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Zhytomyr Polytechnic State University
Zhytomyr Ivan Franko State University
Zhytomyr S. P. Koroliov Military Institute
Zhytomyr Medical Institute
Khmelnytsky National University

"Current Trends in Young Scientists' Research"

VII All Ukrainian Scientific and Practical Conference

Book of Papers

April 16, 2020

Zhytomyr

VII All Ukrainian Scientific and Practical Conference
"Current Trends in Young Scientists' Research"

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R. Havryliuk, Master student
A. Kryvoruchko, PhD in Engr., As. Prof., research advisor
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CALCULATING QUALITY LOSSES CAUSED BY MINERAL COMPOSITION IN MdiSTONES

There are many different methods of forecasting the quality of the deposit, the main criterion in which is the output of blocks. At the same time, the technological properties of the array were taken into account only in Yu. Karasov's graphical and analytical method.

An important indicator that determines the quality of the deposit may be the energy intensity of its further processing.

A number of scientific publications indicate that there is a close correlation between the content of individual minerals and the effectiveness of sawing this rock into blocks. For gabbroid rocks, plagioclase content is such an indicator. The study shows that with increasing plagioclase content the effectiveness of both cleaving and sawing increases.

Therefore, it is suggested that the plagioclase content should be considered in the paper to evaluate the energy intensity of the cleavage. The method of the surface image analysis is used to estimate the content of this mineral. The method is developed and tested by O. Remezova, A. Kryvoruchko and other researchers.

The research methodology is as follows:

1. The bench-floor surface was cleaned at intervals of 5 m on the plot of 10 * 10 cm in size, followed by photographing the area with a digital camera.

2. The location of the photograph was tied to the area on the basis of tacheometric photography.

3. The images obtained were analyzed in MdiStones by masking plagioclase mineral, followed by determination of the relative area.

4. The spatial distribution of plagioclase content was evaluated using the Surfer program

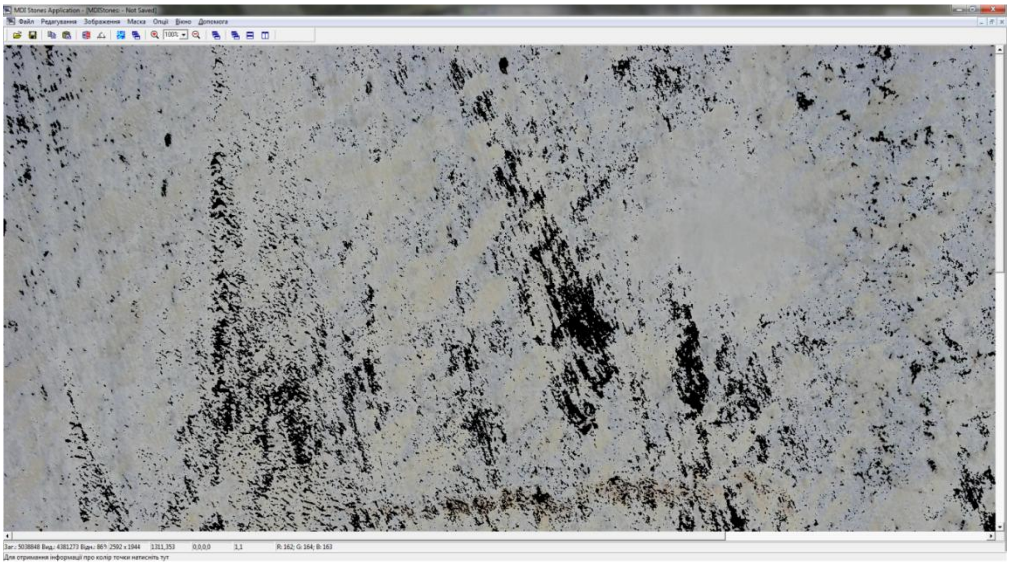


Figure 2.16. Image processing in MdiStones by plagioclase mineral mask

The analysis of samples by horizons is performed in the work.

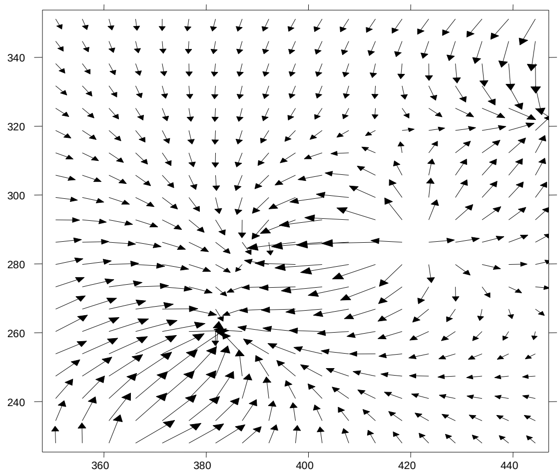
Thus, the results were obtained for horizon 178. They are given in table. 1. and Figure 1 and 2.

Table 1

Research results for energy intensity of deposits destruction for horizon 178

Number	X	У	The area of plagioclase relative,%
18	446.998	353.746	81
29	446.998	323.902	75
38	393.580	286.212	74
37	418.616	286.212	80
46	347.966	257.296	79
45	380.885	257.296	73
53	362.269	225.324	82
54	386.812	225.324	78

Fig. 1. Vector diagram of plagioclase content change for horizon 178



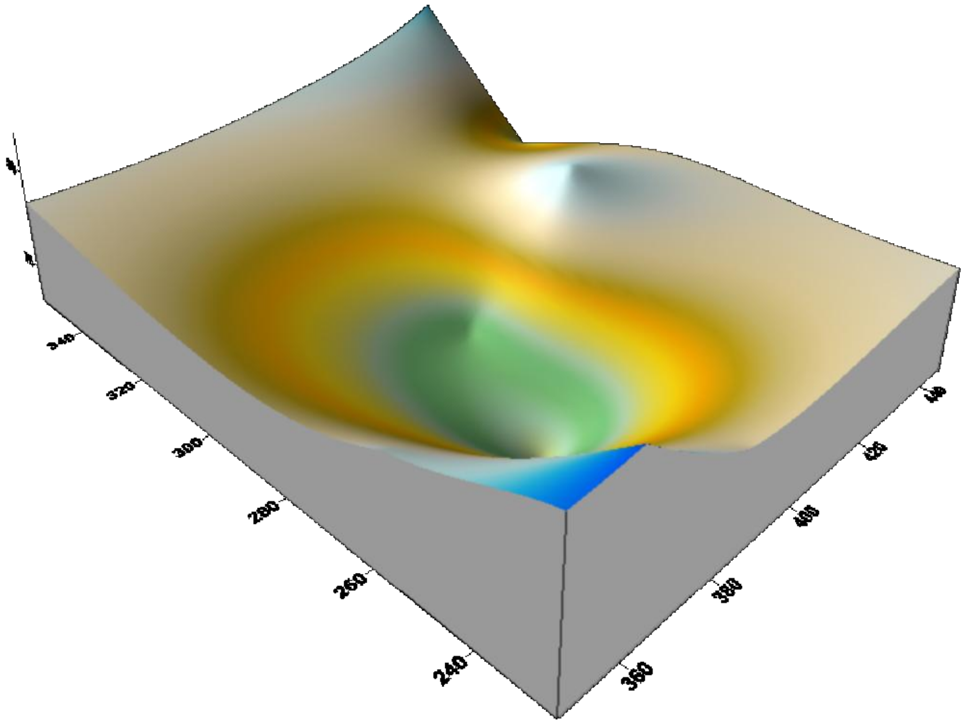


Fig.2. Three-dimensional model of plagioclase content change for horizon 178

The analysis of the obtained results allows performing on-site planning of mining operations on separate sections of the field, taking into account the energy intensity of the rock destruction when extracting and further processing. A characteristic feature of most horizons is the maximum content of plagioclase within the azimuths of 0-45°.

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ASSESSMENT OF SOLAR ENERGY POTENTIAL OF ZHYTOMYR REGION AND THE APPLICATION OF PHOTOVOLTAIC DEVICES FOR ELECTRICITY PRODUCTION

Traditional ways to generate electricity are not environmentally friendly. Therefore, energy should be developed first and foremost in the direction of improving safety of power plants operation, the introduction of waste-free technologies for the use of fuel and the development of alternative "clean" sources of energy.

The sun is the most powerful source of clean energy. About 1300 watts of solar energy penetrate every square meter of the Earth's atmosphere.

The most efficient method of using electricity is converting radiation into electricity by means of solar panels. A solar panel is an electrical installation that generates current and is made of solar modules oriented toward the sun and having common loadbearing construction.

The topicality of the work is caused by the need to obtain relatively cheap electricity in the required volumes. Stimulation of the development of solar energy in Ukraine will contribute to strengthening the energy security of our country, creating a strong base for investment (including international), rapid growth of indicators of science and technology development, as well as solving environmental and social problems.

The solar energy potential in Ukraine is high enough for widespread use of both heat and photovoltaic equipment in all areas. The economic life of solar power equipment in the southern regions of Ukraine is 7 months (from April to October), in the northern regions - 5 months (from May to September). Photovoltaic equipment can be used throughout the year.

On 01.01.15, there were 98 solar plants with a total installed capacity of 819 MWth operating in Ukraine. They generated 485 million kWh of electricity in 2014.

The average indice in Ukraine (1,074.1 kWh/year and 12.3%) is slightly below the European level (1121.5 kWh/kWh and 12.8%), which is a good result.

The transformation of solar energy into electrical energy in Ukraine should focus primarily on the use of photovoltaic devices. Large reserves of raw materials, industrial and scientific and technical facilities for the manufacture of photovoltaic devices can provide not only the needs of the domestic consumer, but also represent more than two-thirds of the production for export deliveries.

Solar potential can be determined by two methods: calculation and measurement. In the paper, we will consider both methods, but in the subsequent calculations, we used the data of the calculation method.

After the analysis of the first part of the calculations, we can conclude that the intensity of direct solar energy is greater when sunlight enters the surface perpendicular to sunrays direction. The highest intensity of solar energy is observed at 12 AM in both cases.

Nowadays, the use of autonomous appliances for heating buildings, flats, houses as well as for water heating and electricity generation is becoming increasingly popular. For the latter, solar panels and so-called windmills are most commonly used.

The total annual solar energy potential for the city of Zhytomyr is about 313.1 kW/m2. The potential amount of solar energy that can be obtained from a unit of area by installing polycrystalline solar panels, which are the most efficient in terms of price and quality, is 43.8 kW/m2.

Knowing the electricity costs of Zhytomyr Polytechnic State University for the year, we can determine the required area of solar panels for the university (main building).

The area of the main building of the university is 15 48,3 m^2, and the roof area where solar panels could be installed is 7 741,7 m^2.

The possibility to cover electricity costs directly depends on the generation of a given amount of energy by solar panels, which is influenced by the distribution of solar radiation in the territory by months.

As far as today 1 kW of electricity at a regular tariff costs UAH 3.50, annually Zhytomyr Polytechnic State University pays for electricity on average 697 456.2 UAH. Considering the amount of electricity produced by the Solar Power Stations (SPS), the sale of residual energy at the "green tariff", as well as the payment for months when the energy produced does not fully cover the costs, the net income for the year is expected to be 395 949,6 UAH.

As the volume of initial investments is 1175172,00 UAH and the annual profit is expected to be 395949,6 UAH, the payback period is about 3 years.

Therefore, solar power plants are becoming to operate extensively in our country. It is a leading branch of the future power industry. The operation of such plants will reduce maintenance costs, completely eliminate the cost of fuel and most importantly, reduce emissions of harmful substances into the atmosphere by reducing the operation of traditional power plants on solid fuels.

Autonomous SPS for home use can provide energy without electricity consumption from the grid. Thus, it saves money, reduces the risk of low electricity current caused by line breaks and makes the consumer completely independent in the energy issue.

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REFORMING AND INFORMATIZATION OF THE SPHERE OF WATER MANAGEMENT IN UKRAINE

Water is our heritage, which should be preserved and protected. However, water resources, both in Ukraine and in the world, are under increasing pressure, which stems from the unceasing growth of humanity's needs in sufficient quantity of water of the proper quality. Therefore, "Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy" was developed in order to implement the European Community policy on the environment and manage water resources. The European integration course of Ukraine, and in particular the signing of the Association Agreement between Ukraine and the European Union [1] in 2014, obliges our country to implement European standards for water management, water protection and water pollution control.

In view of the significant decrease in production in Ukraine over the past 25 years, there has been a significant decrease in water consumption (from 30 km^3 to <9.7 km^3), as well as the reduction of wastewater discharged by various sectors of the economy (from 18 km^3 to 5.3 km^3). Proceeding from this, the expected improvement of the state of water resources was expected, but on the contrary, there are negative trends in the increase of the water shortage due to pollution and depletion of water resources, degradation of water ecosystems. This is happening against the backdrop of the negative effects of climate change (from 1990 to 2010 the area of arid and very arid zone in Ukraine increased by 8 million hectares compared to the 1960-1990 period) [2].

