's invent a world in which the player acquires everything in order to be able to immerse himself in different emotional states. This is what art is <...> What I mean to say is that play is the best way to do what we, as humans, have to do all the time — overcome the oppressive daily routine of our lives and find ourselves in the worlds that we are capable of. influence on their own"

Game Developer magazine journalist Matthew Westland suggested that the system of computer game rules can be considered an art:

In Opinion: Tell me what art is, and I'll tell you what games are, he wrote: "We are dealing with what I call 'the system of game rules as art'. An example of this is in Rod Humble's simple and visual video game The Marriage, where two floating squares — one blue, one pink (symbolically masculine / feminine) float side by side, but you have to move them in special ways to prevent the end of the game (then is, "marriage"). You have to practice a lot in the ability to maintain balance in constantly changing conditions, which, as I understand it, is the author's interpretation of how people living together in marriage feel. Humble argues that a set of game rules in and of itself can communicate meanings and attain the status of art. In this sense, The Marriage is a work of art about marriage, Chess is a work of art about conflict and war, Monopoly can be a work of art about capitalism, even sports, basketball can potentially be a work of art, say, about agility and endurance.[10]

Conclusion: Consequently, the latest computer games reveal a wide range of innovative possibilities that can be relevant both in the light of technological modernization and contribute to the development of the individual. The more perfect the technique, the less it imposes restrictions — the more clearly popular games will reflect the needs and properties of the human soul. There is no doubt that games in the future will make it possible to speak more clearly about the relationship between consciousness and the unconscious, about visual perception and prototypes, about obscure and non-obvious phenomena in the psyche, which so far few people pay attention to. Future systematic interdisciplinary searches for a new type of gaming experience are needed for its socialization and integration into the general context of modern culture as a space for personal and sociocultural development.

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КОМПЬЮТЕРНЫЕ ИГРЫ КАК ФЕНОМЕН СОВРЕМЕННОЙ КУЛЬТУРЫ

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Аннотация. Сегодня невозможно представить себе человека, который не знал о компьютерных играх и не играл в них. Но какую роль они занимают не только в нашей жизни, но и в мировой культуре? Как они повлияли на культурное развитие некоторых стран? И почему к ним где-то относятся с предубеждением? И почему компьютерные игры можно назвать достоянием и феноменом мировой культуры? Это исследование направлено на то, чтобы выяснить ответы на эти вопросы и влияние компьютерных игр.
Ключевые слова: видеоигры, аркада, РПГ, “шутер”, феномен культуры, искусство
Научный руководитель: Шагланова Е.А., канд. фил. наук, доц

УДК 613.86

PSYCHOLOGICAL HEALTH OF A MODERN PERSON

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Abstract. The article is devoted to the study of people's ideas about the psychological health of a modern person. It defines the knowledge and opinion of people about psychological health, the relevance of its study, the importance for them. It also aims to find out the reasons that worsen their psychological health and whether they distinguish it from mental health. The study was conducted on the basis of a survey of people of different age groups.
Keywords: psychological health, representation, age groups, modern man, mental health, assessment, understanding.

For a long time, the problem of health was not a priority of psychological science. Psychology of the last century was more focused on the anomalies of human nature, while mental health was less often the subject of study. Only in the second half of the 20th century, such psychologists as C. Rogers, E. Fromm, V. Frankl, A. Maslow and others– the founders of new school of thought known as humanistic psychology, became interested in the problems of a healthy personality. It was only in the late 1970s that health psychology emerged as a separate discipline.

Now this is a well-known fact that the most important component of human health is psychological health, which serves as the basis for the effectiveness of both professional activity and the general well-being of a person. Therefore, for the integrity of the human personality, people should monitor not only physical health, but also mental and psychological health. It is important to know what people think about a person's psychological health, how they evaluate it, what meaning they attach to the concept of "psychological health" in order to see the picture of what is happening and further improve, correct or maintain the current situation.

The relevance of the study of psychological health is associated with the realization by representatives of the sciences that there is not enough knowledge about a person from a medical point of view, where it is considered only as the absence of pronounced ailments or the sum of average statistical norms. It is also associated with an increase in the number of stressful situations, the choice of life guidelines, difficulties of socialization.

As we noted earlier, the term "psychological health" is relatively new in psychology. Giving its initial definition, I.V. Dubrovina differentiates this type of health from mental health: "mental health", in fact, has to do with individual mental processes and mechanisms; psychological health characterizes the personality as a whole, is in direct connection with the manifestations of the human spirit and allows you to highlight the psychological aspect of the problem of mental health [1].

For mental health, the norm is the absence of pathology, which can interfere with the adaptation of a person in society, and for psychological health, the norm is, on the contrary, the presence of certain personal characteristics that allow not only to adapt to society, but also to develop yourself. A violation in the case of mental health is a disease, and in the case of psychological health it is not a disease, but the lack of the possibility of development in the process of life, inability to fulfill one's life task [4].

Mental health is a state of well-being in which a person can realize their own potential, withstand the usual stresses of life, work productively and fruitfully, and contribute to the life of their community [4].

"Psychological health is the state of an individual that ensures its stable formation and successful personal growth" — this concept is given by I.V. Belashova [3].

Representation is the mental process of reflecting objects or phenomena that are not perceived at the moment, but are recreated based on our previous experience [2].

The goal of the research was to find out what people of different ages think about the psychological health of a modern person.

The objectives of study:

– to get a general idea of psychological health in psychology;

– to study the opinion of people of different age groups about psychological health.

Materials and methods: methods for analyzing the scientific literature, questioning, generalizing theoretical material were used to conduct the study.

The study was conducted using a questionnaire. 58 people took part in the survey. Their age ranges from 13 to 70 years. After analyzing the data obtained, we came to the following conclusions:

– Most people answered that the psychological health of a modern person is poor, unstable;

– Also, the survey participants could not evaluate it, i.e. there were "I don't know" answers;

– A smaller number of respondents indicated that their psychological health is satisfactory and stable.

The main reason for deteriorating psychological health is the loss of a loved one, this was noted by 70% of respondents. Problems at work and school are in second place, as 67% of respondents answered. Difficulties in relationships with relatives are in third place (53%). 50% believe that these are difficulties with self-determination.

34% of respondents noted that in Russia it is customary to go to psychologists, the same percentage of people found it difficult to answer, 31% replied that it was not accepted.

44% of respondents wrote that people do not care about their psychological health, 36% wrote that they do.

To the question: "How would you define in a few words what psychological health is?", respondents answered that it is calmness, adequacy, well-being, the state of a person's soul, the absence of mental disorders, resistance to stress, a combination of mental balance and physical comfort.

Conclusion: Thus, most people think that modern man has unstable psychological health. This may be due to the loss of a loved one, problems at work, school, and more. Also, the majority answered that people do not care about their psychological health. By psychological health, most of all they understand calmness, adequacy, a state of mental well-being, balance. And this indicates that people do not distinguish psychological health from mental health and do not really know what it means.

Nowadays the representatives of various branches of psychological science carry out a theoretical analysis and draw generalized conclusions based on latest well-known achievements in the sphere of psychological health and well-being of modern persons. They provide a rational for the methodological principles of mental health research of a modern person. It should be noticed that it is necessary to conduct trainings, webinars, interviews; to provide counseling, based on the use of innovative technologies which will considerably strengthen the processes of preservation and strengthening of person’s psychological health.

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ПСИХОЛОГИЧЕСКОЕ ЗДОРОВЬЕ СОВРЕМЕННОГО ЧЕЛОВЕКА

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Аннотация. Статья посвящена исследованию представления людей разных возрастных групп о психологическом здоровье современного человека. Автором определяется знание и мнение людей о психологическом здоровье, актуальность и важность его изучения. В статье также говорится о необходимости проведения тренингов, предоставления консультаций, которые послужат сохранению и укреплению психологического здоровья человека.
Ключевые слова: психологическое здоровье, представление, возрастные группы, современный человек, психическое здоровье, оценка, понимание.
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УДК 387

NEW TECHNOLOGIES IN CARRYING OUT VOCATIONAL GUIDANCE EVENTS

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Abstract. The present article describes new technologies used in career guidance as an orientation of schoolchildren to future professional activities using the example of other countries and a deeper look at career guidance in Russia. In the given research vocational guidance work at school on the example of the Republic of Buryatia is examined.
Keywords: career guidance work, schoolchildren, self-determination, professional activity, career guidance, conscious choice.

Nowdays, modern society is at the stage of global informatization, which has already been reflected in the civilization of the XXI century. In connection with the rapid development of communication and information technologies, a new information sphere of life is being created, a post-industrial, information society is being formed. In this regard, the education system is currently facing a new task — to teach the younger generation to make decisions independently and be responsible for their actions, to take a balanced approach to choosing their future professional activity in a highly informative environment. For this reason, the informatization of modern educational processes is the most important direction.

Informatization is a set of measures aimed at ensuring the full use of reliable, comprehensive and operational knowledge in all types of human activities. The main role in this process is played by intelligence and knowledge. With the transition of the educational process to specialized education, the problem of personal and professional self-determination of schoolchildren has become urgent. A conscious choice of a profession is the most important decision that a person makes in his life, because people want the work to be interesting and correspond to physical and psychological capabilities, bring satisfaction and decent wages.

The goal of the research was to study how new technologies contribute to career guidance activities of schoolchildren.

The objectives are:

- to analyze how career guidance activities are carried out today;
- to consider how social networks affect the conduct of career guidance;
- to analyze the project activities of the Social Work and Psychology faculty for conducting career guidance work in the Tik Tok social network.

The professional self-determination of students is influenced by many factors — these are personal interests and opportunities, this is the opinion of other people, this is the economic situation in the country. One of the most serious obstacles to the professional self-determination of schoolchildren is the lack of awareness of existing professions and educational institutions where one can receive an appropriate education.

Currently, "career guidance" is understood as a purposeful multifaceted complex activity to prepare young people for a conscious choice in accordance with personal interests, abilities and social needs in personnel of various professions and different levels of qualifications [1].

The main task set by teachers involved in career guidance activities for schoolchildren is to motivate students to make independent decisions related to their future professional activities. In this case, modern information technologies can help.

Using the Internet, you can solve many problems of career guidance work. In the seventh network, it is possible to complete career guidance questionnaires that will identify the main areas of a person's professional orientation, receive recommendations and information on the relevance of professions, study sites where there is a description of recently emerging professions in order to assess their capabilities and personal qualities that contribute to obtaining a future professional career, activities. Of particular importance are sites where information about educational institutions, their features and areas of study is located. Social networks and instant messengers also play an important role in career guidance work.

Today's youth spends most of their free time on such platforms for communication. These platforms for communication include such social networks as: Vkontakte, Instagram, YouTube, TikTok and many others. These social networks are designed for online communication and entertainment. The question is: is it possible to improve the conduct of career guidance with the help of social networks, where adolescents spend most of their time? Let's try to answer this question on the example of the experience of the Faculty of Social Work and Psychology (FSWP) of Buryat State University named after Dorzhi Banzarov. Students of the FSWP of the Social work department following the results of their project activities, decided to hold career guidance events on the Internet based on the TikTok social network. TikTok is a social network that offers users to create short videos, livestream and exchange messages.