For that reason, the issue of reforming the water management of Ukraine was extremely urgent. This, above all, led to the reform of the organizational structure of the State Agency for Water Management in order to introduce a mechanism and approaches to water resources management, taking into account the basin principle of management and hydrographic zoning of the territory. In Ukraine, 9 areas of river basins were allocated.

Integrated water resources management within the area of the river basin is carried out in accordance with the developed River Basin Management Plan, one of the main stages of which is the determination of the hydrological regime of the river and the definition of water quality indicators. The key role in this is played by the state monitoring of waters, the subjects of which are the Ministry of Environment and Natural Resources of Ukraine, the State Agency of Water Resources of Ukraine, the State Service for Geology and Subsoil of Ukraine, The State Emergency Service of Ukraine, as well as State Agency of Ukraine on Exclusion Zone Management (in the exclusion zone). In particular, the State Agency of Water Resources of Ukraine is responsible for defining a part of physico-chemical indicators, and The State Emergency Service of Ukraine - for determining the hydrological regime of hydromorphological and other indicators.

In the water sector in Ukraine in recent years, intensive introduction of the latest information technology. Among the latter is the publication of water quality data in an open format on the Open Data portal data.gov.ua. At present, the water sector creates a laboratory base for conducting high-quality water monitoring, which will be carried out in accordance with modern requirements. The obtained data should become the "starting point for writing 9 river basin management plans". This work will require the qualified and rapid processing of large amounts of data.

Another area of development of the water sector, in particular the management of surface water resources, which is rapidly "informatized", is the development of a hydrological warning service with a view to timely and reliable forecasting of periods and flood control parameters, which will ensure the timely adoption of the necessary measures to protect against flooding. This is constrained by the complexity of obtaining data from the zones of intensive formation of runoff (mountain and foothill areas), imperfect technology for observing, collecting, transmitting, and processing hydrometeorological information. Therefore, it is very important to increase the level of informativeness of the hydrological alert service by automating the whole process, ranging from streamlined river runoff forecasting.

Thus, from the above analysis of the directions of the reform of the water sector of Ukraine, one can conclude that Ukraine is moving towards a modern, responsible attitude towards water resources.

There is a gradual harmonization of national water legislation with European and world requirements. In addition, the processes of water sector reform in Ukraine require modern specialists who will have a formed set of competencies as fundamental, traditional to the water sector of Ukraine, and those that foresee future requirements, connected with the development of modern technologies, especially informational.

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THE “DA VINCI” ROBOT

Currently, information technology (IT) is being implemented in virtually all healthcare sectors. Due to this, medicine has acquired completely new features today.

This process is accompanied by significant changes in medical theory and practice related to making adjustments to the training of related to making adjustments to the training of medical workers. IT helps to objectively diagnose diseases, to accumulate and effectively use the information obtained at all stages of the healing process and, most importantly for medical science, is invaluable in scientific knowledge.

Among medical computer systems, robotics attracts special attention. Robotic couriers, robotic mannequins, and many others robots already exist. A large number of robots have emerged that perform extremely complex manipulations. Let’s take the “Da Vinci Surgical System” as an example. This is a robotic surgical system made by the American company “Intuitive Surgical”. A working prototype was developed in the late 1980s. Approved by the Food and Drug Administration (FDA) in 2000, it is designed to facilitate surgery using a minimally invasive approach, and is controlled by a surgeon from a console. It consists of two parts, the first one is intended for a surgeon-operator, and the second part - a four-armed robot manipulator - is an actuator.

One of the “arms” of the robot holds a video camera transmitting the image of the area being operated; the other two reproduce the movements made by the surgeon in real time, and the fourth “arm” acts as an assistant to the surgeon.

The system doesn’t resemble a robot so much as a video game. A surgeon sits behind a screen and looks at a magnified view of the surgical site while operating the machine’s robotic arms.

The robotic arms can get into hard-to-reach places, promising patients less bleeding, faster recovery, less chance of damage to important nerves, and smaller scars than traditional surgeries.

A single robot costs about $2 million. Some of the attachments that go on the arms are disposable. And robotic surgery generally costs anywhere from $3,000 to $6,000 more than traditional laparoscopic surgery.

“Da Vinci” was originally designed to do cardiovascular surgery, but it’s fallen out of favor for heart surgeries. Next it was picked up for gynecological surgeries. And finally it was acknowledged for use in urology.

While known as a “robot”, the “Da Vinci System” is in truth an extension of the surgeon. It is a state-of-the-art tool that ensures that it makes most of the skill and expertise of the surgeon performing procedure.

In general, the field of robotic surgery is not standstill. It is constantly expanding and evolving. And I believe that robotic surgery is indeed the future of healthcare.

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WASTEWATER TREATMENT

Wastewater treatment is the process of converting wastewater – water that is no longer needed or is no longer suitable for use – into bilge water that can be discharged back into the environment. It’s formed by a number of activities including bathing, washing, using the toilet, and rainwater runoff. Wastewater is full of contaminants including bacteria, chemicals and other toxins. Its treatment aims at reducing the contaminants to acceptable levels to make the water safe for discharge back into the environment.

In order for the waste water to become safe, it is necessary to recycle them in a special way, subjecting them to treatment of various degrees and depths in order to avoid negative environmental impact. Wastewater drivers are diverted from territorial industrial enterprises and settlements through the sewer system or left where they seek wastewater treatment before it enters the water sources.

Mechanically cleaned first, it is used to trap solids and debris with grilles and sieves. Further, small particles are deposited by gravity.

Grease traps are part of the physical and chemical purification in which the removal of hydrophobic substances from the surface of the water by flotation is taken place [2].

Biological wastewater treatment is an effective way to remove organic impurities from water. Water treatment is carried out using two types of bacteria, they are aerobic and anaerobic. Aerobic microorganisms require oxygen to function. Anaerobic bacteria can work in a closed system without air access. Anaerobic treatment of industrial wastewater is a specific type of treatment and is designed for effluents that are rich in organic substances. In this way, not only purified water is obtained, but also biogas, which can subsequently be converted into thermal or electric energy.

Wastewater disinfection may be the last stage of treatment before discharging water to the terrain or in the reservoir, this treatment is carried out using the installation of ultraviolet radiation or treatment with chlorine for 30 minutes [1].

If we adhere to all the norms and rules of wastewater treatment, then after all stages of treatment they will become clean water, which is ready to fall back into the pipes of our houses, rivers, seas and other water sources without any environmental danger.

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THE DEVELOPMENT OF THE REQUIREMENTS FOR COLLECTION AND PROCESSING OF AEROPHOTOGRAPHY DATA FROM DRONES FOR SIMULATION OF GEOSPACE

Technologies do not stand still and develop rapidly. The study of the geosphere does not go beyond this participation. Not all, but most companies have moved away from outdated theodolites. It happens because they are not easy to use and take a long time to know the data and further processing of data. Besides, accuracy is not of the highest quality. Of course, modern tacheometers are more popular in enterprises. Exploring geospatial makes it more comfortable, convenient and accurate. They allow us to take readings over long distances easily and with high accuracy to determine altitude marks, then we can perform the necessary calculations and formulate plans. However, this is not the peak of engineering thought and development in the field of geospatial research. It's about using an unmanned aerial vehicle (UAV) - drones.

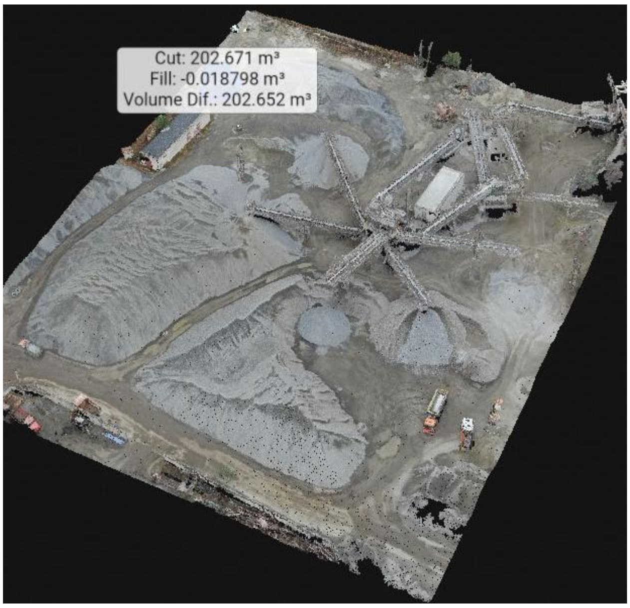
Nowadays drones are increasingly used in mining companies. Drones have proven to be a really reliable technology for making maps, plans and other geodatabase products. Shooting or exploring territories and objects is done offline, but under the close control of the operator, this person can skillfully handle a drone. UAVs are capable of performing various aerial photos and video production, mapping products and 3D models, monitoring changes in space and performing various calculations.

The advantages of photogrammetric shooting with the help of the drones:

• More accuracy than with tacheometric shooting;
• less time spent on work;
• large shooting area;
• fast data processing;
• security;

The disadvantages of photogrammetric shooting with the help of the drones:

• dependence on many physical factors (such as wind gusts, weather, etc.);
• low autonomy of work
• expensive equipment (purchase of the drone itself, the Software, and auxiliary tools in the form of a powerful PC that can process information).



The example of a 3D model obtained from Pix4D

The relevance of the study - today high expectations and prospects are given to the drones in the geosphere. But the requirement for the collection and processing of data to obtain the most accurate and effective values in the development and modeling of geospatial is also very important.

A lot of factors are coming up with a qualitative photogrammetry test which is made with UAVs. For example, even the material of the drone.

In the spring, at one of the seminars, specialists conducted a test flight, testing the drone Skywalker. The offer was budget friendly, but the quality of the drones was not rather good. They had foam bases, so they withstood the gusts of wind badly.

1. So one of the requirements is the material of the drone itself. Practice has shown that the use of plastic frame structures is the most effective in resisting wind gusts and load capacity.

2. Also the quality of the camera on the copter is important because the quality of photogrammetry performance depends on it. After all, as a result of poor shooting, the blocks of still images obtained from the drone may have low photogrammetric quality in terms of standard professional photogrammetric software, which increases the time spent on their camera processing.

3. The autonomy of the drone also plays an important role in modeling. It is important to capture as many of the planned areas and objects as possible with one technique for gain maximum accuracy without distortion.

4. The development of a project of altitude linking guarantees the necessary reliability of the data and the achievement of the requirements of the current instruction and regulations regarding the accuracy of the finished cartographic products.

5. Using the right and appropriate software to handle the camera properly and obtain the necessary materials.

REQUIREMENTS	CHARACTERISTICS	CONFIRMITY
Behavior when work performs in the air	Base material and resistance to external factors during operation (wind gusts, turbulence, etc.)	UAV execution materials should not contain more than 10% of foam
The quality of the shooting device	Camera quality to receive qualitative materials that will be processed in the future	1 pixel, mm - minimum 0.0020 focal length, mm - 20 min light force of action - min 1.8
Autonomy	The amount of time it can spend in the air while performing its UAV work duties without changing his battery	work on a single charge, min - 20 min
Developing of a plan	Developing a plan that allows the implementation of the maximum planned areas and the achievement of instructions and regulations	It is performed while creating topographic maps of scale 1: 500 - 1: 5000 built-up areas
Software	The use of UAV-friendly software that will allow you to obtain and process the maximum amount of necessary and useful information that in the future will allow to form photogrammetry	PIX4D, MicaSenseAtlas

An example of getting 3D Career Models with quality shooting and post-camera processing, including all the requirements

Conclusion

Using the drones and putting them into production, the following can be optimized and improved:

- accurate geo-shooting and subsequent geospatial modeling
- the shape and texture of objects that are not available in the normal shooting method (for example, for safety reasons, but are not physically available for exploration)
- Compliance with all standards
- cost-effectiveness compared to other methods and requirements

- safely and efficiently carry out geological survey work

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LASER THERMAL STRENGTHENING OF PARTS

The successful solution of the problems associated with the reduction of the metal intensity of the structures, while improving their technical characteristics, necessitates the use of modern processing technologies and hardening of the surface of the parts in order to create strong, durable and corrosion-resistant layers on these surfaces. Treatment of surface layers with concentrated energy streams of laser beams, plasma jet allows to change the physical and mechanical properties of materials due to the modification of the structure of their surface layers. In addition, it gives the opportunity to obtain qualitatively new properties of these layers, which cannot be achieved by other methods of strengthening.

In recent years, the study of laser processing of parts of automotive engineering, engines, oil refining equipment have priority for scientists in England, Germany, USA, Bulgaria. Significant progress has been made in strengthening the responsible parts such as shafts, gears, cylinder liners and the like. The main areas of research for laser strengthening of parts are the wear characteristics of the surfaces. However, important is the ability to adjust and improve such characteristics of the responsible parts as durability.

In the works devoted to the study of the characteristics of the strength of steels after laser thermal strengthening, the possibility of both their increase and decrease. The results obtained are related primarily to the processing modes for specific materials and parts.

Laser thermal strengthening allows to increase the value of endurance limits. Laser treatment can reduce the characteristics of fatigue resistance. The change in fatigue resistance during laser treatment is related to structural changes in the treated area, its hardness, the residual stress that is formed, and the microrelief of the surface. These properties are related to the technological parameters of processing – the type of laser, the radiation power, the speed of processing, the geometry of application of the paths of hardening, the area of the treated surface, as well as the orientation of the working stress with respect to the direction of application of the paths of strengthening (due to the anisotropic effects laser track). In this regard, in order to obtain the endurance limits of materials and parts above the initial values, an analysis of the machining modes with respect to the specific operating conditions of the machine parts is required. To solve this problem, it is necessary to link the surface properties (residual stresses, hardness, roughness, and so on) with the technological modes and operational parameters [1].

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USE OF FLY ASH FROM POWER PLANTS IN INDUSTRY

The idea is to efficiently use fly ash, which considers as wastes of fuel burning, in industry to increase profitability and ecology.

This work deals with the use of fly ash from power plants in industry. Scientists need to focus equal attention on theories of the environmentally friendly building elements based on fly ash, on descriptions of the utilization and transportation process as well as for more immediately relevant ideas about how fly ash can be efficiently used.

The goal is to find the best ways of using Power Plants wastes.

Power industry is based on conventional fuels combustion: hard coal and brown coal. Power generation process creates considerable quantity of wastes, including fly ash which is used in various other industries. One method of using fly ash is placing it in a fly ash – water suspensions in underground coal mines. Fly ash in a mixture with water might be used for carbon dioxide fixation in mineral carbonation process.

Due to significant amount of power and heat and power plants existing, ipso facto significant amount of produced fly ashes, which could be used in industry.

Fly ashes have many economic applications. They are mainly used in the building materials industry for cement, concrete, light aggregate and building ceramics production (Fig. 1). One of the most important directions in ash utilization is its use in road building and geotechnics. Typical world practice is fly ash utilization in underground mining. As the data shows, the largest quantity of fly ashes was economically used in mining (maximum 60.7% of total fly ash utilization). The fact that coal mines located near power plants or combined heat and power plants favour the fly ash use in the mining industry. Coal mines can utilize ash during entire year while cement plants are of seasonal operation. An important aspect of fly ash utilization in mines is capability to use ashes of various chemical composition. [1]

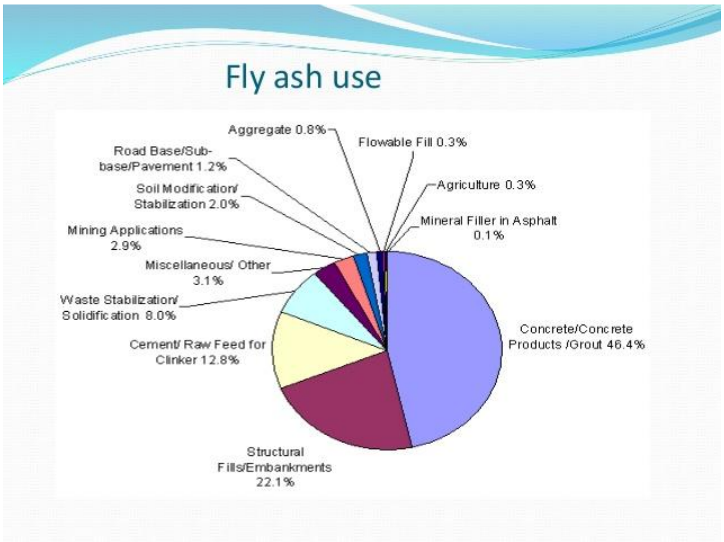

Fig. 1 Fly ash use and utilization [2]

For further research it is offered to take into account that the disposal distinguishes the following fly ashes' types:

- fly ashes from carbon – code 10 01 02;
- fly ashes from peat and wood which was not chemically processed – code 10 01 03;
- fly ashes and dusts from liquid fuels boilers – code 10 01 04;
- fly ashes from emulsified hydrocarbons uses as fuel – code 10 01 13;
- fly ashes from co-combustion which contain hazardous substances – code 10 01 16;
- fly ashes from co-combustion other than specified in 10 01 16 – code 10 01 17;
- fly ashes and solid wastes' mixtures from calcium methods for flue gas desulphurization (dry and half dry flue gas desulphurization and combustion in fluidized bed) – code 10 01 82.

For more complete analysis of fly ash it is defined as a residue after coal or brown coal combustion, which is lifted together with flue gases. The standard defines also captured and emitted fly ashes. Captured fly ash is a fly ash captured outside the furnace chamber. Emitted fly ash is fly ash lifted with flue gases outside chimney. Standard distinguished two types of fly ashes:

- fly ash from hard coal (PK symbol);
- fly ash from brown coal (PB symbol).

It has to be stressed that fly ashes' properties depend on many factors, including type of combusted carbon, fuel combustion technology, fluid chemical composition. One of the most important aspect of using ash is considered to be based on water mixtures for carbon dioxide fixation as the possibility of storing it in underground mines. The technology of placing fly ashes as mixtures with water has been in use for years.

Summing up, it was found that fly ash can be used in building industry to lower expenses. Also fly ash was revealed as a good agent for carbon dioxide fixation as the possibility of storing it in underground mines in combination with water mixtures.

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INNOVATION IN THE PROCESSING OF IRON CONCENTRATE

It is difficult to imagine your life without iron tools, equipment, mechanisms, transport – steel is used everywhere. Man passed the bronze and iron age, until he learned how to make steel. Today, methods of steel extraction differ in their quality, productivity, and costs. This report deals with the new approaches in the practice of extracting and processing iron ore at the Poltava mining and processing plant.

The Poltava mining and processing plant which produces iron concentrate and pellets for metallurgical plants in Ukraine and in the world is currently being updated. The installation of new automated manufacturing facilities and computer technologies is almost completed. The equipment does not only manufacture the highest quality iron concentrate, which can be used to produce pellets for direct production of all grades of steel in electric furnaces, but also manages the processes:

- Transportation of the finished concentrate to the place, where pellets are made;
- Transportation and stacking of the finished concentrate to a warehouse;

- Transportation of the finished concentrate to the railway loading station, where the specified amount of concentrate is automatically loaded into railway cars;
- Creation of electronic commercial documents for cargo.

Modern methods of concentrate enrichment can significantly improve the quality of the output product. For example, the filtration technology that was used earlier, namely disk vacuum filters, was less effective. Due to the imperfection of the design, about 30% of the iron was lost. Modern camera filter technology is controlled by software and works automatically. More advanced filtering algorithms allow you to remove the maximum amount of iron from the ore. The ready concentrate is delivered to railway cars and loaded (on average 60 tons per 4 minutes with accuracy of 100 kilograms). If there are no available railway cars, then the concentrate can be conveyed by transporters to closed warehouses, where it is stacked not to stop the production. The concentrate can also be directed to a factory for the production of pellets, which are then also loaded into railway cars and delivered to the plants in different parts of the world.

The railway cars under loading are moved automatically, without the participation of the operator. All machines: pumps, compressors, conveyors and auxiliary equipment work automatically – with the help of software that has been developed specifically for automating this process. At the end, the costs of technical water, compressed air, electricity and the output are taken into account.

The control system is based on SIEMENS controller technology. The connection of the main controller with the Executive controller takes place via the redundant networks PROFIBOS. As a result, we have a fully automated system for filtering, loading and transporting concentrate, which leads to reduction of the number of people working at the plant. Previously, such plants required a large number of experienced specialists, but now the number of working staff has decreased, so the production costs are reduced. The capability to switch the entire system to semi-automatic mode at any time makes it very flexible and reliable.

After loading the concentrate, it is delivered to steel mills all over Ukraine and abroad. The concentrate is fed to the furnaces in the steel mills. In contrast to the coke blast furnaces, the electric arc furnaces are often used. During the smelting process, various impurities are added to the concentrate (molybdenum, manganese, tungsten, vanadium, and others) to produce high – quality steel of various grades- from the softest to the hardest.

As we can see, everything is being developed and improved. Ukrainian enterprises such as the Poltava mining and processing plant provide resources to the production in different parts of the world. Thus, it allows humanity to move forward.

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THE PERSPECTIVE SOLUTION FOR MINIMIZING OF HEAT LOSS IN PIPES OF THERMAL NETWORKS

Thermal power plays an important role in human life, because this industry provides humanity with thermal and electrical energy. Like other industries, it has some problems that need a lot of attention. The thesis deals with minimizing of heat loss in pipes of thermal networks. The goal is to cope with the task that has challenged the effectiveness of perspective solutions…

The major problems of the future development of thermal energy in the world remain, as before, the further technological improvement of the stations in order to increase the efficiency, reliability and environmental cleanliness of electricity and heat production, but there are other and equally important disadvantages. In particular, in the heat supply system, that has heat loss during transport of the coolant [1].

LOGSTOR has developed leading technology to address energy efficiency issues (reduced heat loss) in field of heat supply and is currently continuing to set new standards. The company is the world's leading manufacturer of pre-insulated pipe systems, so product requirements are very high. Manufacturing has a unique track record in this sector, due to constant innovation in the wake of emerging technologies.

LOGSTOR supplies peerless efficiency and high system quality documented from start to finish. The ISO 9001 and ISO 14001 standards lay the foundations for the manufacture of all pipes and components. These are also backed by a complete set of documentation in accordance with the relevant quality standards, including the European norms EN 253, EN 448, EN 488 and EN 489 [2].

The company has its own laboratory, on the basis of which it performs continuous laboratory tests on the basis of international standards, in order to document and improve products. Measurement results showed stable and high thermal insulation properties of products due to new standards in production:

- a layer added to the composition of the pipe – diffusion barrier of aluminum foil, to obstruct from the aging of the insulation because it prevents moisture from entering the environment, thereby ensuring the efficiency, reliability and durability of the insulation, since moisture that penetrates in the insulation and destroys its properties thereby increasing heat loss (Fig. 1) [2].

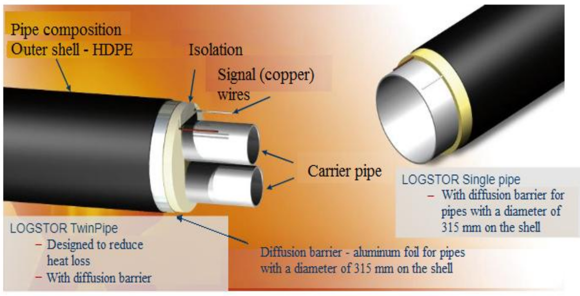

Fig. 1 – Composition of pipes

- cyclopentane is used as insulation, whose thermal conductivity coefficient λ = 0,017 W/(m·K) is lower than that of pre-insulated pipes based on foamed polyurethane (PIP) λ = 0,0296 W/(m·K). Cyclopentane more effectively reduces energy losses (Fig. 2) [2].

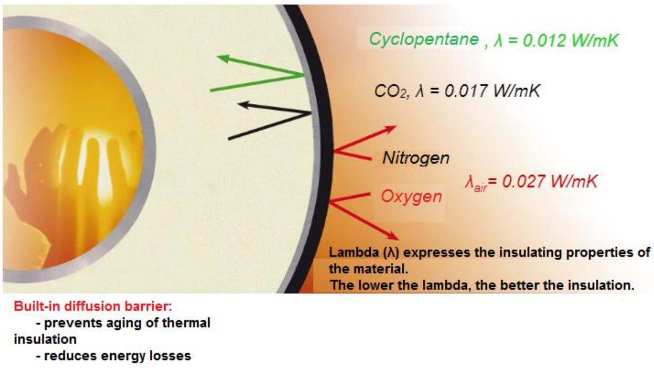

Fig. 2 – Material energy efficiency

- the technology of application of insulation on pipes has been changed, namely the pipes are made as one pipe of infinite length, and not as separate sections. Carrier pipes are inserted horizontally into the production machinery and assembled in a long, unbroken line. The insulation form is cast in place (axial process) or sprayed (spiral process) directly onto the steel pipe, depending on its size. The continuous method requires a lower volume of foam to produce better insulation than on traditionally manufactured pipes [2].

The axial process is a production method in which the pipes are continuously insulated in a rolling mold in which the polyurethane foam is poured around the pipe. The fully cast insulated pipe then proceeds through an extruder station where the HDPE outer casing is melted in place (Fig. 3) [2].