The history of the creation of the application begins with Byte Dance, which has been operating since 2012 in China. The organization is still engaged in the development and implementation of mobile applications. The TikTok app was created in 2016. In China it is called Douyin. After large advertisers became interested in it, they learned about the resource on the world market [2].The task of the students of the Faculty of SWP was to transform information on career guidance to the style of the TikTok social network. Career guidance videos were filmed and uploaded to the network, telling about the activities of the Faculty of Social Work and Psychology, about the events in which the faculty took part and about the profession of a Social Worker in general, about the merits and subtleties of this profession.

Students carried out research and creative work. Career guidance material had to be presented in an entertaining and educational format at the same time. Thus, it was more convenient and accessible for schoolchildren to perceive information about the profession of a social worker, and the posted content did not stand out from the style of the TikTok social network.

At the initial stages of the project, the effectiveness of the work carried out was low, the estimated resource was the number of views, the number of subscribers and "likes". Students did not fully understand how to present career guidance information in an entertaining way. But over time, identifying mistakes and shortcomings, determining what interests schoolchildren at the moment, the project participants formed a stable concept of career guidance videos.

Today, the page of the Faculty of Social Work and Psychology of BSU on the TikTok social network is popular. New videos are posted there twice a week. Based on the estimated resources, as of December 3, 2021, the number of subscribers is 136 people, the total number of views is 231,455, the total number of "likes" is 1708, it can be concluded that the work has been done effectively and has a positive result.

Conclusion: Conducting career guidance activities in the TikTok social network with a positive result was achieved. From the carrying project, we can conclude that at the moment career guidance events are not only possible, but also necessary to be carried out not only in a standard format, but also to actively use social networks and the Internet, for a more effective result.

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НОВЫЕ ТЕХНОЛОГИИ В ПРОВЕДЕНИИ ПРОФОРИЕНТАЦИОННЫХ МЕРОПРИЯТИЙ

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Аннотация. В данной статье описываются новые технологии, используемые в профориентационной работе, как нацеливание школьников на будущую профессиональную деятельность на примере других стран и более глубокий анализ состояния профориентационной работы в России. В авторском исследовании рассматривается профориентационная работа, проводимая в школах Республики Бурятия.
Ключевые слова: профориентационная работа, школьники, самоопределение, профессиональная деятельность, профориентация, осознанный выбор.
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УДК 159.9.072

PROFESSIONALLY IMPORTANT FEATURES OF A CONSULTANT PSYCHOLOGIST

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Abstract. This article discusses the professionally important qualities of a counseling psychologist, identifies the most significant characteristics that clients first of all pay attention to when choosing a specialist. By interviewing respondents, 6 key indicators were identified and methods were collected, as well as tips for improving them. Thus, the results highlighted in the scientific work will help psychologists to pay attention to the shortcomings in their activities, and through this, improve personal performance for further more successful work.
Keywords: professionally important qualities, consultant psychologist, client, counseling, interest, patience, unobtrusiveness, openness, neatness, voice.

Psychology is a rather complex science that requires diligence and a lot of time to study and understand it, as it affects all areas of our life, but at the same time, this science is very interesting and rapidly developing, and in our turbulent times it becomes more and more relevant. Not all people can cope with their problems, control their behavior and emotions, and people begin to realize that they cannot cope alone without the help of a competent specialist; therefore, starting from 2019, people began to turn to psychologists more often. Some are wary of the representatives of this profession, as they are afraid to stumble upon an incompetent and unsuitable for their needs psychologist consultant.

The goal of the research is to identify the most significant qualities of a psychologist, the observance and manifestation of which, clients would like to see in the first place.

The objectives are:

- Conduct a survey and identify the main qualities that a psychologist-consultant should have.
- With the help of an online survey, we will highlight the most important qualities that excite customers to a greater extent.
- To the selected qualities, write recommendations and exercises for their development.

Materials and methods: conducting a survey, content analysis.

In psychology, there are many specialties, each of which provides its own assistance in its own way. One of the most common areas is psychological counseling. Psychological counseling is a type of psychological assistance that has emerged from psychotherapy. It is aimed at mentally healthy people who are facing difficult life challenges or want to improve their quality of life. This is what a counseling psychologist does. His tasks include — advising clients, conducting psychodiagnostics, developing the necessary personal skills and formulating recommendations for solving the problem that has arisen. What professional qualities should a psychologist-consultant have? With the help of the survey, we were able to answer the question posed.

Research. In order to collect information and compile a questionnaire, an oral survey was previously conducted, which required a detailed answer. People were asked the question: how would you like to see a psychologist? Based on the answers, a list of all named qualities was compiled, which were divided into external and internal.

Internal qualities: interest (visible interest in the client); patience (does not interrupt, listens carefully); unobtrusiveness (does not bother the client, does not put pressure on him); self-control (keep calm); punctuality (performs his duties on time; is not late for sessions); perseverance (works hard with the client's questions and problems; no matter what, gets to the truth); tolerance (tolerance for a different worldview, lifestyle, behavior and customs); modesty; non-conflict; the ability to keep secrets; openness (easy to contact; ready to discuss any issues); visible emotions (repetition of the client's emotions, their expression in facial expressions); emotionlessness; responsibility.

External qualities: neatness; uses perfume; does not use perfume; in clothes observes a business style; in clothes observes a free style; calm gestures; sharp gestures; calm, soft speech; pleasant voice.

The questionnaire was compiled in an online format and consisted of only two questions, after which it was necessary to select a certain number of items. There was no age limit in this survey, anyone could participate, the opinion of all subjects was taken into account. Thus, 104 respondents took part. In the first question, the subject had to choose four internal qualities that he considered the most important and attractive; in the second question, according to the same principle, only two external qualities were selected. After conducting the survey, we got the following results:

The name of the qualities	Number of responses	Result in percent
Interest	66	63,5%
Patience	62	59,5%
Unobtrusiveness	46	44,2%
Self-control	33	31,7%
Punctuality	24	23,1%
Perseverance	25	24%
Tolerance	41	39,4%
Modesty	7	6,7%
Non-conflict	13	12,5%
The ability to keep secrets	45	43,3%
Openness	48	46%
Visible emotions	9	8,7%
Emotionlessness	3	2,9%
Responsibility	36	34,6%
Neatness	75	72,1%
Uses perfume	6	5,8%
Does not use perfume	6	5,8%
In clothes observes a business style	20	19,2%
In clothes observes a free style	14	13,5%
Calm gestures	46	44,2%
Sharp gestures	1	1%
Calm, soft speech	69	66,3%
Pleasant voice	37	35,6%

According to the results of the survey, 6 qualities were identified, of which 4 are internal qualities (interest, patience, unobtrusiveness, openness) and 2 are external (neatness, calm and soft speech). Let's consider each quality in more detail.

Interest. According to the results of the survey, about the important internal qualities of a psychologist, the respondents identified — interest in the client (66). People who come to a session with a psychologist, first of all, want to be listened to attentively and showed interest in their personality. Some psychologists neglect this for various reasons — someone is simply tired of work, and someone looks down on clients, thereby pushing them away from themselves, creating a negative impression about people in this profession. To show proper interest in clients, you need to be interested in your activities and love your profession. Work should not be something that you think about with irritation that depresses you. To do this, it is important to remember that the main task of a counseling psychologist is to help people overcome their problems. It is necessary to treat this responsibly, since the result of his work with the client depends on the psychologist. You can show care, find out if it is convenient for him, offer tea or meet him in order to hold an office. Also, for successful work, you need to find time to rest, take breaks when you need them, and most importantly, do not think about your business at this time. You can find a hobby or do certain exercises to help you relax. Here are some relaxation exercises for you.

1. Breathing exercise — you need to take a comfortable position, sit or lie down, and then you should relax all your muscles. Then you need to start breathing slowly, inhaling and exhaling air through the nose, while counting to 4.
2. Muscle relaxation — you should concentrate on your breathing. Breathe slowly and on the inhale you need to tighten the muscles, on the exhale relax. You can do this with any muscle in the body.
3. Meditation — choose a comfortable position for yourself, then decide on the point on which you will concentrate. If you meditate with your eyes closed, then imagine a picture that is pleasant for you; if you are meditating with your eyes open, then choose an object, for example, a candle. The main thing during meditation is to completely abstract from the outside world.

Patience. According to the results of the survey, patience is in second place (62). In addition to attention, clients want to be listened to patiently, not to interrupt or break the silence when the client requires it. Of course, this is an important professional quality, but for some psychologists it is quite difficult. Most importantly, if a psychologist has this problem, it must be recognized, not denied, and told to yourself about it. Next, you need to determine what emotions you have while working with a client and find out why this happens. Also, this problem is solved with practice, namely when working with people, the more often you conduct sessions and communicate, the faster you will overcome this problem. In situations where you feel like saying something or asking a question, write it down so you don't keep it in your head and get distracted.

Unobtrusiveness. According to the results of the survey, unobtrusiveness is in third place (46). The attention of the psychologist and his ability to listen is important for clients, but the main thing is not to overdo it in showing interest and activity. To do this, you need to learn how to control yourself, do not go beyond the client's frontier, not talk too much and not ask too many questions. Also, so that the client does not get tired of you and does not feel pressure, you need to be able to speak calmly, in a language understandable to everyone, not to use excessively active facial expressions and gestures filling everything around with yourself. To do this, you can train near the mirror, listen and adjust your intonation in order to achieve euphony of speech.

Openness. According to the results of the survey, openness is in fourth place (48). To win over a client, you need to be an open person, easy to make contact and be ready to discuss any issues. This takes good practice. Try to communicate with different people, read more literature that relates to your activities, be interested in events that take place in the world, in short, develop your horizons. Work on your postures and gestures, this can also be worked out at the mirror.

Now let's move on to external qualities. Respondents singled out two items — neatness (75) and Calm, soft voice (69).

Neatness. Specialists who work directly with people need to be neat and clean, because the first impression is formed from how a person looks. Therefore, you need to carefully monitor hygiene, your clothes, hair, and shoes. If a person often forgets about this or neglects it, it is worth getting forms for yourself and every day, when going to work, note in them about the things done, and if you do not have enough time for morning preparations, in such cases you should prepare in advance. In order to develop neatness in yourself, in addition to a neat appearance, you need to learn order in the house and at the workplace, so neatness will become a habit and will be observed in everything.

Calm, soft voice. To make your voice and speech comfortable for hearing, you need to train it daily.

1. Position: standing, feet shoulder width apart. First, take a few calm breaths in and out, then take a deep breath and exhale sharply with the sound "ha-a". The exhalation should be as full and loud as possible. In this case, the body can be slightly moved forward.
2. Inhale deeply, and as you exhale, say a long "bom-m", "bim-m", "bon-n". Drag the last sounds as long as possible. Ideally, vibration should occur in the region of the upper lip and nose. A similar exercise can be done with the syllables "mo-mo", "mi-mi", "mu-mu", "me-me". But in this case, first pronounce them briefly, and only then drawl.