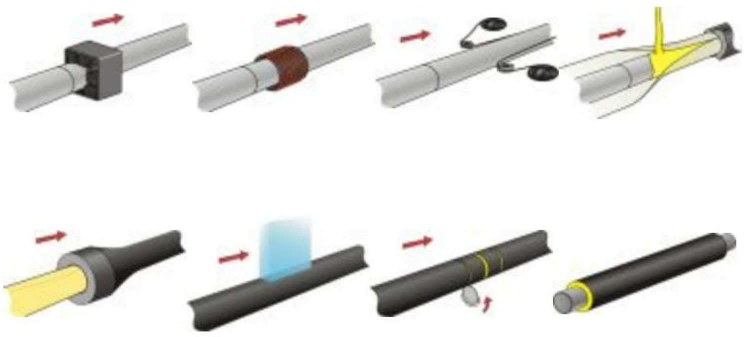

Fig. 3 – The process of axial isolation of pipes

The spiral process is a manufacturing method in which the PUR material is sprayed onto the carrier pipe while it rotates around its own axis as it passes through the production facility. The outer sheath of high density polyethylene is then coiled from the extruder in a spiral manner while the pipe continues to rotate around its axis (Fig. 4) [2].

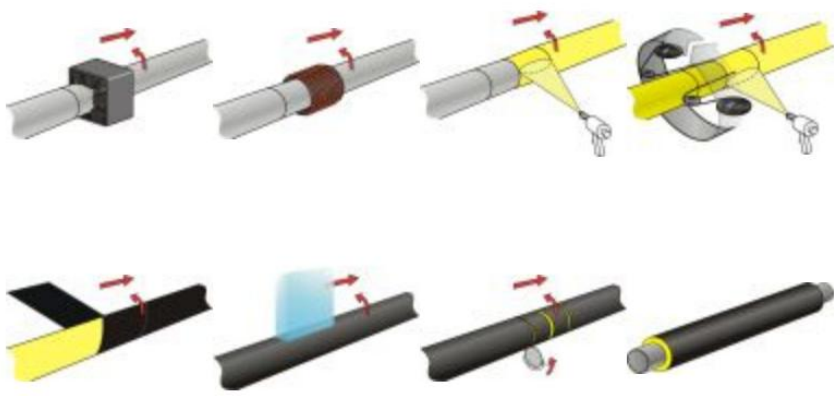

Fig. 4 – The process of spiral isolation of pipes

Based on laboratory experiments and tests of pre-insulated LOGSTOR pipes using cyclopentane, an additional diffusion barrier and using spiral and axial thermal insulation, the benefits of the company's products in energy efficiency, quality, environmental resistance, and operational reliability have been confirmed.

The results of this study have established the effectiveness of the use of pre-insulated LOGSTOR pipes in the solution of minimizing heat losses in pipelines of thermal networks.

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AREAS OF THE FUTURE: HOW DRONES CONQUER THE WORLD

Unmanned aerial vehicles have become increasingly popular with nuclear safety experts, as drones can be used for good (scientists using drones have explored one of the most polluted places on Earth – the Red Forest in the Chernobyl zone and have 3D- maps fluctuations in radiation level) and for the realization of evil intentions. Although the industry of small unmanned aerial vehicles has recently emerged, the threats and challenges of misuse have become apparent to many. That is why Greenpeace crashed a drone against the wall of a nuclear power plant in France to show the station's vulnerability.

Environmental activists smashed a drone in the form of a Superman comic book hero against the wall of the French Nuclear Power Plant "Bugey" near Lyon, for this they used two drones, one of which took off the flight and the other flew directly into the wall of the building where the spent uranium fuel was stored. The video from the drone they posted on Twitter. The flight and the crash of this drone showed how much airspace was not sufficiently protected, and the physical protection system did not provide such a threat at all [1].

Invisibility, high altitude and speed of flight, the ability to carry all kinds of dangerous goods make these devices potentially dangerous for virtually all areas of life. And the losses from the activities of even a small drone can be very large.

The European Aviation Safety Agency (EASA) has promulgated common rules for the use of drones, which will soon become mandatory for all EU Member States. Given the rapid development of the global drone industry, the emergence of such standards was only a matter of time. Until now, unmanned aerial vehicles remained unattended by legislators, without even having a clearly defined status [2].

The first legal regulations for drones were adopted in our country only in 2018.

The State Aviation Service has set rules for the use of drones in Ukraine. These are called the Temporary Order of Use of Ukraine's Airspace. It sets limits on the weight of drones – 2 kilograms, the time when it is possible to launch drones – which is only a day, and the places where aircraft are not allowed to fly: over protected objects, roads of national importance, power plants, seaports, fuel depots, oil, gas, over the central streets of settlements. Flights are also prohibited over correctional centers, colonies and detention centers, etc. In addition, it is now impossible to get too close and too close to people. The very rules that limit their scope already indicate the potential for sabotage and potential danger.

The issue under discussion is how to deal with air hazards.

Drones are divided into two large groups: the first group is the interference that affects the electromagnetic circuits and the electromagnetic situation around the drone, either locally or in the direction of the drone, and the drone loses control signal from the ground. The main task of simple tools is to create obstacles. The drone does not see where it is, the drone does not understand what commands it receives. In this regard, a reasonable drone is reversed, a bad drone falls. Work is under way around the world to build drone countermeasures. Their number is already measured in the dozens. Among the most popular varieties: laser installations, microwave emitters, powerful electromagnetic interference and devices for drone strikes by sound wave [3].

There are quite extravagant ways – so, in Asia, birds of prey are used, European countries have developed drones-hunters armed with nets to catch "intruders".

But it will be most effective if the drone makers, by programming their products and laying their flight cards there, will simply put restrictions in these maps – airports and restricted areas, and the drone will not actually be able to fly there. Such software is available even in drones that are controlled remotely, rather than just flying on a given program. Unfair owners, of course, can break the software and remove such restrictions. Therefore, in conjunction with the modification, it is necessary to use the tools that hinder the flight of drones over a certain area.

In addition, the belgian police will lead a European Union-funded training program to counteract "unfriendly" drones. Such dangerous objects will be eliminated by police drones, including the use of special nets [4].

In Ukraine, training was also carried out "Drones over the Netishyn NPP" within the framework of tactical-specific exercises through the activation of terrorists in the Ukrainian rear – security officers (representatives of the Security Service of Ukraine, National Police, paramilitary and military units of NPP protection) work out all possible scenarios related to elimination of diversionary scenarios using drones.

The main purpose is to check the interaction of all services in case of emergency.

As soon as the unmanned aerial vehicle was spotted in the air, it was immediately cleared. Special equipment was used for this purpose – the so-called unique antidron protection manufactured in Ukraine [5].

However, according to scientists, people are so accustomed to the use of drones that in the near future they will not be able to do without them in everyday life. Airplanes will become as necessary as a computer or mobile phone.

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THE ENERGY EFFICIENCY ANALYSIS OF COMFORT CONDITIONS MAINTENANCE IN THE PRODUCTION AREA WITH THE AID OF AN AIR HEATING AND VENTILATION HEAT PUMP SYSTEM

Nowadays a process of heat pump systems (HPS) design is more complex than just a straightforward selection of a heat pump (HP) with required heat load which meets the heat supply needs. Several factors must be considered when designing a HPS in order to achieve the ultimate goals: a HP efficiency enhancement and a general reduction of energy consumption.

The most promising direction of HPS application in the sense of energy efficiency is their integration with ventilation and air heating systems of facilities that include large volume premises [1, c. 57]. The introduction of a HP in such systems significantly increases their energy efficiency since the exhaust air heat is utilised in order to preheat the supply air [2, c. 78]. The purpose of the current study is to analyse the energy efficiency of an air heating and ventilation HPS with a variable partial exhaust air recirculation and depending on the ambient air parameters. The system designed to maintain comfort conditions in a production area with an excessive moisture generation inside during a cold period of year is shown in fig. 1.

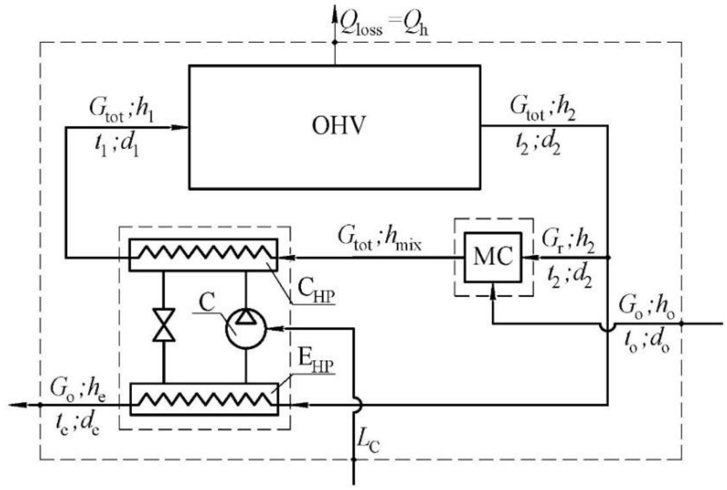

Fig. 1. A general design of an air heating and ventilation heat pump system with a partial exhaust air recirculation: C_{HP} – a heat pump condenser; E_{HP} – a heat pump evaporator; C – a compressor; MC – a mixing chamber; OHV – an object of air heating and ventilation.

A theoretical model of this system has been developed, and a numerical analysis of its thermodynamic efficiency has been performed. It is determined that an additional heating of the supply air to compensate for heat losses can be estimated using a simple coefficient (i.e. coefficient *K*) which is proportional to the temperature difference of air inside and outside a premise and which is defined by the premise constructional properties along with its required air exchange rate.

The results showed that the exhaust air recirculation coefficient required to maintain comfort conditions inside a premise does not depend on the air heating properties, but only on the properties of the ambient air and the set indoors parameters. This air heating and ventilation system for premises with excessive moisture can ensure the maintenance of the given conditions indoors during the cold and the warm period of year only up to a specific critical temperature of the ambient air which depends on its relative humidity and the set indoors parameters. The system must operate in an air conditioning mode after reaching this temperature.

The calculated values of external energy specific costs were obtained for the current HPS. These values characterise energy efficiency of the system's operation depending on the ambient air parameters. The results show this system to be highly energy efficient in a wide range of both ambient air and premise parameters. This is associated with the favourable temperature conditions for a HP operation, which provide high values of COP (i.e. coefficient of performance), and the exhaust air heat utilisation due to a partial recirculation.

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SANITARY AND HYGIENIC ASSESSMENT OF CLASSROOMS USED FOR STUDY BY STUDENTS OF GROUPS 183 "ENVIRONMENTAL PROTECTION TECHNOLOGIES" AND 101 "ECOLOGY"

Lighting is divided into natural, artificial and common lighting: the most favorable for human organism is natural lighting. Common lighting is lighting that uses both natural and artificial light at the same time. Lighting should meet a number of hygienic requirements: it should be sufficient, uniform, should not dazzle your eyes, and create unnecessary contrast on the work surface. The level of illumination of the work surface is controlled by the light meters of such modifications as Yu-116, Yu-16, Yu-17 and Yu-117.

The illumination of workplaces, studies, classrooms, laboratories in technical schools and higher educational establishments should be at least 400 LK according to the standard of the National Security Council 2.04.05-98. The ratio between light fluxes from windows and artificial illumination should be 2: 1. The total illumination should be at least 25-30% of the illumination in the workplace. The illumination should be at least 50% at the distance of 0.75 m from the workplace and it should be at least 30% at the distance of 5 m from the workplace.

All educational premises in general educational institutions should have natural lighting. The orientation of the windows in classrooms should comply with the requirements of DBN B.2.2-3-97. In the light zone of Ukraine (53 degrees, north latitude), the highest level of natural light is from the south-east side, and therefore the maximum number of school premises should be oriented to this side of the horizon. For long study days, the east side is recommended, for the first shift classes – western. It is forbidden to orient classrooms to the north (except for the rooms of fine arts and drawing, where uniform lighting is required).

Poor workplace lighting is one of the reasons for low productivity. In poor light, workers can suffer from eye strain, it is difficult to distinguish between objects being processed, the pace of work is reduced and general condition of the human body is deteriorating.

Irrational lighting of premises leads to visual discomfort; it reduces mental and physical performance, increases visual fatigue as well as promotes the development of several diseases.

To determine the level of general and natural lighting in classrooms, measurements were made at 8:30, 11:20, 13:00 and 15:00. There were selected four classrooms: 1-P, 316 with the north and south side of the rooms, 318 and 403-a. We measured the illumination in the rooms at distances of 1, 2, 3, 4, 5 m from the window on a horizontal line. The photocell was kept parallel to the floor at the height of the table (0.8 m from the floor).

Natural lighting in the 1-p audience is sufficient at a distance of 1m at 11:20, 13:00 and 15:00, at other time and distance, natural lighting is insufficient. In the classroom 318 natural lighting is sufficient at 11:20 at a distance of 1m. It is also sufficient at 13:00 at distances of 1m, 2m and 3m from the window. In the classroom 316, natural light from the south and north at 13:00 is sufficient at any distance, but it is better from the south. In the classroom 403, natural light is enough at 8:30 at a distance of 1m, at 11:20 at distances of 1m and 2m, at 13:00 at distances of 1m, 2m, and 3m.