You can also record vocals to strengthen your vocal cords.

Conclusion: Thus, when clients come to a session with a counseling psychologist, they want him to look neat, his voice was calm and soft, he listened attentively, he was patient, he communicated freely and openly and was not too intrusive. With the help of the tips and exercises that are described in the article, you can improve your professional skills.

ПРОФЕССИОНАЛЬНО ВАЖНЫЕ КАЧЕСТВА ПСИХОЛОГА-КОНСУЛЬТАНТА

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Аннотация. В данной статье рассматриваются профессионально важные качества психолога-консультанта, выявляются наиболее значимые характеристики, на которые в первую очередь обращают внимание клиенты при выборе специалиста. Путём опроса респондентов, были выделены 6 ключевых показателя и собраны упражнения, а также советы по их развитию. Таким образом, выделенные в научной работе результаты, помогут психологам обратить внимание на недостатки в их деятельности, и посредством этого, улучшить личные показатели для дальнейшей более успешной работы.
Ключевые слова: профессионально-важные качества, психолог консультант, клиент, консультирование, заинтересованность, терпеливость, ненавязчивость, открытость, опрятность, голос.
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УДК 159.9

BULLYING AS A STRESS FACTOR AMONG TEENAGERS

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Abstract. Bullying as a phenomenon of deviant behavior of adolescents is a significant problem of the whole world. The article is aimed at identifying the problems of bullying, studying in the framework of psychological research in connection with the prevalence of this phenomenon and its danger to the physical and mental health of children.
Keywords: bullying, teenagers, psychological research, buller, victim, approving, indifferent.

Bullying among teenagers is a very real problem in schools. For the first time, Dan Olveus, a scientist from Scandinavia, took up the study of this problem. In the 1970s, he conducted a study in which he studied the manifestation of bullying among boys [6. p.1178]. After his research, studies of bullying began in all countries.

The aim of the study is to study bullying as a stress factor among adolescents.

Based on the set goal, the following **tasks** are highlighted:

1) to examine the history of the study of bullying by domestic and foreign researchers;
2) highlight the concept, content and structure of bullying;
3) to conduct a study and determine the features of bullying in adolescents;
4) to study bullying as a stress factor in modern adolescents.

The object of the study is stress manifested in adolescents.

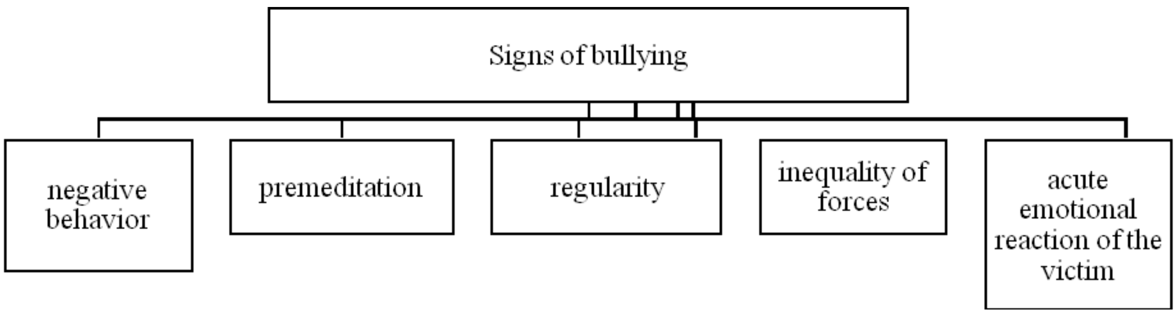
The subject of the study is bullying as a stress factor in adolescents.

Research methods:

1. Moreno's "Sociometry" methodology.
2. Questionnaire on bullying (self-assessment).
3. Methodology "Bullying structure".

Bullying is the aggression of some children against others, when there is an inequality of the aggressor's and victim's forces, aggression tends to repeat itself, while the victim's response shows how much she is hurt by what is happening.

Researchers identify signs of bullying



The main reasons for school bullying are: on the part of the victim — appearance, dialect, low or overestimated self–esteem, fear and anxiety, excessive sensitivity, academic performance, pronounced physical illnesses, imposing one's idea on everyone, violating the rules and boundaries of others; on the part of buller — attracting attention, revenge, power struggle, restoration of justice, envy, elimination of an opponent, self-affirmation, feeling of dislike.

D. Olveus identified some typical features of bullers, they can also manifest themselves in children who are not initiators of bullying in the classroom, but they will not be as pronounced as in the bullers themselves.

– they get excited quickly and are very hot-tempered;

– they want to be in the spotlight, because there will be no bullying without an audience;

– consider themselves superior to the victim;

– aggressive;

– as a rule, physically stronger than the victim.

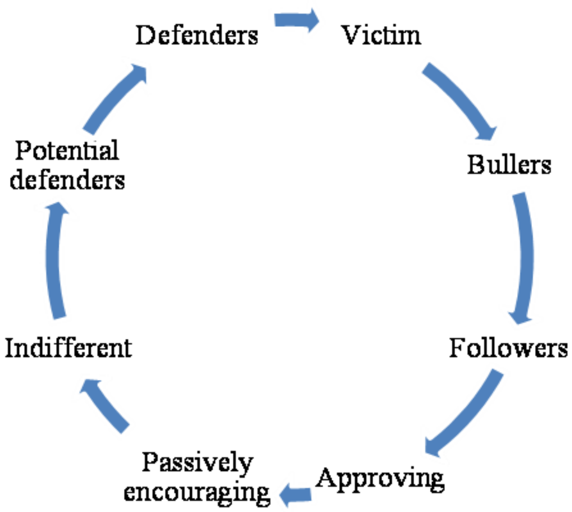
Bullying does not always have a physical form of expression, most often it is carried out in a psychological form:

— verbal harassment — insults, malicious jokes, ridicule, etc. [7. p.30];

— spreading rumors and gossip;

— boycott announcement.

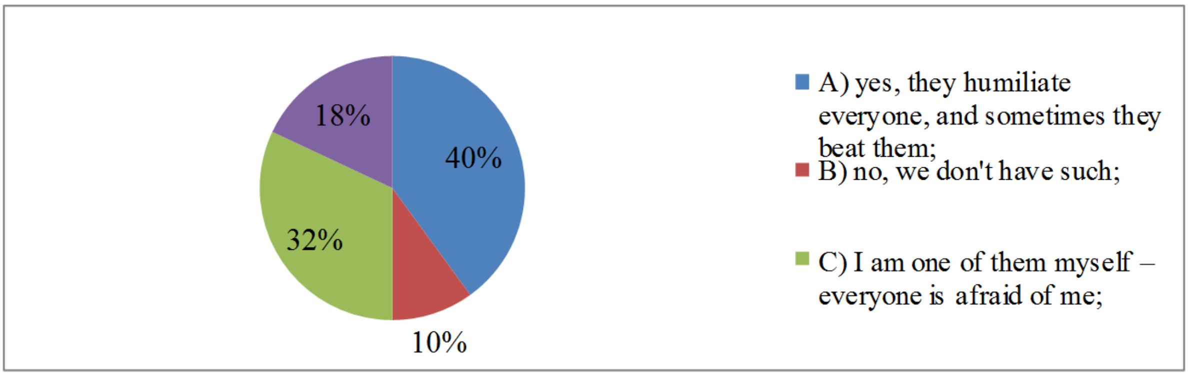
The main subject of bullying is a buller — a child from whom aggression comes towards another child or group of children. However, there are much more subjects in this process.



Bullying subjects

The analysis of the results of an empirical study should begin with reflecting the negative aspects of the psychological atmosphere that contributes to the identification of cases of emotional violence.

This can lead to negative attitudes towards communication, which generate even more cases of emotional violence, creating favorable ground for bullying. The method of "Bullying structure" showed that 32% of students are aggressors.



Results of answers to question 13 of the "Bullying Structure" survey.

Moreno's sociometry technique showed that students in their class do not communicate with everyone the same way. As a result of the survey, it turned out that there are 1-2 people in each class that other students did not mention in their questionnaire.

This indicates that these students are outcasts and, therefore, may become victims of bullying or have already become them. In a situation of bullying, the roles are distributed in such a way that not only the abuser and the victim are present in the group, but also eyewitnesses, followers of Buller, sympathizers and others.

According to the results obtained, it is necessary to carry out work on the primary prevention of emotional violence before cases of emotional violence are identified. Prevention of emotional violence may consist in the fact that a teacher and a psychologist will be able to help students establish and maintain positive relationships with each other, more adequately resolve interpersonal conflicts.

To do this, it is necessary to conduct specialized psychocorrection classes and trainings. All of this can help reduce the number of cases of bullying and bullying.

To reduce the conflictogenicity, you can conduct a training program for conflict prevention [3. p.6]. The main content of this program may be activities aimed at developing conflict-free behavior skills.

Any person or child can become a victim of bullying.

The development of bullying is facilitated by upbringing in the family, attitudes instilled from childhood, the microclimate of the educational institution.

Conclusion: So, summing up, it is necessary to emphasize the following. Bullying is a phenomenon of destructive influence in a team, accompanied by the manifestation of violence, cruelty and aggressiveness.

Today it is customary to distinguish physical, psychological and social bullying, each of which is characterized by its own characteristics and ways of manifestation.

As a prevention of bullying, team building should be carried out, and the position of strictly fixed roles in the team should be avoided. Each student should contribute to the group, relationships should be built on equal terms and with respect for each other. In this case, group events should be held more often, where students can unite and work for the benefit of a common cause. This will contribute to the formation of a sense of community and collectivism, as well as an understanding of the team as a whole.

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БУЛЛИНГ КАК ФАКТОР СТРЕССА СРЕДИ ПОДРОСТКОВ

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Аннотация. Буллинг как явление девиантного поведения подростков является значимой проблемой всего мира. Статья направлена на выявление проблем буллинга, изучение в рамках психологических исследований в связи с распространенностью этого явления и его опасностью для физического и психического здоровья детей.
Ключевые слова: **б**уллинг, подростки, психологические исследования, издеватель, жертва, одобрение, безразличие.
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УДК 374.32

POLITICAL ACTIVITY OF STUDENTS YOUTH IN SOCIAL NETWORKS

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Abstract. The article analyzes the activity of student youth in political life in social networks, identifies the main forms of political activity in social networks. On the basis of empirical research data, it has been established that political activity does not arouse particular interest among students, and among the forms of political activity in social networks, reading news about political events, discussing and commenting on political news, putting likes and reposts, subscribing to political pages, are engaged in the dissemination of political information, participation in online petitions, watching videos on tiktok. Students prefer conventional forms of political activity. Among students with a pronounced low level of political activity, the reasons for their non-participation were identified — the inability to change what is happening, the lack of time. Lack of interest in this area forms a low level of political activity.
Keywords: political activity, student youth, forms of political activity, modern politics, social networks, virtualization.

The goal of the research
Conclusion:

Student youth is an association of people interested not only in obtaining professional education, but also in the development of spiritual values. Being practically the most dynamic, active group of society, student youth can radically change the future of the state. Their involvement in political, socio-economic life can lead to profound social transformations. During the student period, the younger generation continues its formation as a person, interacting with various social institutions and the state, therefore, understanding their rights and obligations, knowledge about what is happening in the world is an important component of the formation of a person participating in the socio-political life of the country. Thus, the formation of politically active young people is becoming a significant aspect for the development of civil society.

Modern political life is characterized by a number of changes that are caused, among other things, by the rapid development of the Internet, information and communication technologies.

Modern political life is characterized by a number of changes that are caused, among other things, by the rapid development of the Internet, information and communication technologies.

That is why they are an important resource and factor influencing modern politics, changing the traditional means of mass communication. First of all, this is expressed in the ways of obtaining political information. The speed, multiplicity and alternative sources of information make it more accessible and diverse (along the political spectrum). As a result, such information may reflect conflicting assessments of political events and processes, different types of political cultures and models of political behavior. In this regard, new information means of mass communications, on the one hand, act as a tool for the formation of values among young people, including students. On the other hand, they act as a platform for expressing their own attitude to the political processes taking place in society. Among the modern means of mass communication in this regard, the leading place is occupied by social networks, which build communications in a new way, allowing you to enter into a dialogue with any specific or anonymous person or group or community, freely express or support an opinion, proposal or idea.

As a result, the mobilization potential of student youth is being formed, the “virtual” political activity of young people is being transformed into real political activity, and so on.

The goal of the research is to identify forms of political activity of student youth in social networks.

The objectives are:

1. to develop research methodology;
2. carry out research;
3. to process research results.

In order to identify forms of political activity of student youth in social networks, a questionnaire survey was conducted among students.

The survey involved 200 students from the Republic of Buryatia, as well as from Moscow.

For the selection of respondents, a random sample (simple random selection) was used, which assumes the homogeneity of the general population (students), the same probability of each student getting into the sample.

At the stage of collecting information, the survey was conducted by e-mailing questionnaires to students who agreed to contribute to the conduct of this survey. The data obtained were processed by us independently, after which the appropriate conclusions were made.

Below are the results of a study of the political activity of student youth in social networks, conducted by means of a questionnaire survey. The results of the study are structured in accordance with the questions of the developed questionnaire.

The first indicator that we analyzed is if there is interest in politics? the survey showed that at the moment there is a low interest in politics among students. As can be seen from the survey results, twice as many students in the Moscow region are interested in politics as in the Republic of Buryatia. Also, there are two times fewer students in the Moscow region who are not interested in politics than in Buryatia. Already these primary data allow us to assume that the political activity of students in the Moscow region is higher than in Buryatia, and also that students from the Moscow region will be more politically active in social networks.

The next parameter that we analyzed is how political activity manifests itself. Many students do not take an active part, only discussing politics in a circle of acquaintances. Nevertheless, the manifestation of political activity of students is mainly expressed in participation in public discussion of political issues and in the work of political parties and social movements.

According to the table, in the Moscow region 7% of students take part in strikes, protests; in the Republic of Buryatia, no such students were identified. Thus, we can say that in the Moscow region a much larger number of students are ready to engage in destructive political activities than in Buryatia.

Also, in Buryatia, only 2% of students participate in the work of political parties and social movements, in the Moscow region, 12% of such students. In Buryatia, 20% of students participate in public discussion of political issues, in the Moscow region there are twice as many such students. Low activity in this aspect of political action is shown by 78% of the youth of the Republic of Buryatia and only 38% of the student youth of the Moscow region. However, despite this, more than 70% of the respondents have never participated in the presented activity. This indicates the lack of experience of participation in the political life of the state. Together, lack of interest and experience in participating in political activities contribute to political passivity, which directly affects the development of civil society.

The main form of political activity in social networks among students is that they share political news with their friends. But, as the survey results show, many students do not participate in any of these forms.

The majority of students from Buryatia replied that they did not take part in any of the forms of political activity indicated in the questionnaire. To obtain objective data, it was possible to write your own version. Among the suggested options were "watching videos in tik-tok", "reading news on social networks and discussing them", "putting likes", while 21% share political news with their friends.

In this regard, Moscow students are much more active, while the most popular forms of activity are viewing newsletters, discussing and commenting on political news, likes, reposts, distributing political information, expressing their own political position, participating in online petitions, in a flash mob, subscribing to the pages of politicians, political communities in social networks, and also sending donations to the pages of political parties and politicians.

Conclusion:

The main forms of political activity in social networks, based on the results obtained, were identified in this research. These forms are: reading news about political events, discussing and commenting on political news, putting likes and making reposts, subscribing to political pages, distributing political information, participating in online petitions, expressing their own political position, watching videos in tick-tok, and also sending monetary donations. Thus, students prefer conventional forms of political activity.

The aim of the work was to identify the forms of political activity of students in social networks, which was done in a sociological study. As a result, the goal of the work was achieved, and the tasks were completed.

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ПОЛИТИЧЕСКАЯ АКТИВНОСТЬ СТУДЕНЧЕСКОЙ МОЛОДЕЖИ В СОЦИАЛЬНЫХ СЕТЯХ

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Аннотация. В статье анализируется активность студенческой молодежи в политической жизни в социальных сетях, выявляются основные формы политической активности в социальных сетях. На базе данных эмпирического исследования установлено, что политическая деятельность не вызывает у студентов особого интереса, а среди форм политической активности в социальных сетях, выделяются чтение новостей о политических событиях, обсуждение и комментирование политических новостей, ставят лайки и делают репосты, подписка на политические страницы, занимаются распространением политической информации, участие в онлай-петициях, просмотр роликов в тик-ток. Студенты предпочитают конвенциональные формы политической активности. У студентов с выраженным низким уровнем политической активности были определены причины их неучастия — невозможность изменить происходящее, отсутствие времени. Отсутствие интереса к данной сфере формируют низкий уровень политической активности.
Ключевые слова: политическая активность, студенческая молодежь, формы политической активности, современная политика, социальные сети, виртуализация
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УДК 347

SOFTWARE: REGISTRATION AND COPYRIGHT PROTECTION

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Abstract. The paper is devoted to the legal regulation of software, its registration and copyright protection. Nowadays information technologies are an integral part of our life. It is difficult to imagine modern society without information and communication technologies. A lot of computer programs have been created, but very few programmers know how to protect their authorship, and it may become a problem in the future.
Keywords: IT, software copyright, copyright protection, civil law, copyright, legal regulation.

Today the field of information technologies (IT) is the most increasingly developing and complex enough, and even lawyers do not immediately understand what forms IT as civil law objects exist in and how they can be regulated. Therefore, the relevance of this study is due to the need to find out how the current Russian legislation regulates these issues because as we see the problem of software copyright protection is getting more topical than ever.

The goal of the research is to study legal regulation of software copyright protection in Russia.

The objectives are:

- to explore features of software copyright;
- to identify ways to protect software copyright;
- to reveal the normative legal acts regulating software.

Materials and methods: analysis of scientific literature and legal acts.

Russian Civil Code states that a computer program (software) is a set of data, procedures, rules and commands presented in an objective form intended for the operation of computers and other computer devices in order to obtain a certain result, including preparatory materials obtained during the development of a computer program, and the results generated by it and audiovisual display [1].

Copyrights for all types of computer programs (including operating systems and software complexes) that can be expressed in any language and in any form, including source text and object code, are protected in the same way as copyrights for works of literature [2].

It should be specially noted that copyright does not depend on the ownership of the material carrier (thing) on which the computer program is located. And when the ownership of the thing (material carrier) in which the computer program is expressed is transferred, there is no transfer or granting of copyright to the computer program.

The author of software is the person who created this program with his creative work. However, it is more difficult for programmers than for artists and writers: it is almost impossible to distinguish the original program from a copy. If you write a program today, no one guarantees that another developer will not repeat it tomorrow. At the same time, it will be difficult to prove that he stole the code because the plagiarist can always say that he wrote everything himself, and coincidences are random.

To convince the court that you are the author, you will need to prove that you have the code before the plagiarist. But if you do not protect your rights in advance, there will be nothing to show the court. Whether you are writing software to sell, trying to win a grant, or something else, this can be a big problem.

The study lets us to identify what is protected by copyright:

1. Literal program components. It is the source text that means the source code and object code. The law does not define source code, but state standards contain the concept of source code. From a legal point of view, these terms can be considered as synonyms. Source code is the textual form of a computer program. Object code is the result of compiling the program's source code. It is these program components that receive copyright protection in the first place.

2. Non-literal program components. This is a certain visual or sound sequence that occurs as a result of the program. The audiovisual displays generated by the program are its component, which can receive independent protection only under certain conditions. For example, a graphic design of a user interface may be protected as an industrial design.

3. The original name of software. The title of the work reflects its content and gives individuality, but, as part of the work, it must also meet the requirements of originality, be the result of the author's creative work. Otherwise, the name will not be able to receive legal protection [3].

So after analyzing different legal provisions we found out that there are five legal ways to protect your software copyright:

- source code registration;
- patenting of the program algorithm;
- patenting of the hardware and software complex;
- interface design patenting;
- trademark registration.

1. The easiest way to prove that you wrote a program before a competitor is to keep a copy of it in an independent repository immediately after creation. To do this, there is depositing the code in Federal Service for Intellectual Property (FSIP). The author fills out an application and a brief description of the program, attaches a disk with the code, pays the state duty and sends everything to FSIP to deposit the code. The expert checks the correctness of filling out the documents, gives the program a serial number and sends the disk to the FSIP archive. The author receives a certificate of state registration of the computer program.

2. As a general rule, a program cannot be patented, but you can patent the algorithm embedded in it. The patent protects the logic of the program, its essence. Therefore, unlike the first method, it cannot be bypassed by rewriting the code in another language or changing the design.

3. When a program is built into a device, both the device and the algorithm by which it works can be patented. It will be a patent that protects the entire hardware and software complex.

4. The design of the program, its interface, icons and fonts can be patented as an industrial design. It's just the specific name of a patent protecting appearance. In other countries it is known as a design patent. This patent will be issued only if the examination recognizes it as new and original. This means that the same or similar design should not be published anywhere in the world in open sources.

5. A trademark is a name or logo registered with FSIP. It is needed so that competitors cannot use your brand, name and reputation of your product. The trademark does not protect the form or essence of a program, only the name and logo. But if you do not have it, there is always the possibility that your competitors might have it. Then it will be a problem.

The study has shown that the main legal act regulating these issues is Civil Code, and there are a lot of acts of federal services and ministries.

In conclusion, it should be said that despite the fact that the authors have a fairly large amount of rights to computer programs, they do not always have an idea of how rights can be disposed of and what can be done to protect them. The most correct approach in this case would be to contact a copyright specialist who can provide qualified assistance and answer most questions regarding such objects of law as computer programs.