In 1-P classroom, the level of common lighting is the lowest, at distances of 1, 2 and 3 m at different time there are indicators can be higher than 400 Lk but at a distance of 4m the indicators are 240 Lk on average. It can be explained by the fact that the point is evenly located between two lamps and is away from the window. At a distance of 5m the indicator is 370 Lk on average, although this point is the farthest from the window, but it is below the lamp and therefore, according to the requirements, is at the acceptable level.

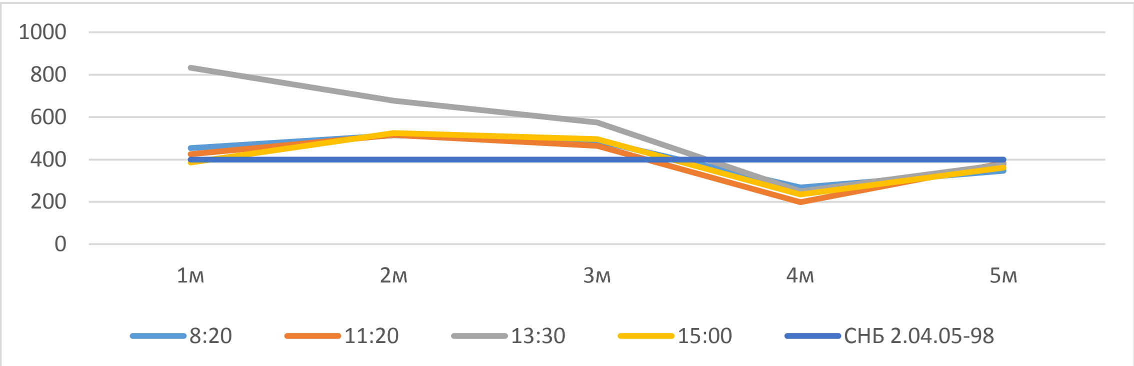

Figure 1. Common Light in the classroom 1-P

In the classroom 316, the indicators at different distances and at different time meet requirements of the National Security Standard 2.04.05-98 and are more than 400 LK. The lamps are correctly and evenly set up in this room there.

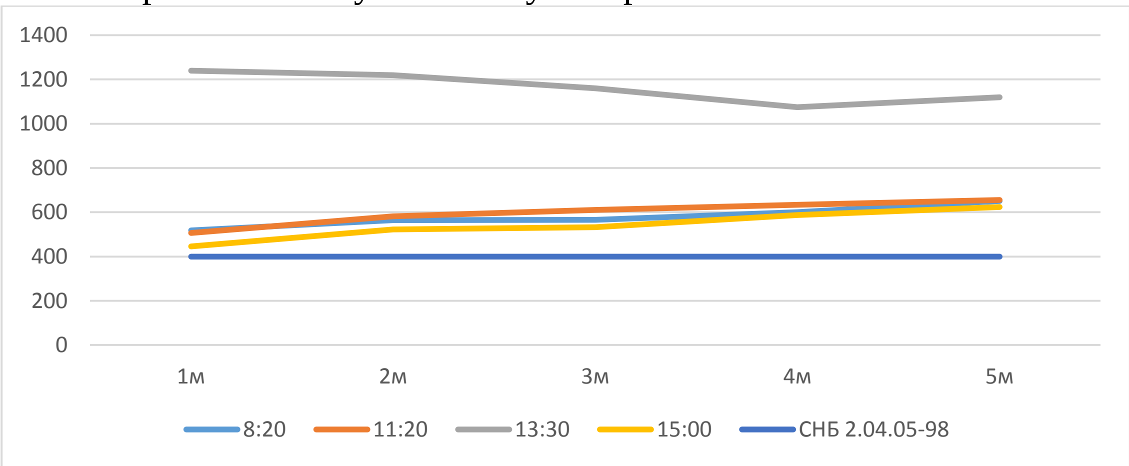

Figure 2. Common Light in the classroom 316

In the classroom 318, the indicators are higher than 400 LK and the room is well lit at 13:00. At distances of 3m, 4m, 5m at 8:30, 11:20 and at 15:00, the indicators are lower than those in the standard of the National Security Council 2.04.05-98 (not less than 400 LK). The same hours at distances of 1m and 2m indicators are satisfactory and they are higher than 400 Lk.

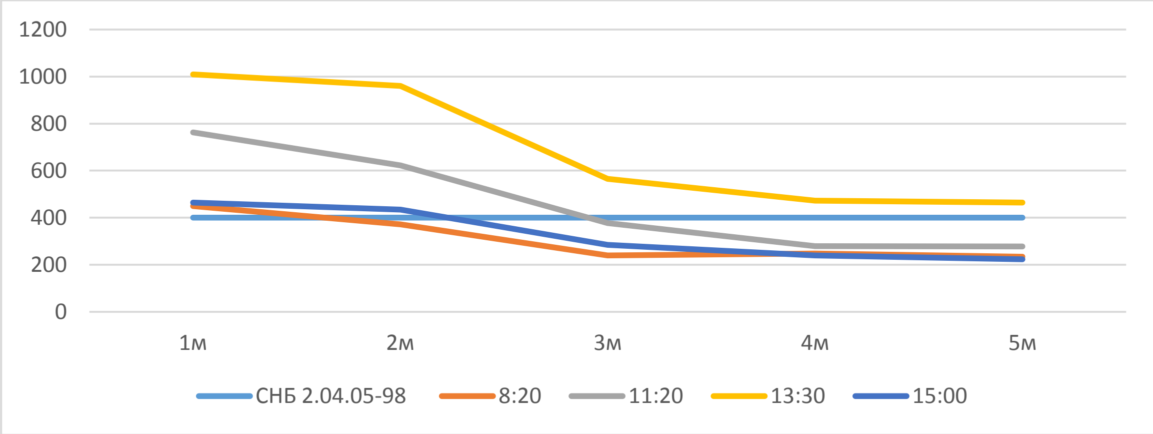

Fig. 3. Common Light in the classroom 318

In the classroom 403, the indicators meet the standard of the SNB 2.04.05-98 and are more than 400 LK. These indicators are getting lower with the distance from the window but they comply with the requirements.

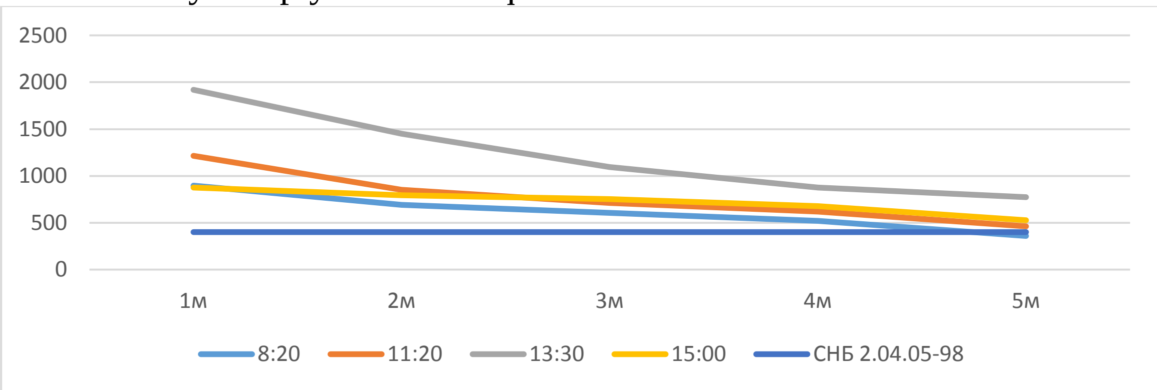

Figure 1.3. Common Light in the classroom in the classroom 403

The main sources of light for room illumination are incandescent and discharge lamps of various types. Each type of lamp has its disadvantages and advantages. The incandescent lamps (LR) belong to the light sources of thermal radiation; their light output is 10-15 lm / W. The specific power of fluorescent lighting should be 24-28 W / sq. m, for incandescent lamps - 48 W / sq. m. m. For local lighting, lamps with a lamp power of 200 watts are used. The luminaires are located at safe distances from the lifting devices and from ways of moving loads.

In classrooms, the lamps should be placed in 2 rows parallel to the line of windows at a distance of 1.5 m from the outer and inner walls, 1.2 m - from the blackboard, 1.6 m - from the back wall. The distance between the rows of lamps should be 2.5-2.65 m.

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THE THERMODYNAMIC ANALYSIS OF A SOIL HEAT PUMP HEATING AND VENTILATION SCHEME USING HEAT OF SEWAGE WATER AND VENTILATION EMISSIONS

Today, with increasing demands for construction services and thermal comfort in the space, heating, ventilation and air conditioning (HVAC) systems consume almost half of the world's energy [1, c. 51-62]. On the other hand, the increasing impact of global warming and energy shortages has prompted an immediate investigation into the efficiency and rationalization of the use of alternative energy sources in construction, especially for HVAC systems [2, c. 78-89]. Among the many forms of renewable energy (solar, wind, tidal, bioenergy and hydropower, etc.), soil thermal energy is ideally suited for direct use due to the constant heat source temperature and overall availability.

From 2010 to 2018, ground-based heat pump (HP) systems have seen a 52% increase worldwide, and by the end of 2018, they have been widely developed in 48 countries [3]. However, one of the main problems with the widespread use of such systems is the high cost of installation (well drilling, land preparation, earth probes, etc.).

From the literature review above, we can conclude that developments in this area were mainly related to the design of new design solutions that could improve the system's performance, however, such decisions have little effect on the scheme as a whole. Research should be conducted in a more fundamental direction, namely to consider the scheme from a thermodynamic point of view. For example, Bezrodnyi and Oslovskyi [4, c. 7-15] developed fundamentally new schemes of heat supply using heat pumping technologies and several low-temperature heat sources, cited the results of thermodynamic analysis of the developed schemes and investigated the optimal working conditions of the ground heat exchanger (GHE). In the study [5, c. 12-20], it was proposed to use a combination of lower heat sources such as soil, conditionally pure wastewater, ventilation emissions. As a result of such a combination, not only the operational costs for the facility's heat supply, but also the capital improvements (system installation, well drilling, the size of the GHE) improved. System performance was also improved by increasing the coolant temperature in the lower circuit. Also, this combination of heat sources allows the use of soil HP in the reversed mode in the summer - there is a phenomenon of so-called "injection" of heat into the soil [6, c. 95-103], which contributes to the further exploitation of the land compared with conventional schemes, where the topsoil could freeze, which when frozen deterioration or complete absence of soil fertility.

Continuing the research towards the creation of combined heat and power systems, a new scheme of heat supply was developed based on the ground heat pump with the additional use of wastewater heat and ventilation emissions (fig. 1).

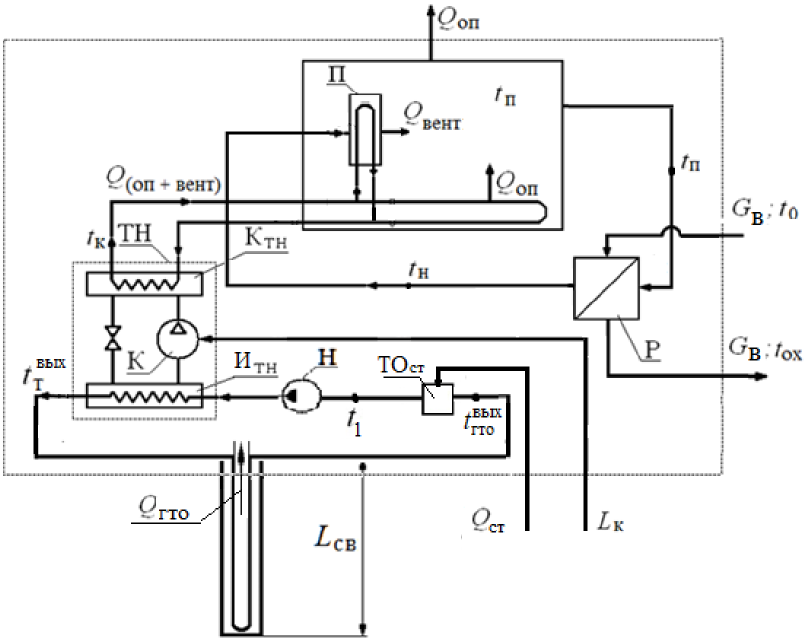

Fig. 1. Schematic diagram of the combined heating and ventilation system based on ground heat pump with the additional using of heat of ventilation emissions and wastewater: ТН–heat pump; Ктн – condenser; Итн – evaporator; К – compressor; ТОст – heat exchanger for recover heat of sewage; П–heater of fresh air; Н – pump; Р – recuperator.