We consider that to solve this problem it is necessary to conduct special courses in this field of law.

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ПРОГРАММЫ ДЛЯ ЭВМ: РЕГИСТРАЦИЯ И ЗАЩИТА АВТОРСКИХ ПРАВ

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Аннотация. Статья посвящена правовому регулированию программ для ЭВМ, их регистрации и защите авторских прав. В настоящее время информационные и коммуникационные технологии являются неотъемлемой частью нашей жизни, без которых сложно представить современное. Создано много программ для ЭВМ, но очень немногие программисты знают, как защитить свое авторство, и это может стать проблемой в будущем.
Ключевые слова: ИТ, авторское право на программное обеспечение, защита авторских прав, гражданское право, авторское право, правовое регулирование.
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УДК 341.3

PRIVATE MILITARY COMPANIES IN INTERNATIONAL LAW

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Abstract. The market for the services of private military companies (PMCs) in the 21st century has firmly established as a separate sphere of the modern economy. There appear more and more such organizations every year. They are not isolated in one country anymore, PMCs have entered the international level and actively influence foreign policy processes.The question of regulating this area is becoming ever more acute under these conditions. However, it turned out to be much more difficult than expected.
Keywords: Private military companies, international law, mercenary, gray zone, weapon, offence, white spots in legal regulation.

The path of development of the PMC sphere was quite long. Mercenary at the state and international levels is not a new phenomenon. Since ancient times this type of troops was used in military clashes and to protect rulers. It was much cheaper than keeping a regular army. By the 18th century mercenary had lost its former popularity, but already in the 20th century it received a new impetus in development.

During the Cold War and the development of proxy wars, it became the most popular method in different parts of the world, but in its traditional form did not last long. At the beginning of the 70s private military companies were created, they united mercenaries. From this moment we are talking about the full-fledged formation of the market for PMC services. However, the problem was the spontaneity of this process and as a result the existence of a gray zone — a blind area of legal regulation.

At this stage, it was possible to create a system of private state and international norms to regulate the field of activities of private military companies. However, since the early 2000s a large number of offenses by these organizations have been noted. The **relevance** of this study is related to the low efficiency of international norms in this sphere. The gray zone of legal regulation is formed from many white spots contained in legislative acts and documents. **The goal of the research is** the complex analysis of the legal documents along with the recorded offenses by PMCs.

The objectives are:

- to study the existing legal system in the field of activity of PMCs and the process of its formation;
- to identify and cover the most significant parts of the legal norms and compare them with offenses in this area;
- to assess the capabilities of this system;

We need to analyze the existing norms to determine and understand the framework within which PMCs should operate, as well as to identify gaps in the legal system that allow PMCs to go beyond the established legal restrictions. It is necessary to consider both the state level and the international one. They form the general legal scope of PMCs. There are two opposing views to whether PMCs should be fully legalized. Supporters of full legalization point out the economic potential of PMCs for the state, while opponents emphasize the complete uncontrollability of such companies. This uncertainty of opinions is also reflected in the legal sphere of a number of states.

Mercenary activities are prohibited under the Russian law, but private security companies (PSCs) are permitted and officially regulated. According to the law "On private detective and security activities in the Russian Federation" (1992), every citizen who has been trained and passed an exam can become a private security guard [5]. It is private security companies that subsequently go international, becoming large military companies. Also, special divisions of Transneft and Gazprom have the right to use weapons and special equipment to ensure the safety of products supplied for federal state needs. The issue of legalizing the activities of private military companies is periodically raised in the State Duma, but there is still no consensus [1].

The situation in other countries is no better. In the United States of America, there is no unified federal law on private military and security organizations, legal regulations vary from state to state, which leads to even more uncertainty. In ten states there are no special legislative norms for security guards. In many states, in order to become a security guard, you just need to provide a recommendation letter. For example, in New York, to become a private security guard, you must submit fingerprints and a certificate of education, and pass the state exam [3]. In California, to obtain a license, you must be over 18 years of age, have work experience, pass a US law exam, pay a license fee, a certificate of no criminal record, and all items from New York law [12]. The states of Alabama, Alaska, Colorado, Mississippi, Missouri, and South Dakota do not require special permits. In several other states, a license is required only for the manager; for ordinary employees, obtaining special permits is not necessary.

In the UK, there is also no general system of rules for regulating the activities of private security companies. Guards, like detectives, must be licensed, but there is no serious regulation of their activities. This leads to a consistently high level of offenses and crimes in this area. According to some research, it was 21 times higher than the crime rates of police officers. It is also not difficult for private security companies to enter and strengthen at the international level. For example, Keenie Meenie Services (KMS) started out guarding British diplomats in Buenos Aires. And a few years later, KMS won several government contracts from the government of Sri Lanka due to the civil war that broke out on the island, and then moved to Nicaragua and Afghanistan [14].

In fact, not only in the USA, Britain and Russia, but also in most countries, the legal system in the field of regulating the activities of military companies is ambiguous and uncertain. It is possible and quite easy to create PMCs. It is also very easy to go beyond the country of creation. The world community is already facing the issue of regulating the activities of PMCs at the international level, which is complicated, too. International legal norms in this area appeared and expanded along with the development of the service of PMCs. Therefore, they were often incomplete and had many white spots.

Due to the change in the war itself and the obsolescence of the norms, it was necessary to supplement the existing legislation. Article 47of Additional Protocol I (1977) defined mercenaries and indicated that they did not have the right to become prisoners of war [13]. This can be considered the first step on the way to international law in the field of PMC activity. Further on, the market for private military companies continued to grow. PMCs began to be used almost everywhere. Additional Protocol was no longer enough to regulate it. Therefore, already in the Convention on the Prohibition of the Recruitment, Use, Financing and Training of Mercenaries (1989), the list of persons who can be classified as mercenaries was expanded [8]. Also, the signatories pledged not to use mercenaries and PMCs in their own interests and not to create new ones. This convention was the first document which can control the activities of PMCs in the international arena, since there were real restrictions for the signatories. However, only 46 countries signed it. It also was proved by other conventions, for instance in African convention for the elimination of mercenarism [4]. This did not solve the problem with the increase in the activity of private military companies. At the end of the 20th and the beginning of the 21st century, we can see a trend towards cooperation between various PMCs. In April 2001, the Peace Operations Association was established to coordinate the activities of private military and security companies at the international level. After the start of the war in Iraq, an association of Western private military and security companies, the Private Security Company Association of Iraq, was created to coordinate their activities. Some private legal system, created directly between PMCs, began to evolve. At that moment, it was necessary to revise and expand the existing international legislation in the field of PMCs. New initiatives emerged to increase control over private military corporations, for example, an initiative by the UK and Switzerland, together with the Committee of the Red Cross, called the "Swiss Initiative". It culminated in the adoption of the Montreux Document in 2008 and the International Code of Conduct for Private Security Companies in 2010. The Montreux Document contains rules and regulations on private military and security companies operating in areas of war [10]. However, it is declarative, all its provisions are recommendations that are not binding. In the International Code of Conduct for Private Security Companies, PSC refers to any company that provides security services, regardless of how it describes itself [7]. Companies signing this code are committed to establishing external control mechanisms, develop internal systems for monitoring. However, to date, only a small part of companies has signed it.

In general, we can say that the renewal of the international legal system in this sphere has ended, no other important documents that would lead to serious changes have been adopted. Thus, we have a whole group of international legal norms on the activity of PMCs. This is a broad area that covers a large number of aspects. However, the question arises as to the effectiveness of this legal system. Firstly, most of the normative acts are declarative and the signatory parties do not actually oblige to anything. Secondly, only a small part of all countries sign and ratify these agreements, the rest prefer to abstain. It is also important to take into account that the activities of PMCs are quite extensive, often secretive, the crimes committed and violations of the law related to PMCs are difficult to find and prove. We see that there are no real restrictions and controls either at the state level or internationally. PMCs are quite easily created within one country and quickly start working around the world. Due to the existence of a legal vacuum, their activities are mostly uncontrolled. And this problem also admitted by many countries [11]. This, in its turn, leads to the violation of international norms by PMCs around the world.

This legal system is quite unstable including the area of activity of PMCs. Rapid movement and change make it necessary to constantly change and supplement the legal norms, which results in many white spots in the regulation. Further, these gaps will be detailed with practical examples of violations in this area. The Montreux Document is the best way to analyze real offenses and compare them to laws. The PMC Code of Conduct is more effective in this regard, as it provides for real sanctions, but it was adopted later than all the largest violations and is still signed by too few companies to fully regulate this area.

One of the most obscure parts of the legislation is how PMCs use weapons. It is this area where the majority of crimes occur. The main articles in the Montreux document related to weapons cover all the important stages of use: purchase, registration, cases of use, and subsequent reporting. However, it cannot be said that their content is sufficiently complete to regulate this area. Thus, under Article 11, private military companies are prohibited from buying and using weapons that are forbidden by international law. It is also mentioned that PMCs should acquire weapons legally. This includes the purchase rules without specific explanations. Therefore, in the future, the private law of the state of registration of a PMC comes into effect. However, its application is complicated by the location of this PMC on the territory of another state and the impossibility of verifying some of the organization's actions. An example is the case with the use of AK-47 assault rifles by Blackwater. The case was investigated in 2008 by the US Bureau of Alcohol, Tobacco, Firearms and Explosives. The following year, the U.S. Senate Ordnance Committee also launched an investigation into the illegal purchase of more than 500 AK-47s by this PMC. According to them, in both cases, documents for obtaining such weapons were forged [9].

The next step is the rules for using weapons. According to Article 18 of the Montreux Document, its application is permitted only under some appropriate circumstances. However, a clear description of such a situation is not attached. Hence, there are many cases in which it is not clear why the weapon was used. One of them is related to the shooting of a demonstration in An-Najaf in April 2004. Then the employees of the private military company Blackwater fired on more than 400 civilians who were protesting near the headquarters of the Provisional Coalition Administration [15]. There also may be disputes between states about the need to use weapons in some situations. Since the case in Baghdad in 2007 dubbed "Bloody Sunday", when employees of the private military company Blackwater shot dead several civilians, such disagreements have arisen between Iraq and the United States. The American side considered this a necessary measure to protect diplomats, while the Iraqi government, based on the testimony of eyewitnesses, believed that the use of weapons in this situation was not justified. Further investigation showed that PMC employees were involved in an average of 1.4 shootouts per week. In more than 80% of cases, the company's employees opened fire first [6].

Another important area in the use of weapons by PMCs is their registration and reporting. It also has a lot of white spots and inaccuracies. In particular, here we are interested in three articles from the Montreux document, in particular, articles 34, 44 and 55. According to them, private military companies must register each weapon, and their volume must also be limited. The need for rules on the export and return of weapons is also mentioned, but these rules are not further specified. Therefore, in this area there are no less violations than in the previous one, and their regulation is again in the sphere of private law of the state of registration. Again, the private military company Blackwater is leading in terms of the number of offenses in this area. They were repeatedly suspected of smuggling the received weapons to Iraq, Afghanistan. The company kept prohibited types of weapons, such as automatic rifles or AK-47 assault rifles, forged documents about the presence and quantity of weapons used and resold them to interested parties. These, of course, are not all offenses during this period, there are many more of them, the study examined the most resonant of them. However, having considered even some of them, we see that it is all these inaccuracies and white spots that form a gray zone in which the regulation of the activities of PMCs is minimized and, as a result, the number of violations increases.

In international law, attention is also paid to the image of a private military company when signing new contracts with it. One of the most important parts of the Montreux Document states that the system should select only those private military companies that do not violate international law. The recommendations must necessarily take into account all previous misconduct and major offenses of the company (articles 32 and 36). A license should also not be given to an employee who has violated the law. However, this is an ideal system that is very difficult to implement, so the process of monitoring and evaluating the actions of PMCs is ineffective.

The Blackwater company continued to receive contracts for work, simply changing its legal name, despite the fact that all the offenses of this PMC were well known. DynCorp Aerospace also did not lose its contract and continued to work with the UN, despite allegations by a former employee of the company, which won a court case on this issue. Some employees were forced to leave after being suspected of illegal activity, but that did not stop the company from keeping all of its work contracts and simply compensating the employee for damages [16].

Also, a special paragraph is devoted to the cooperation of PMCs with the investigation in case of detection of offenses. Companies should, by all means, correct the consequences of illegal behavior, as well as conduct a comprehensive investigation of the activities of their employees. However, this system rarely works in practice. For example, in 2006, a Blackwater employee shot and killed the security guard of the Iraqi Vice President. After this event, the head of the PMC, Eric Prince, was summoned to testify, but he did not show up, sending only his lawyer. After that, the company stated that this employee was fired and no longer worked in this area, but no evidence of this was provided. The same thing happened after the incident in Baghdad in 2007. Eric Prince again refused to testify and cooperate with the investigation, and did not appear at several hearings. Periodically, some PMC employees were charged with a constantly changing number of those killed, but later these charges were dropped.

These are not all cases. Practice shows that all private military companies that have ever violated the law continued their work, sometimes changing their name or legal address. In fact, it is as difficult to prove a committed offense as it is problematic to verify and evaluate it. Therefore, the PMC image system, which could help weed out violating companies, does not work, neither do many areas of legal regulation of such companies. This is a serious problem because the activity of PMCs increases every year.

Previous experience and a large number of offenses have taught the international community and showed the need to improve legislation in the field of regulation of private military companies. In 2009, the Code of Conduct for PMCs, a document with real legal restrictions, was created. Many companies signed it and pledged to comply with all necessary requirements. However, this did not help regulate this market more effectively. There is only one problem here: signing this document is a voluntary matter and is at full discretion of the PMC. Therefore, in real practice, the legislation does not have a system of real control and application of sanctions in case of violation. The only correct solution in such a situation would be to strengthen this system. Completely private military companies cannot be restricted, but the weaknesses of the legal system in this area can be corrected.

There are several possible solutions in this situation. This can either be a transformation of the existing system, or the creation of a new organization. In the first case, it is necessary to think over a system for tracking violations by private military companies and making this area more transparent for states or international organizations. There have already been similar attempts to track the activities of PMCs. Cameras were installed in their cars, and control over the provision of weapons to them was strengthened. However, such practices have not received further development. It is also necessary in this case to improve the verification of all legal documentation for falsification, which is very common in the activities of PMCs. This option has some difficulties. Technically, the system can be improved, but this implies work at international and state levels at once. It will be necessary to change the legislation, both the state of creation of PMCs, and international legal acts. The process can be too long and difficult. The second option involves the creation of an appropriate organization that could monitor the violations of private military companies. In practice, organizations coordinating the activities of various PMCs have already been created. However, there was no clause on monitoring their compliance with laws. In theory, such organization can appear, but the question of its legal force arises. Usually, PMCs are regulated either from below or from above. Regulation from above involves the development of state laws, which the company undertakes to comply with when registered in the territory of this state. In the second case, the initiative comes from the PMCs themselves, as, for example, with the PMC Code, when the companies themselves decided whether to sign it or not. The international organization is located between them. In this case, it is not clear what will be the legal guarantee of compliance with its decisions. In this option, either PMCs must recognize such an organization as a superior one and sign appropriate agreements under which the they will be obliged to comply with its orders, or the strength of such an international body must be equal to the strength of private state and international law.

Today, in the context of global instability and the impact of globalization on international processes, PMCs are not the only area whose regulation system needs to be revised. The international system of legal norms is polycentric. The states and interstate organizations still play the main role in all processes. However, in the context of globalization, non-governmental organizations began to come to the fore. Not including them in management will hinder the creation of an effective control system. The most obvious option under such conditions is to combine several methods of control, including those involving the PMCs themselves, in order to be able to extract all the positive parts from their activities. In general, solutions to this problem exist. To do this the international community needs to return to the issue of legal regulation of PMCs. This may happen in the coming years.

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ЧАСТНЫЕ ВОЕННЫЕ КОМПАНИИ В МЕЖДУНАРОДНОМ ПРАВЕ

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Аннотация. Рынок услуг частных военных компаний (ЧВК) в XXI веке прочно утвердился как отдельная сфера современной экономики. Таких организаций с каждым годом становится все больше. Они уже не изолированы в одной стране, ЧВК вышли на международный уровень и активно влияют на внешнеполитические процессы. В этих условиях все более остро встает вопрос о регулировании этой сферы. Однако это оказалось гораздо сложнее, чем предполагалось.
Ключевые слова: частные военные компании, международное право, наемничество, серя зона, вооружение, правонарушение, белые пятна в правовом регулировании.
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УДК 338.48

PECULIARITIES OF PHOTO TOURIZM ORGANIZATION AND DEVELOPMENT

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Abstract. Tourism is a popular form of recreation that combines the satisfaction of people's needs in restoring physical and psychological strength, as well as in cognition of the surrounding world. There are different types and forms of tourism depending on the needs of travelers. One of the types of tourism gaining popularity today is photo tourism, combining trips with photography training for photography lovers. This study is aimed at studying the essence of photo tourism, the main stages of the development of tourist photography and the features of the organization of photo tours.
Keywords: the essence of photo tourism, the history of tourist photography, photo shooting, travel, photography, features of the organization of a photo tour.

The development of the tourism sector is connected with the development of scientific and technological progress, the development of the economy, and the great accessibility of travel for people. And every year travel companies design new tours and routes taking into account the different needs of tourists.

New types of tourism are developing more actively: ecological, extreme, event, gastronomic, etc. Photo tourism can also become an example of an innovative offer.

The goal of the research is to study the essence of photo tourism the main stages of the development of tourist photography and the features of the organization of photo tours. There is a huge number of different types and forms of tourism.

There is no officially fixed definition of photo tourism, but some authors give their own terms:

Photo tourism is a journey that allows photographers and amateur photographers to discover new corners in the company of like-minded people, aimed at improving the photographic level and replenishing the portfolio with new photos.

Photo tourism is defined as a trip for a group of photographers or amateur photographers organized in order to create a favorable atmosphere for taking beautiful photos and gaining experiences.

Photo tourism is an arranged trip that includes elements of cognitive, ethnographic and other types of tourism aimed at both professional photographers and photography enthusiasts with the aim of obtaining or improving photographic skills and (or) taking photos under the guidance of the organizer [6, c. 104].

Photo tourism has an extensive classification based on various classification features (event format, duration, orientation, etc.). The most important classification feature of any photo tour is the subject of photography which is determined depending on the main object and genre of photography. According to the subject photography is divided into landscape, genre, portrait, architecture, macro, reportage, street photography and photo hunting.

The main object of photography is identified due to the subject and genre of the photo tour (architecture, historical objects, landscapes, plants, animals, phenomena and elements of nature, local population, food, household and cultural items, events, etc.) [1, p. 5].

There are following types of photo tours:

– academic (professional) photo tour which includes a course of lectures and workshops and tourists perform tasks, practice the acquired knowledge about photography. Important features of such tours are familiarity with the laws of photo composition, lighting, competent ability to employ photographic equipment and various aspects of photographing, the ability of tourists to think extraordinary to find unusual angles and subjects for shooting, the inclusion of excursions in the tour that allow better to learn the history and culture of the area where photography is planned;

– a photo tour without theoretical classes which is designed only to enjoy the trip and photographing, and all possible training is reduced to communication with the photographer-organizer and a group of travelers. The purpose of such tour is to enjoy traveling, socializing, photographing;

– event tours (workshops, lectures, field lessons and other events dedicated to the art of photography).

Also photo tours can be divided according to the degree of comfort into:

– photo tours-hiking (include not only shooting sights and nature, but also camping);

– photo tours of increased comfort (a tourist spends the night in a hotel, is transferred to the shooting objects with special transport, or a camp for tourists is set up in such a way that all the places and routes on which shooting is planned are in close proximity to the place of permanent accommodation) [2, p. 48].

In addition, photo tours are one of the new types of active recreation — ecological tourism — which is just beginning to emerge in Russia. The trips during which a group of photographers work in wild nature are focused on the idea of preserving and protecting untouched nature caring for its inhabitants [5, p, 55].

According to A.V. Popova and E.V. Kolotova the target audience of this direction is somewhat wider and along with amateur photographers and professional photographers it also includes owners of photo studios, graduates of photo schools, newcomers who have recently joined the photographic art, who are attracted by the acquisition of photo skills and the opportunity to share the obtained results with others [2, p. 47].

The origin and development of photo tourism is inextricably linked with the development of science and technology, the achievements of scientific and technological progress. Thanks to the huge number of discoveries in the field of photography the methods of creating images became more and more perfect and the technology for obtaining them became more and more available in various countries, and therefore new directions of photographic art appeared. One of such directions can be attributed to the development of photo tourism [6, p. 105].

After the orientalist Jean Champollion made an expedition to Egypt in 1829 this direction began to be mastered by photographers, but initially only for scientific purposes. Over time, in the 1950s, after the invention of the calotype, the number of photo trips to the Egyptian countryside increased dramatically. During this period of time the heyday of such genre as tourist photography takes place. The photographer's route usually ran from Nubia to Cairo.

Even before the 1850s it became popular among the affluent segments of the population interested in photography to go on long trips to capture the natural and architectural sights of various countries. Work on the creation of images had a large number of inconveniences due to the fact that portable devices of those times were quite bulky and had a lot of weight. Travelers needed to have with them not only a camera that weighed about 10 kg, but also a set of plates and reagents, thanks to what it became possible to create a picture.

In the early 1850s, the wet-colloid process of developing images was invented due to which the quality of photographs increased significantly, and the exposure time was reduced significantly. Despite the advantages of this method it was even more inconvenient for travelers due to the fact that the images taken had to be developed immediately, i.e. photographers had to take additional equipment on the road. It can be said that the photo travelers used whole mobile laboratories, which included a special tent, since the plates were processed in complete darkness, as well as a large box for storing chemicals, dishes, new plates and other devices [6, p. 105]. The weight of all accessories averaged from 150 pounds, so several porters were often hired to move them, and mules or camels were also used for this purpose. Photographers have not been able to get pictures during expeditions due to the extreme shooting conditions and the complexity of technical equipment,.