The main feature of this solution is the combination of soil HP with additional low potential energy sources, such as heat of ventilation emissions $Q_{вент}$ and wastewater $Q_{ст}$. According to the scheme, a wastewater heat exchanger (ТОст) is installed in the lower (ground) circuit of the heat pump, due to which the glycol solution, which took the heat $Q_{гто}$ from the soil, is heated from the temperature $t_{гто}^{вых}$ to t_1, thereby utilizing the waste heat of the effluents. On the other hand, a heat exchanger-recuperator (Р) is installed in the initial circuit, with which fresh atmospheric air in the mechanical ventilation system is heated from temperature t_0 to $t_н$, due to the heat of the exhaust air, which is cooled from $t_п$ to $t_{ох}$. Further, the supply air flow passes through the heater (П), where it heats up to the set temperature $t_п$ in the room.

In this scheme, due to the soil heat pump, the heat consumption is covered both for ventilation $Q_{вент}$ and for heating $Q_{оп}$. Using an additional low-potential heat sources, it becomes possible to increase the efficiency of the heat supply scheme based on soil heat pumps due to the waste heat of ventilation emissions. Due to this solution, it is possible to reduce not only the operational costs of heat supply (electricity), but also capital cost - by reducing the size of the soil heat exchanger.

The analysis of the proposed scheme was carried out using a numerical method. The algorithm of calculation on the basis of balance equations of the scheme has been developed, from which the basic quantities influencing the work efficiency have been determined. On the basis of the calculations, graphical dependences of the determinants on external factors were constructed.

As a result of the analysis the following conclusions were made:

1. The additional use of hous wastewater and ventilation emissions in general has a significant positive effect on the performance of the system.

2. The recovery of ventilation emissions not only reduces the cost of external energy for heat production, but also reduces the capital cost of constructing a ground heat exchanger for a heat pump.

3. The use of the wastewater heat exchanger practically does not affect the optimum speed in the lower circuit and operating costs, but under the calculated ambient air conditions, the utilization of such heat makes it possible to reduce the power of the ground heat exchanger, and, as a consequence, its size and the costs of its discharging. .

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ADVANTAGES OF WATER JET CUTTING

A water jet cutter is an industrial tool capable of cutting a wide variety of materials using a very high-pressure jet of water, or a mixture of water and an abrasive substance. The term abrasive jet refers specifically to the use of a mixture of water and abrasive to cut hard materials such as metal or granite, while the terms pure water jet and water-only cutting refer to water jet cutting without the use of added abrasives, often used for softer materials such as wood or rubber [2].

Water jet cutting is often used during fabrication of machine parts. It is the preferred method when the materials being cut are sensitive to the high temperatures generated by other methods. Water jet cutting is used in various industries, including mining and aerospace, for cutting, shaping, and reaming [1].

Essentially, a water jet is an ideal, wear-free cutting tool. Such cutting is applied also when it is necessary to keep the initial properties of the processed material to prevent neither mechanical nor thermal influence.

Water jet cutting is used for production of parts from any grades of steel (tool, structural, heat-resistant), non-ferrous metals and alloys (titanium, aluminum, copper, brass, bronze) [3].

There are six main process characteristics to water jet cutting:

1. uses a high velocity stream of Ultra High Pressure Water 30,000–90,000 psi (210–620 MPa) which is produced by a high pressure pump with possible abrasive particles suspended in the stream; 2. is used for machining a large array of materials, including heat-sensitive, delicate or very hard materials; 3. produces no heat damage to workpiece surface or edges; 4. nozzles are typically made of sintered boride or composite tungsten carbide; 5. produces a taper of less than 1 degree on most cuts, which can be reduced or eliminated entirely by slowing down the cut process or tilting the jet; 6. distance of nozzle from workpiece affects the size of the kerf and the removal rate of material. Typical distance is .125 in (3.2 mm). Temperature is not as much of a factor [5].

Comparing a water jet with a machining (milling, drilling, stamping, etc.) and thermal (oxygen, plasma, laser, erosion cutting) the advantages of a water jet are:

1. High quality of cutting. Water jet cutting provides high precision and quality, this cutting method requires no further machining. There are no thermal changes under their influence, and this prevents deformation, slagging or mixing, as well as contamination with elements such as harmful vapors and gases inherent in other types of cutting when processing plastics, composites, etc. The jet of water does not create direct pressure on the surface of the material and mechanical action occurs only at the microscopic level. Thus, despite the large kinetic energy of the jet of water, there is no deformation of the material and precision cutting is performed without the appearance of irregularities of the edge.

Water jet cutting allows to cut details with complex profiles without additional processing of a surface of a cut and rather high productivity.

2. Non-waste of material. A very thin stream of water creates significantly less waste of material than traditional processes.

3. Non-deformation. When using a water jet cutter, non-deformation of the parts occurs and, as a consequence, the physical and mechanical properties of the material are retained. The low tangential cutting force on the workpiece causes that workpiece don't clamp.

4. Versatility. This technology allows to cut a variety of composite materials without creating any gaps in their structure. Water jet cutting is ideal for trimming materials with a wavy surface as well as a surface with complex contours. Sometimes a cutting machine is the only right solution, for example for cutting sheet metal laminated with plastic, copper and some other materials.

5. Security. When using water jet cutting there is no heating and sparking, which, in turn, provides absolute fire and explosion safety of using this method.

6. Speed of cutting. Water jet cutting has a high speed and allows significantly increase the amount of work performed.

7. Automation of the process. Ability to mechanize and automate the process of water jet cutting reduces the labor costs of the process [4].

Despite of the good indicators, the water jet cutting has several disadvantages: insufficient speed of movement of thin-walled steel; limited resource, which corresponds to the configuration and the cutting head; high value of abrasive (consumables); corrosion of metal [1].

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GEOPOLYMER CEMENT

The purpose of this research is to study the physical, chemical and mechanical properties of geopolymer cement, its advantages, specifications, and environmental impact.

Geopolymers are inorganic materials with a polymer structure of molecules. They possess high strength and a range of specific properties. They are called "geopolymers" because the raw materials used for their production are mainly minerals of geological origin.

Technology

The technology of geopolymer concrete is based on the idea of applying inorganic mineral substances, the production of which does not require the additional use of natural resources, and does not lead to CO2 emissions into the atmosphere (byproducts of metallurgical, electrometallurgical industries and power plants).

Geopolymer concrete is chemically inert to a range of aggressive substances and remains sturdy in severe climates. In comparison to traditional concrete production technology based on portland cement, geopolymer concrete has been shown to possess superior results in strength, durability, freeze-thaw resistance, fire resistance, heat insulation, corrosion, and aggressive substance resistance including some types of acids. Besides, the use of geopolymer cement reduces CO2 emissions by up to 90% compared to portland cement production. Geopolymer cement can be formulated to re-use and recycle industrial byproducts.

Main properties:

1) chemical resistance

Geopolymer concrete is highly resistant to various acids and aggressive substances, as well as highly sulfur resistant due to the absence of calcium compounds in its structure.

2) superior waterproof properties

Excellent waterproof properties are achieved thanks to its inherent mesoporous structure. Big molecules like water can't enter the geopolymer matrix even if they are pushed using external forces.

3) thermal resistance

Geopolymer concrete is resistant both to high temperatures over 1000 °C (1832 °F) and to low temperatures due to a high level of freeze-thaw resistance.

4) fire resistance

Unlike ordinary portland cement-based concretes, water in geopolymer concretes easily evaporates (not bound on a molecular level) and does not explode the concrete from inside.

5) thermal insulation properties

Materials and plasters using high-quality aggregates and geopolymer cement have superior thermal insulation.

6) fast strength development

Geopolymer concrete develops about 50% of its strength in the first three days. This feature increases the construction speed.

Advantages:

1) ecological safety

Geopolymer cement production reduces CO2 emissions by 90% in comparison to traditional production.

2) utilisation of by-products

Utilizes waste and byproducts of existing industries.

3) high efficiency

Geopolymer concrete possesses higher-level compressive strength and axial tension strength, freeze-thaw resistance, water impermeability and resistance to abrasion.

4) cost effectiveness

Speed of the project implementation increases due to fast strength development. No additives or modifiers are needed.

Technical specifications.

Geopolymer concrete nanostructure and a high level of mesoporosity allow air to pass through the material, giving it the following properties: insulation, resistance to thermal shock, high level of freeze-thaw resistance, fire resistance, thixotropy, flowability, adjustable setting time from 0 to 180 minutes, constantly high strength, compressive strength over 100 MPa (14500 psi), flexural strength over 13 MPa (1885 psi), resistance to corrosion, resistance to alkalis, salts, and acids.

Environmental impact.

With population growth and the corresponding increasing demand in concretes and cements, ecological aspects of building have become a major concern of our generation. The portland cement industry is the second largest producer of CO2 globally. Introduction of the geopolymer technology in the production of concrete and cement gives the following environmental benefits in comparison with traditional portland cement production:

- reducing CO2 emissions up to 90% in the production process;
- a minimum 60% less impact on the environment by reducing the need to extract raw materials;
- recycle and reuse of wastes and by-products of the existing industries.

Geocement is a material of the future. It has a far more eco-friendly production process. Buildings constructed with geocement earn additional points compared to conventional construction materials.

Application.

Geocement can be used in a wide range of different industries.

Examples of industries where geopolymer cement-based products can be applied:

- General construction
- Earthquake-proof construction and buildings
- Concrete blocks
- Road construction
- Concrete pavements
- Eco-friendly green building
- Concrete floors
- High-strength fiber-concretes
- Containers and tanks for various liquids
- Pre-cast concrete
- Bridge constructions
- Railroad slippers
- Modular houses
- 3D-printing
- Sewer systems
- Various infrastructural projects
- Fire-proof systems
- Radioactive substances containment / encapsulation systems
- Marine structures
- Piles, foundations and other subterranean structures
- Petrochemical constructions
- Architectural constructions
- Architectural design and decoration
- Countertops, panels and other concrete goods
- Thermal insulation material

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MODULAR LOW-POWER REACTORS AND POSSIBILITIES FOR THEIR IMPLEMENTATION IN UKRAINE

Ukraine plans to move from the construction of large units to small modular reactors.

Green energy continues to grow – these capacities are being introduced at a very high rate. The required capacities that compensate for them are maneuverability. Therefore, today we plan to refocus on the construction of small modular reactors that have the ability to maneuver [1].

SMR-160 technology can solve load management issues quickly and at the lowest cost, with significant increases in solar generation and unprecedented growth in wind energy that are rapidly replacing traditional energy sources. In addition, this type of generation does not lead to carbon emissions [1].

On June 10, 2019, NNEGC/ National Nuclear Energy Generating Company of Ukraine Energoatom, Holtec International and the State Nuclear and Radiation Safety Scientific and Technical Center of Ukraine signed a tripartite agreement. The signed tripartite agreement provides for the creation of an international consortium aimed at promoting SMR -160 Small Module Reactor (SMP) technology in Ukraine.

The main design decision, which determines the increased interest in the technology of modular reactors, is the ability to build high-power nuclear power plants from individual small reactors - modules that are built wall to wall. This makes it possible to significantly optimize capital costs during the construction phase of new nuclear power plants. And already at the expense of the first module, by investing funds from the generated electricity, it is possible to build other modules as needed. According to the Energy Strategy of Ukraine until 2035, a policy of extending the lifetime of operating units is envisaged. At the same time, due to the fact that 12 units of 15 units will be extended for the period from 2030 to 2040, the issue of construction of new capacity is becoming more urgent. Energoatom already plans to replace Rivne NPP Units 1 and 2 (type VVER-440) with six small SMR -160 ″ reactors

Small modular reactors have a higher level of safety than traditional reactor types due to the lack of equipment that requires external power supply. For example, the design of the SMR-160 reactor, developed by Holtec International, involves the use of fewer valves, pumps, heat exchangers and other external equipment. This, in turn, leads to simplification of the operator's actions during the various modes of operation, including diagnosis and management in emergency situations. Moreover, spent fuel is stored inside the module after its expiration date.

SMR-160 main advantages:

– simplified design and compactness;
– inherently inherent security;
– increased physical protection;
– simplicity and reliability in operation;
– possibility of different use;
– short construction times and a competitive economy;
– arrangement of the reactor - underground using passive safety systems and low enriched uranium as fuel;
– due to the use of air cooling systems, the reactor can be built in regions with water shortages.

To accommodate a SMR-160 reactor, 4.5 acres of land (135 × 135 m^2) is sufficient, which allows the energy source to be brought closer to consumers, including the supply of specific areas and territories with complex geographical locations [2].

New technologies in the form of low-power modular reactors (SMPs) are currently being actively studied, developed and already under construction in the world. Currently, SMR developments are underway in many countries: Argentina, France, Canada, India, China, Japan, South Africa, the United Kingdom, the Russian Federation, the United States, Denmark, South Korea and others.