The founder of tourist photography is Francis Frith, who in 1855 decided to sell his business in order to seriously engage in photography and travel. The most famous are his photographs taken in the countries of the Middle East, where he made three trips in the 1850s. During the entire period of his activity, the photographer published seven books with his works.

Until the beginning of the 1860s, photography was still considered as a painting, but it was during this period that the difference between photographic skill and the artist's skill was understood. The concept of «the art of photography» was born. In many European countries, there was an active spread of the photographic profession. At that time there were two types of photographer's activity: studio shooting and traveling (when the master tried to display a reliable picture of the surrounding world) [4, p. 248].

Gradually, people began to show more and more interest in photography and travel, which gave rise to the appearance of thematic magazines. In 1888 the first magazine dedicated to this topic was published. It was called «National Geographic Magazine». Initially its content consisted mostly of texts, but in 1905 the editor Gilbert Grosvenor decided to change the format of the presentation of the material. Under his leadership an 11-page magazine was published, which mainly included photographs of the Tibetan city of Lhasa.

Mass production of digital photographic equipment occurred in 2003. Due to the constant release of new models the retail value of outdated cameras was declining and in this regard the equipment became more and more affordable having received mass distribution.

Thus, tourist photography was formed into a separate type of travel and was called photo tourism. For the first time, a photo tour in its modern form was organized in the early 1980s in Western Europe. Scientists still find it difficult to answer the question who the author of the idea of this direction and the first organizer of travel focused not only on recreation, gaining new knowledge and impressions, but, above all, on the creation of professional photographs by participants and the development or improvement of skills in the field of photography was.

In 2008, an agency specialized in organizing and promoting photo tours was opened. The company was named «Photours» and its founders are considered to be professionals in the field of photography — Jeff Vanderpool and his colleague Mark Goodwin. Their main goal was to prove that in the modern world tourism is unthinkable without photography. The trips they organized could be either short-term, and lasted only a few hours, or long-lasting — about two weeks. The route ran through various European countries. The company promised its clients to conduct leisurely excursions, improve existing skills or learn the basics in the field of photography, as well as return from a trip with incredible impressions and unusually beautiful pictures. The cost of the photo tour was higher than the usual trip organized by the company [6, p. 107].

In Russia, the organization of photo trips is considered to be a relatively new field of activity. This direction has become more actively developed only since the 2000s, but the historical prerequisites for the emergence of photo tourism are attributed to the Soviet Union. The impetus for the origin of such excursions was a magazine called «Soviet Photo». In the publication you could see pictures taken by travelers or lovers of photography. It is known that the increased interest in traveling and shooting contributed to the foundation of photo clubs in the USSR. In the Soviet Union there were 450 such schools in which not only training courses were held, but also trips were organized to hone the theoretical knowledge gained in practice. These trips referred to the first photo tours that were conducted on the territory of the USSR [4, p. 249].

Gradually various large photo schools began to organize such tours. An increasing number of new projects created by the most famous photographers appeared. For example, «Photosafari.ru» is the idea developed by Olga and Dmitry Rudakov. Initially this project was not widespread among fans of photography and its developers traveled mainly with friends, but over time the brand found its audience and today it is engaged in conducting excursions around the world. Especially among the participants are popular routes in Japan, Italy, Antarctica, Africa, Iceland and Canada.

In the modern world almost everyone has a camera, and no trip of most tourists is complete without capturing memorable moments and interesting sights. Many people want to bring not only a lot of pleasant memories and impressions from their trips, but also a large number of beautiful photo frames reminding of the journey.

In addition the photos that tourists take during their tours are valuable as they are an indisputable proof of travel. At the same time, it is photo tourism, unlike many other types of tourist activity that does not lead to the depletion of natural and historical resources.

A significant role in the popularization of photo tourism is played by the development of modern technologies, as well as the ubiquity of social media and the constant expansion of the number of their users. Recently photography has become a fashionable trend especially among young people. Such a direction as blogging appears and is popularized, where special attention is paid to the photos presented. In this regard many people tend to fill their profiles with high-quality content that will be interesting to a large number of people. These Internet resources can also act as a way to attract potential customers primarily young ones.

Unfortunately today photo tours have not yet become widespread in Russia, and not every travel agency can offer this type of vacation. But photo tourism is also actively developing in the Moscow region, more and more travel agencies offer services for organizing and conducting photo tours. For the development of photo tourism in the Moscow region the natural resources can be used: Moscow and the Moscow region are a land of amazing natural contrasts due to the peculiarities of their geographical location. The rich range of natural landscapes includes forests, meadows, coastal forests, rivers and lakes, natural monuments. Cultural and historical resources include preserved historical buildings, special architectural pattern of the city that allow us to call modern Moscow an open-air museum. There are numerous architectural monuments, active temples, theaters with a century-old history in Moscow. Photo tourism can be built on the basis of ethnographic and event tourism. The Moscow region is distinguished by a variety of ethnic and confessional composition. The Moscow region is also the center of world event tourism. All these can be worthy resources for the development of photo tourism [3, p. 86].

Russia could position itself for this type of tourism, because there are many interesting and often outlandish landscapes in our country. The nature of Kamchatka and the Urals, Altai and Baikal are begging for the frame. And there are hundreds of nationalities living in Russia, each of which has its own history, way of life and traditions — from Eskimos to Ossetians, from Cossacks to nomads of the Southern Russian steppes. In short, fans of landscape photography and fans of the «ethnic component» will find space for creativity in Russia [7, p. 12].

The following main features of the organization of a photo tour can be distinguished:

1. The main difference is that photo tourism focuses on the specifics of the trip, first of all, the necessary conditions are created for high-quality photography. The head of the photo tour should initially choose a route taking into account that the material for future photos is as accessible as possible. To organize such tours, first of all, tourist facilities are needed, i.e. areas with unique natural, cultural and historical resources. Their presence is the basis for the formation of a high-quality tourist product and it determines the possibility and plan for the promotion of this region in the market of tourist services.

2. The photo tour involves not only, and not so much sightseeing and photography, but also the learning process which can be very active, intense and carried out in a strict academic style or be limited to consultations of a professional photographer leading the group. During the photo tour an experienced and authoritative guide-photographer can give useful lessons-lectures on photography, point out the features of the equipment available to vacationers, point out mistakes to novice specialists. This is a live master class: he teaches each participant theoretical and practical skills in the company of like-minded friends. The result of such collaboration is photographs whether they are landscapes, city photos or portraits of local residents. This is the key difference between a photo tour and a regular «for everyone» trip.

An important feature of the training programs in the process of the photo tour is a combination of the following key components:

– the construction and organization of learning process based on the concept of «practicing learning» that comes from the proposal that the knowledge, skills and appropriate behavior in general, the most effective are formed in the course of acquisition students the necessary experience, which need to be comprehended and confirmed theoretically and practically;

– training in the educational program is aimed at mastering technical aspects of photography and acquaintance with laws of photo composition, makes it possible to master subtleties of various types and genres of photography in practice, to study main shooting topics: landscape, still life, portrait, reportage;

– development of students' ability to think out of the ordinary, make decisions in conditions of rapid change of the situation and emotional saturation, familiarization with the basics of the philosophy of success, the basis of which is a good balance of technical knowledge and art;

– inclusion in the curriculum of disciplines that allow better to learn the history, culture, geography of the country where photography is planned;

– organic combination of theory and practice of photography [5, p.55].

3. Another interesting feature of such trips is a clear mode of the day, the choice of the optimal pace of movement. A photo tour is a specially organized tour for photographers, taking into account the maximum use of light time. The main criterion in drawing up the schedule of the day of such a trip is the duration of light time. Photo tours are usually planned in such a way that photographers have the opportunity to fully use the conditions of daytime, morning and evening lighting [3, p. 86]. This is necessary to obtain high-quality photographs. Tourists get up early enough to catch the beginning of the day. By the way experienced

photographers claim that it is the early morning hours and the evening sunset that are ideal for photographing. After the morning photo shoot tourists either rest or move along the route, listen to seminars or prepare for an evening shoot, wait for sunset. And only then in the calm atmosphere of the end of the shooting day the photographers view their shots, discuss the footage, explain to each other the reasons for the shortcomings and point out the undoubted advantages.

If the tour is a hiking trip then the strict route and schedule also limit the desire to take with you heavy equipment that you need to carry on yourself. Participants are delivered to a certain location and are based here for several days: they adapt to the peculiarities of the terrain, conduct theoretical and practical classes. From the base camp the participants of the photo tour make walking exits or trips by transport to particularly interesting objects with a set of photographic equipment that will be required taking into account the specifics of the shooting objects, and personal belongings and equipment that are not required at the moment remain at the base location [10, p. 40].

4. Groups for such photo trips are recruited relatively small — 6-10 people. In the event that there are too many people, it is difficult for the organizing photographer to pay attention to each participant. In this case, the proper quality of the training part is observed, the participants do not interfere with each other in the process of photographing, and their photos are not duplicated. It is necessary to strive to ensure that each photographer has his own collection of photographs as a result of such a trip — a unique and inimitable.

5. Photo tourism cannot be realized without specialized equipment, so tourists need to take with them special gear that will help capture the areas and objects they like.

This set includes:

- camera and camera lens;
- flash cards and film in the necessary stock;
- protective filters for the lens;
- batteries for camera and flash;
- means for cleaning optics and matrix of digital cameras;
- a convenient bag or backpack for carrying various attributes;
- a laptop or other roomy storage device for storing pictures, etc. [7, p. 12].

6. Photo tours are organized by both travel companies and schools of photographers or professionals who create special workshops and photo shoots in nature [7, p. 11]. Here, of course, everything depends on the organizers themselves. Their duties include drawing up routes, booking hotel rooms and choosing the most interesting places for photographic work. The main task of the organizer in this case is to create suitable conditions for real creativity, a ready-made travel plan, negotiations with local residents, hiring local guides with whom cooperation is conducted on an ongoing basis. They know the situation perfectly and will tell you how to behave correctly. The choice of an instructor photographer plays an important role. The teacher advises how to correctly set up the technique and choose the angle. And for the best effect, he shows all this by personal example.

7. The availability of medical insurance for each participant of the photo tour is considered mandatory. This procedure is elevated to the rank of standard, as with any tourist trip. Such an organization helps to be in the right place at the right time, without unnecessary nerves, tedious stresses, unnecessary waste of time and effort.

8. During the photo tour, good pictures are created under the guidance of a professional photographer. These images can be used by travel agencies as a means of attracting tourists to the object. Also, photos of tourists can be placed in magazines, catalogs, on the Internet, which will also form an attractive image of the tourist territory.