For comparison with high-power reactors, SMP suppliers claim a construction time of up to 36 months and an order of magnitude higher operating safety for these units.

We, as a Chernobyl survivor, cannot use technologies that have never been tested before to become a testing ground. Before making any decision, it is necessary to make sure it is safe. Taking into account the importance of mentioned above facts the State Nuclear and Radiation Safety Center of Ukraine suggests an approach aiming at overcoming regulatory and design differences between US and Ukrainian technologies and signing a memorandum of understanding with NuScale. This document makes it possible support the implementation of NuScale SMR modular nuclear reactors in Ukraine.

The NuScale reactor has a capacity of 60 MW, for example, one RVP unit VVER-1000 has an electrical capacity of 1000 MW.

NuScale reactor size is like two buses and it is designed with modularity in mind. If there is a need to increase the power, several settings can be installed. NuScale's main body of work is plain water – the most popular type of body in nuclear power.

The small size of NuScale ensures its safety. To protect it from radiation, it is placed in an underground pool. If radiation leaks, it will remain in this pool. The calculations show that this reactor can withstand almost any critical situation without melting.

The first power plant from 12 NuScale reactors is set to start electricity generation in 2026 in the United States [3].

Small-scale reactors that have a near-term implementation potential (up to 10 - 15 years) are of the following types of housing reactors: PWR (water-pressure water), fast-neutron reactors or high-temperature (preferably gas cooled) reactors.

Our participation in the Small Module Reactor Club allows us to keep our hands on the pulse of the latest nuclear technology in nuclear power. And, as we know, perhaps from 2022 we will become one of the first countries to adopt such technologies, and perhaps even become an energy start from where these technologies will be distributed worldwide.

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ARTIFICIAL INTELLIGENCE (AI) PROBLEMS

When most people hear the term artificial intelligence, the first thing they usually think of is robots. That’s because big-budget films and novels weave stories about human-like machines that wreak havoc on Earth. But nothing could be further from the truth.

Artificial intelligence is based on the principle that human intelligence can be defined in a way that a machine can easily simulate it and execute tasks, from the most simple to those that are even more complex. The goals of artificial intelligence are learning, reasoning, and perception.

Its applications are endless. In the healthcare industry it is used for dosing drugs and different treatment in patients as well as for surgical procedures in the operating room. Other examples include computers that play chess and self-driving cars. Each of these machines must weigh the consequences of any action they take, as each action will impact the end result. In chess, the end result is winning the game. For self-driving cars, the computer system must account for all external data and compute it to act in a way that prevents a collision. In the financial industry it is used to detect and flag activity in banking and finance, such as unusual debit card usage and large account deposits etc. Computers essentially function by following sets of programming instructions, and artificial intelligence is a field that is helping transform this process into something much more dynamic where the programs can find ways to learn on their own without having to receive new instructions all the time.

In spite of artificial intelligence continues to bring incremental benefits to human life, it has various problems which include safety, trust, computation power, job loss concern, etc. Let’s study them more precisely.

As the artificial intelligence becomes smarter by the day even the high paid, high skill workers, become more vulnerable to job losses as, given the high cost of skilled workers, the companies get better margins by automating their work.

There have been various instances where artificial intelligence has gone wrong when Twitter Chabot started spewing abusive and Pro-Nazi sentiments and in other instance when Facebook AI bots started interacting with each other in a language no one else would understand, ultimately leading to the project being shut down.

There are grave concerns about artificial intelligence doing something harmful to humankind. The case in point is autonomous weapons which can be programmed to kill other humans.

There are several applications where artificial intelligence operates as a black box. For example, in high-frequency trading even the program developers don’t have a good understanding of the basis on which it executed the trade. Some more striking examples include Amazon AI-based algorithm for same-day delivery which was inadvertently biased against black neighborhood, another example was Correctional Offender Management Profiling for Alternative Sanctions (COMPAS) where the artificial intelligence algorithm while profiling suspects was biased against the black community.

Artificial intelligence algorithm involves analyzing the humongous amount of data that require an immense amount of computational power. So far the problem was dealt with with the help of Cloud Computing and Parallel Processing. However, as the amount of data increases and more complex deep learning algorithm comes in the mainstream, the present-day computational power will not be enough to cater to the complex requirement. We will need more storage and computational power which can handle crunching exabytes and Zettabytes of data.

Quantum computing which is based on concepts of Quantum theory might be the answer to solving computation power challenges. Quantum computing is 100 Million times faster than a normal computer we use at home. Although it is currently in the research and experimental stage. As per an estimate by different experts, we can see its mainstream implementation in the next 10-15 years.

In computer science and the field of computers, the word artificial intelligence has been playing a very prominent role and off late this term has been gaining much more popular due to the recent advances in the field of artificial intelligence and machine learning. Machine learning is that sphere of artificial intelligence where the machines are responsible to do the end to end daily chores and are believed to be smarter than humans. Robotics and integration with the IoT devices have made machines think and work on a whole new level where they are outsmarting humans with their cognitive abilities and smartness. They have been known to learn, adapt and perform in a much faster way than what humans are supposed and programmed to do. In this article, we are going to read about the vast importance of artificial intelligence.

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BACKGROUND OF THE OPTIMAL METHOD OF THE SURVEY GRID CREATION IN THE CONDITIONS OF BEREZOVSKY-1 OPEN-PIT MINE

The current question is the assessment of the reliability of surveying support grids at mining enterprises, since the last alignment of the survey support grids was realized 10 years ago. The demand for break stone is increasing every year. Precisely because the production rates at mining enterprises are increasing, the advance of the mining operations is accelerating, mining and geological conditions are becoming more complicated, and the depth of workings is increasing.

All of the above factors can lead to the loss of surveying support grids, due to this case occurs a need for reconstruction, as well as an analysis of the accuracy of created or designed surveying support grids.

The accuracy of the creation of surveying grids is greatly influenced by the errors of angular measurements, errors of linear measurements, errors of measurements of the coordinates of the basepoints and angles of the directions of the source sides. These errors also have a significant effect on the position error of the outermost point. All of this is necessary to assess the accuracy of existing and designed surveying support grids.

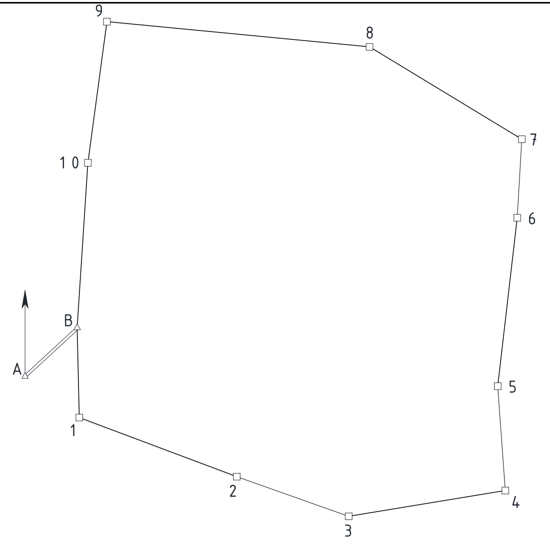
The analysis of the accuracy of surveying grids is to study the accuracy of the construction of surveying support grids, as well as to study the survey process. It is an integral part of the design of mining operations at a mining enterprise.

Mine support survey and survey grids are created by mine surveyors or third parties in addition to existing station points for mining operations at mining enterprises, in accordance with the requirements set out in the Mine Production Guidelines.

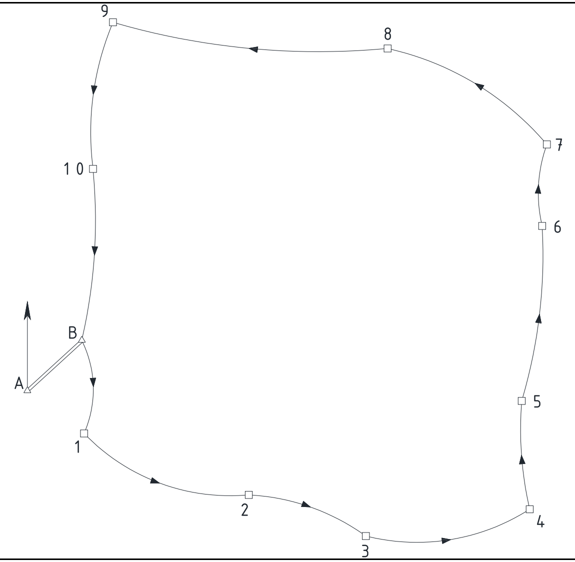
There are three known options for designing a survey geodetic grid, such as polygonometry, triangulation and trilateration. According to the instruction GKNTA-2.04-02-98 the most appropriate and cost-effective solution would be to create a survey grid using the method of polyginometry. Because trilateration requires to use high-precision position finders, and a method of triangulation is only used when it is impossible or impractical to use polygonometry for any reason.

In this work has been found the most optimal way to create a survey grid in the conditions of Berezovsky - 1 open-pit mine.

For this purpose, grid of fourth-order polygonometry was designed and, under the conditions of the Berezovsky-1 open-pit mine, a planimetric grid was constructed with the help of the 2T5K theodolite (Pic. 1). Third-order levelling grid was designed with the help of N3 leveler, and a vertical control survey grid was constructed (Fig. 2).



Picture 1. Planimetric geodesy grid



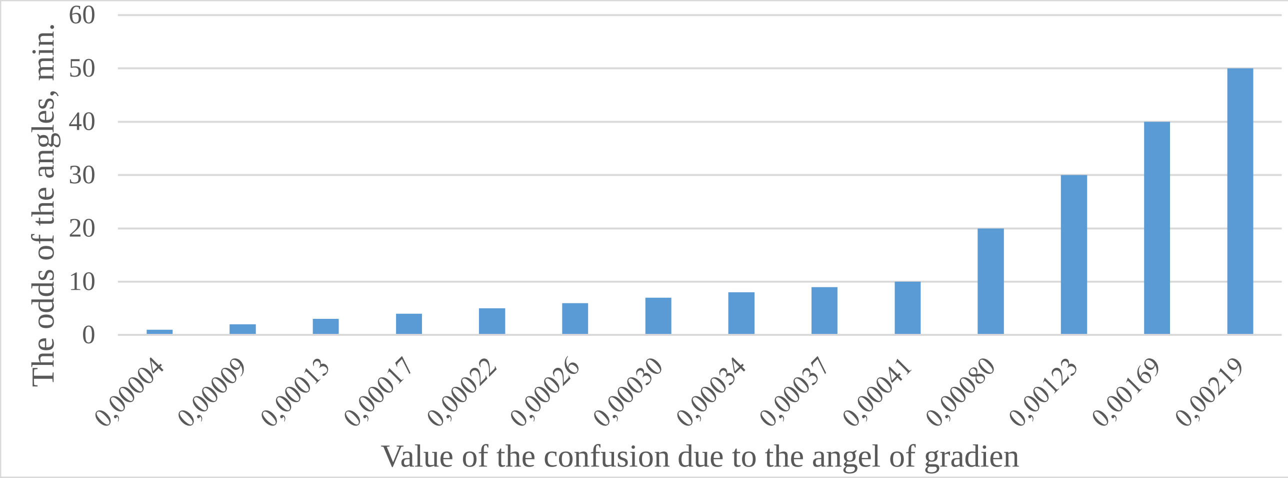
Picture 2. Vertical control geodesy grid

Requirements and recommendations for fourth-order polygonometric grids are taken into account to avoid significant confusions:

- while designing the sides of the polygonometry, there is no transition from very short sides to the longest,

- the number of angular and linear closure errors to the boundary does not exceed 10%.

Although difference of height between some points exceed 5 meters, a considerable distance between the points eliminates this problem, so it was decided not to use trigonometric levelling. The histogram shows the dependence of the change in the value of the confusion due to the angel of gradient of the collimation line on the odds of the angles of gradient of the collimation line between two points (Fig. 3).



Picture 3. Histogram of the functional connection of the confusion value due to the odds of the angle of gradient and the odds of the angles

All the measurements and calculations fit the grid requirements. The calculation of the designed grids was also performed, in which the general confusion value of the disposition of the point (Table 1) did not exceed the permissible values.

Table 1. Fundamental calculations of the accuracy of the surveying grid

Term of the confusion value	Measuring the lengths of the sides		Observation	Tools	Measure the angle	The mean squar coordinate of th poi		Disposition of the point
Symbol	m_{xs}	m_{ys}	m_0	m	m_β	M_x	M_y	M
Value	0,032	0,031	10,47	5,45	3	0,037	0,045	0,058

The best option for creating a survey grid is the polygonometric method, because it is simpler to perform, more flexible than other methods, and allows you to survey with a minimum amount of equipment. On the territory of the fields there is rarely a flat terrain, it has many hills and pits, so the difference of height between the points also ranges from 0.5 to 5 meters for this field. The difference of height and distance between points affect the angle of gradient of the collimation line. The pattern has found if the distance between points increases, the effect of the difference of height on the confusion value due to the angle of gradient is reduced.