Conclusion: Photo tourism, as one of the directions of travel, has a long history and is inextricably linked with the development of photographic equipment and increasing the level of accessibility of trips, satiation of passive leisure travelers. At the moment, photo tourism, as an innovative direction in the field of travel, is actively developing in foreign countries, but in Russia only a few companies organize such tours. This type of tourism with the growing popularity of photography and the increasing complexity of the needs of tourists can become a popular destination, which can contribute to the growth of incoming tourism and domestic tourism.

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ОСОБЕННОСТИ ОРГАНИЗАЦИИ И РАЗВИТИЯ ФОТОТУРИЗМА

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Аннотация. Туризм — популярный вид отдыха, сочетающий в себе удовлетворение потребностей людей в восстановлении физических и психологических сил, а также в познании окружающего мира. Существуют различные виды и формы туризма в зависимости от потребностей путешествующих. Один из набирающих популярность видов туризма является фототуризм, объединяющий поездки с обучением съёмки любителей фотографии. Данное исследование направлено на изучение сущности фототуризма, основных этапов развития туристской фотографии и особенностей организации фототуров.
Ключевые слова: сущность фототуризма, история туристской фотографии, фотосъёмка, путешествия, фотография, особенности организации фототура.
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УДК 336.741.242.1

CHINA'S DIGITAL CURRENCY:
MAIN CHARACTERISTICS AND IMPACT ON THE GLOBAL ECONOMY

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Abstract. Due to the growing popularity of online payments, the digital economy has entered a new stage of development, and the deep integration of financial resources and technologies has become a new trend in the world, pushing countries to develop and implement their digital currencies. In China, the idea of introducing a digital currency appeared in 2014, the former head of the central bank of China put the idea of creating a digital currency and launched an initial study. Now this currency is being tested. The subject of the article is China’s digital currency and its role in the modern global economy.
Keywords: digital economy; global economy; bitcoin; online payment platforms; digital currency; Digital Currency Electronic payment.

The coronavirus pandemic has changed the world and people's habits. Online cinemas and shopping, contactless food delivery and payments have become the norm. Against the background of the epidemic, the digital currency, which replaces cash and ATMs, has regained relevance. People are increasingly using contactless payment methods for goods and services.

The goal of the research is studying the impact of China's digital currency on the country's economy, on the value of the dollar and on the world economy as a whole.

The objectives are:

- studying the concept of digital currency;
- identifying the differences between Digital Currency Electronic Payment and other digital currencies;
- analyzing the differences between digital currencies and online payment systems;
- determining the benefits of using DC|EP;
- analyzing the impact of DC|EP on the value of the dollar and the global economy as a whole.

Digital (electronic) currency — electronic money that is used as an alternative or additional currency. Most often, its value is tied to national currencies, but there are other bases for exchange. The peg can be to precious metals, floating exchange rates are also found (see Table 1).

Table 1

Examples of digital currencies not tied to national currencies

Digital currencies pegged to precious metals	Digital currencies with floating course
E-gold;	Bitcoin
WebMoney	LiteCoin
Second Life Linden Dollars	Ripple
PerfectMoney	
WM units	
World of Warcraft Gold	

In order to better understanding we have to clarify the differences between Digital Currency Electronic Payment and other digital currencies. There are many ways to issue digital currencies: blockchain, bitcoin years earlier. The central bank digital currency DC | EP is different from bitcoin (see Table 2).

Table 2

The main differences between Bitcoin and DC|EP

Bitcoin	DC|EP
Currency	Combining currency and payment method
Decentralized release	Centralized release
Limited quantity	The quantity is regulated by the central bank of China
	A mean of regulating monetary policy

we can see, it is integrated with the electronic payment system, nevertheless, it is a kind of currency and can be used for online payments. It is a combination of the existing currency and existing payment methods. The main difference between DC|EP and Bitcoin is that the digital currency will be issued by China's central bank, a centralized institution.

The main disadvantage of bitcoin is that its quantity has a limit. Because of this, it is difficult for it to adapt to changes in the economy. As the scale of China's economic development is constantly expanding, the currency will also grow, in addition, if the economy is damaged, the country will have to adjust its monetary policy.

For example, in the wake of the pandemic, central banks around the world have provided liquidity to their markets to support economic development. Therefore, by launching the digital currency of the Central Bank of China, you can ensure not only the speed and security of payments, but also control the amount of money invested in the market and in the economy. This is the only way to guarantee the work of monetary policy. In fact, it is a combination of the high-performance benefits of digital currency with the needs of monetary policy.

In recent years, Internet technologies have been actively developing. Due to this, the use of WeChatpay and Alipay online payment platforms is becoming more and more common for Chinese people. Experts believe that digital currency in use is similar to online payment systems, but at the same time it differs significantly from them.

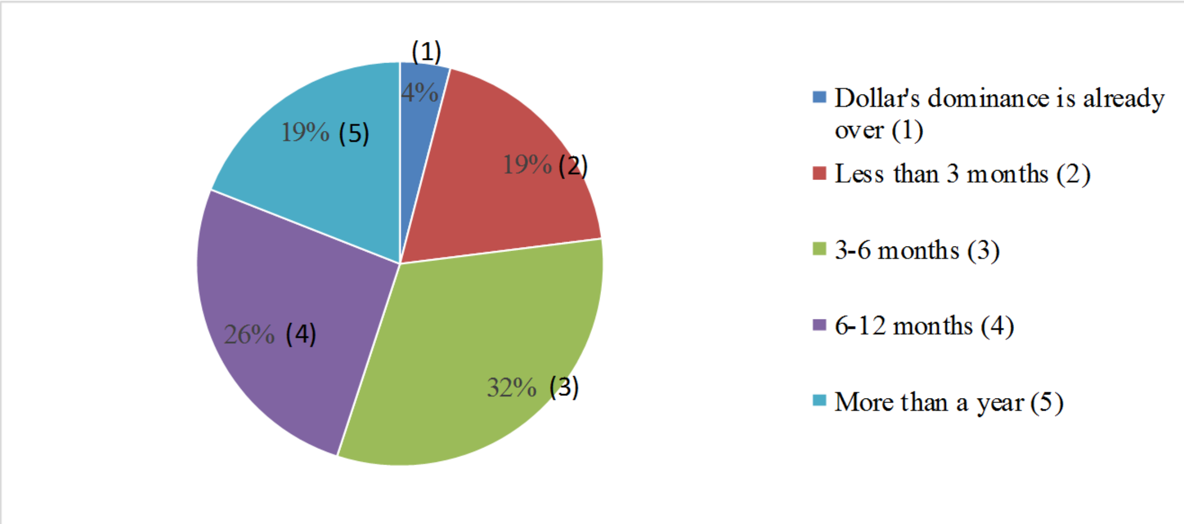
Firstly, WeChatpay and Alipay are not digital currencies. These are only means of making payments that are not legally responsible. If any organization does not want to accept money through these two platforms, this is its right. Secondly, digital currency cannot be denied, because it is a payment method prescribed by law. It is simultaneously a means of payment and a currency prescribed by law. Finally, the digital currency of the Central Bank of China will use offline payment methods. This is the main difference between e-currency and current means of payment. Currently, electronic payments are made by transferring information via an Internet connection. In the future, digital currency will be able to support the transfer of payments in the offline system. The scope of application will be wider, its convenience and safety of use will increase.

It is important to understand what benefits DC|EP implies. Today we cannot say that the digital currency will replace current payment methods. Firstly, one of the benefits of a legal digital currency is that it cannot be rejected. This advantage can be cultivated, but it takes time. In the short term, there will be no upheaval or complete replacement of our usual forms of payment. Secondly, the digital currency can adapt to the digital development trend. Thirdly, it has some functions of monetary policy adjustment. In particular, it can support the effectiveness of existing monetary policy in the digital economy. From this perspective, the central bank is adjusting to the digital development trend by using digital currency to strengthen monetary policy and improve the ability to macroeconomic control and adapt to the digital economy. Digital currency is an inevitable result of the development of China's digital economy.

The current position of the China's central bank is to replace cash with digital money. However, experts believe that this depends on people's payment habits. Perhaps only a partial replacement of one currency for another will occur. However, it will make cash flow management more accurate and improve the effectiveness of all monetary policy, which will help improve overall financial performance and reduce costs. For example, the payment of subsidies goes through the bank, and this requires additional funds, but if the money goes directly to the electronic wallet, transaction costs can be avoided. That is why digital currency will play an important role in improving monetary policy, the foundation for this has already been laid.

On the other hand, creating a viable alternative to dollar-denominated trading would help other countries to act as they see and not be dependent on United States sanctions. From an economic standpoint, the value of the dollar is also in doubt, especially as the world's largest economy is facing a recession.

Most financial analysts believe that the dollar's days are numbered (see Picture 1).



Picture 1. Reuters Poll: How long will the U.S. dollar's dominance last? January 2021 [4]

The American government interferes with international trade with virtually no hindrance. Among such cases are well-known US sanctions against North Korea, Russia and Iran, as well as their own American companies.

A sovereign digital currency provides a functional alternative to the dollar settlement system and reduces the impact of any sanctions or threats of exclusion, both at the country and company level.

Conclusion: In my opinion, Western countries should pay more attention to the creation and implementation of digital currencies, since the People's Republic of China is already approaching the introduction of advanced financial infrastructure. Based on the results of the study, we can conclude that DC|EP should be the key to improving the efficiency of trading calculations. China's digital currency is not necessarily superior to the dollar as a means of payment, but it already demonstrates the inability of the United States to maintain its position as a world leader in innovation.

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ЦИФРОВАЯ ВАЛЮТА КИТАЯ: ОСНОВНЫЕ ХАРАКТЕРИСТИКИ И ВЛИЯНИЕ НА МИРОВУЮ ЭКОНОМИКУ

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Аннотация. В связи с растущей популярностью онлайн-платежей цифровая экономика вступила в новый этап развития, а глубокая интеграция финансовых ресурсов и технологий стала новой тенденцией в мире, подталкивающей страны к разработке и внедрению своих цифровых валют. В Китае идея введения цифровой валюты появилась в 2014 году, бывший глава центрального банка Китая выдвинул идею создания цифровой валюты и запустил первоначальное исследование. В настоящее время эта валюта тестируется. Данное исследование направлено на изучение феномена цифровой валюты Китая.

Ключевые слова: цифровая экономика; глобальная экономика; биткоин; платформы онлайн-платежей; цифровая валюта; Digital Currency Electronic payment.

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СОДЕРЖАНИЕ

Научное издание

ALL-RUSSIAN CONTEST FOR THE STUDENT'S SCIENTIFIC PROJECT IN A FOREIGN LANGUAGE

Материалы всероссийского конкурса
студенческих научных проектов на иностранном языке — 2022

(Улан-Удэ, 19–20 мая, 2022 г.)

Компьютерная верстка Н. Ц. Тахинаевой

Свидетельство о государственной аккредитации
№ 2670 от 11 августа 2017 г.

Подписано в печать 17.05.22. Формат 60x84 1/8.
Усл. печ. л. 13,95. Уч.-изд. л. 12,13. Заказ 76.

Издательство Бурятского госуниверситета
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