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PROBLEMS OF CREATING MINIATURE FLAT HEAT PIPES

The thesis is devoted to the investigation of the contemporary state of miniature flat pipes, their use, characteristics, parameters and ways of their creation and modification. The goal is to highlight that designs of pipes can vary from device to device but we have to assume that cooling systems are equally important.

With the development of technology and modern high-tech devices, problems often arise to ensure their temperature conditions. To solve this problem, heat pipes of various designs have been successfully used in recent decades. These designs are constantly being improved, optimized, and new ones are being developed.

One of these designs is a flat heat pipe, which has some advantages over traditional heat pipes of circular cross-section. The main advantage is that the flat shape of the pipe body corresponds to the flat shape of most fuel elements of electronic devices that require cooling. This makes it possible to reduce to a minimum the thermal resistance between the heat release point and the heat pipe and more effectively use the internal volume of the electronic device. This is especially important when using heat pipes in mobile devices such as tablets, smartphones, and other miniature electronic products.

As a result of the literature review, it was determined that there are currently enough publications that are devoted to the topic of flat heat pipes and their use. For example, [1] and [2] used miniature flat heat pipes for cooling mobile electronic devices. They have shown their effectiveness, namely: improving the thermal characteristics of the cooling module, increasing productivity and effective thermal conductivity. At the same time, experiments described in sources [3] and [4] were carried out, in which flat heat pipes were used for cooling systems of powerful overall installations (Fig. 1).

Figure 1-Design with integrated flat heat pipe

A number of other scientists in this field are also interested in the topic that is covered in the thesis.We also deal with the hopes of the producers and the permanent quest for perfection that the consumers demonstrate. The research results indicate that the problem of creating cooling systems for miniature devices is very urgent and for its successful solution it is necessary to investigate and analyse the processes, characteristics and ways to optimize the parameters of miniature flat heat pipes.

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Session work № 2

CURRENT RESEARCH IN THE FIELD OF INFORMATION COMPUTER TECHNOLOGIES

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COMPUTERS MAY OVERTAKE HUMANS IN INTELLECTUAL ABILITY

What is Artificial Intelligence? According to John McCarthy, one of the "founding fathers" and the person who coined the term of Artificial Intelligence, it is *"the science and engineering of making intelligent machines, especially intelligent computer programs"*.

AI is defined as a unique technological product that enables machines to learn, to adapt to new conditions within their application, to perform multi-layered tasks, to predict events and enhance resources of different nature. Nevertheless the examples of applying AI from well-known gaming computers to intelligent robotic systems, are still human-dependent and require deep learning. However, even at the stage of its current progress, AI has a global impact on the life of the whole civilisation, creating new ideas about the future and prospects for the development of cutting-edge technologies.

Computers can take in and process certain kinds of information much faster than people can. They can swirl that data around in their "brains," made of processors, and perform calculations to conjure multiple scenarios at superhuman speeds. For example, the best chess-trained computers can strategize many moves ahead, problem-solving far more deftly than can the best chess-playing humans. Computers learn much more quickly, too, narrowing complex choices to the most optimal ones. Yes, humans also learn from mistakes, but when it comes to tackling the kinds of puzzles computers **excel a**t, we are far more fallible.

For example, in 1997, world chess champion Garry Kasparov played a series of six games in a rematch against the supercomputer Deep Blue. The year before, Kasparov defeated Deep Blue, winning three games to one (with two draws) against the supercomputer. During the rematch, Kasparov won the first game but then began to struggle. When it was all over, Deep Blue claimed the victory with two wins against one with three draws.

Computers enjoy other advantages over people. They have better memories, so they can be fed a large amount of information, and can tap into all of it almost instantaneously. Computers don't require sleep the way humans do, so they can calculate, analyse and perform tasks tirelessly and round the clock. Notwithstanding bugs or susceptibility to power blackouts, computers are simply more accurate at pulling off a broadening range of high-value functions than we are. They're not affected or influenced by emotions, feelings, wants, needs and other factors that often cloud the judgement and intelligence of us mere mortals.

"Today, computers can learn faster than humans, e.g.," IBM's Watson can read and remember all the research on cancer, no human could," says Maital. "With deep learning, Watson can also solve a problem, for example, how to treat a rare form of cancer — and it has done so. So in that sense, computers can be smarter than humans [1]."

Were these losses signs that computers had become smarter than people? It's true that computers can perform calculations at a blistering pace. The Sequoia supercomputer can perform 16.32 quadrillion floating operations every second. How does that compare to the *grey matter* that's in our heads?

Measuring how fast humans can think isn't easy. Creative estimations are the best we can manage. Using visual processing as a starting point, robotics expert Hans Moravec of Carnegie Mellon institute estimated that humans can process about 100 trillion instructions per second (or teraflops). But Chris Westbury, associate professor at the University of Alberta, estimates the brain may be capable of 20 million billion calculations per second, or around 20 petaflops. Westbury bases this estimation on the number of neurons in an average brain and how quickly they can send signals to one another. What's clear is that computer processing speed is at least approaching, if not outpacing, human thought. But are computers smarter?

Currently, computers fall short of possessing intelligence. But will that always be the case?

There's more to intelligence than processing speed. While a supercomputer like the Sequoia can analyse problems and reach a solution faster than humans, it can't adapt and learn the way humans can. Our brains are capable of scrutinising new and unfamiliar situations in a way that computers can't. We can draw upon our past experiences and make inferences about the new situation. We can experiment with different approaches until we find the best way to move forward. Computers aren't capable of doing that - you have to tell a computer what to do.

Humans are also very good at recognizing patterns. While we are making progress in machine pattern recognition, it's mostly on a superficial level. For example, some digital cameras can recognize specific faces and automatically tag photos of those people as you take pictures. But humans can recognize complex patterns and adapt to them, computers still have trouble doing that.

Could computer scientists build a machine that simulates the way humans think? It's not as easy as it sounds. The human brain is incredibly complex. We still don't have a full understanding of how the brain works. Without this understanding, it's challenging to create a meaningful simulation of the brain.

Maital points to another example of computer intelligence in his article “Will robots soon be smarter than humans?” On February 10, 1996, IBM’s Deep Blue computer defeated world champion Garry Kasparov in the first of a six-game series, going on to eventually win the series a year later — the first computer ever to do so. Was Deep Blue intelligent? Yes and no, says Maital.

“No, because it was simply able to calculate an enormous number of possible chess moves in a fraction of a second,” writes Maital. “Speed is not intelligence. But, yes, because it was able to analyse these chess moves and pick the best one sufficiently well to beat Kasparov[1].”

“From an AI perspective, we can now train computers to perform better than humans in many tasks, for instance some visual recognition tasks,” says Mallick. “These tasks have one thing in common: there is a vast amount of data we can gather to solve these tasks and/or they are repetitive tasks. Any repetitive task that creates a lot of data will eventually be learned by computers [2].”

But experts agree that humans still tower over computers in general intelligence, creativity, and a common-sense knowledge or understanding of the world.

Some people, such as computer scientist Ray Kurzweil and Tesla co-founder Elon Musk, have warned against the potential dangers of AI, envisioning a Terminator-type future in which machines have run amok. We certainly need to keep a handle on artificial intelligence so that we control the machines rather than the other way around. But the question seems less one of Hollywood-style “evil” machines rising up to exterminate puny humans, than of alignment: how do we ensure that machine intelligence that may eventually be utterly beyond our comprehension remains fully aligned with our own?

In conclusion some of this reconsidering how we approach these questions. Rather than obsessing over who is smarter or irrationally fearing the technology, we need to remember that computers and machines are designed to improve our lives, just as IBM’s Watson computer is helping us in the fight against deadly diseases. The trick, as computers become better and better at these and any number of other tasks, is ensuring that “helping us” remains their prime directive.

We are in a dilemma on the subject of artificial intelligence. On the one hand, we live in an age of technological innovation and we are seeing enormous leaps in computational ability every year. On the other, thinking is hard. We suspect we'll have the hardware capable of supporting thought before we crack the software side of the problem. It's probably only a matter of time before machines are actually thinking in a way that's analogous to our own processes. But it's still hard for us to imagine.

We should admit that creating a self-aware computer system is beyond our capabilities right now. It may not even be possible. While we continue to gain understanding in the fields of biology and computer science, we may encounter a fundamental obstacle before we can ever create a self-aware machine. Alternatively, we may come to a point where human and machine intelligence merge, leaving the entire question moot.

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SILICON VALLEY – HISTORICAL OUTLINE AND SUCCESS FACTORS

Term "Silicon Valley" metaphorically and physically describes a territory in the USA, California with a high concentration of research and educational centers, high-class IT specialists and venture capital firms, which are not afraid to invest in the sphere of high technologies. The results of their collaboration are numerous technologies and electronic devices that make our communication easier and life more comfortable. Silicon Valley remains a leading center of high perspective innovative projects, related to computes, programming, biotechnologies and mobile communication.

The name Silicon Valley is partly due to the merits of physicist William Shockley. In the middle of the previous century William moved to California State where he invented semiconductors. In the late 1950s the first ever microprocessor company "Fairchild Semiconductors" was founded. The use of silicon in production of microchips defined region's name and specialization – Silicon Valley of United States. The phrase was coined by journalist Don Hefler on January 11, 1971 when he began publishing a series of articles entitled "Silicon Valley of USA" [1]. In his articles the author was writing about place Santa Clara south to San Francisco, where the headquarters of the largest IT companies were concentrated.

The idea to create a zone of the latest technologies originally belongs to Stanford University. In postwar years there was no money for the development of the university. There was only land owned by it. Therefore, the management of the institution decided to rent land for a long-term to companies which were engaged in innovative developments in the sphere of technologies. Thus, the university opened a research center.

Because these companies created jobs, one more problem was solved – the problem of «brain drain» – the outflow of students who graduated from Stanford to other parts of country for employment. For example, ex-graduates of Stanford University William Hewlett and David Packard stayed to work in Silicon Valley. Following the advice of Professor Frederick Termanao they founded a company, which thereafter became a giant of IT industry. Famous Hewlett Packard was one of the first in the Valley.

California State is one of the most populous. In terms of GDP and the amount of billionaires it takes the first place in country. Accordingly, the infrastructure of famous area is extremely developed. There are some universities: Northwestern Polytechnic University, Carnegie Mellon University, San Jose State University, Santa Clara University, Stanford University.

The Silicon Valley includes seven thousand software and hardware companies. Among them worldwide famous: Apple, Adobe Systems, Advanced Micro Devices (AMD), Apple Inc., Cisco Systems, Dolby Laboratories Inc., eBay, Google, Hewlett-Packard, Intel, Intuit, Juniper Networks, Maxtor, National Semiconductor, Nintendo, NVIDIA Corporation, Oracle Corporation, SanDisk, Sun Microsystems, Symantec, Yahoo! etc.

What turned a usual American land into a global center of high technologies? There are a few significant contributing factors:

– democracy, openness, lack of vertical governing body;

– lack of monopoly, that encouraged competition and consequently was favorable for motivation and further development;

– developed communications and a high level of cooperation, besides high level of competition;

– orientation on global market;

– venture capital – stakeholders invest significant funds in young and promising companies. Having received financial support they make their contribution to improvement of advanced technologies;

– advanced scientific and technical platform – 32 universities are located there. Besides the most famous Stanford and California universities, many colleges are located there.

– the area attracts people with innovative and creative ideas;

– orientation on global market and innovative technologies;

– good location – California State is one of the richest states with a good climate;

Despite the fact that Silicon Valley is technically developed, there is a high standard of life and good salary, there are some disadvantages of living there.

Firstly, the number of failed and unsuccessful projects exceeds the number of successful ones. Venture business by definition is risky. Silicon Valley is not only Apple, Hewlett-Packard, Intel, Google but also a thousand of failed startups. Up to 95% startups of Silicon Valley, even if they received an investment, do not achieve success.

Secondly, because of significantly higher level of salaries and income than in other parts of the country, this affects the cost of living, houses, social infrastructures and everything else.

Nevertheless, Silicon Valley remains a highly competitive environment for all its participants – investors, businessmen, employers etc. That's why the most of its people are forced to work under constant stress, under threat of failure or dismissal.

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DATA SCIENCE AND ITS APPLICATION IN HEALTHCARE

A well-organized healthcare system has become an essential part of our modern life. Without doctors, treatments, and disease prevention we'll return to the Stone Age. It is becoming obvious that only by a fundamental rethinking of our healthcare systems we can successfully address the serious challenges we are facing globally.

The tools for big data analytics and data science in medicine may vary, but the need drives technologies to evolve. An intricate net of different databases covers every aspect of the industry - from logistics to the genome structure. Each such database contributes to medical services in its way, and each of them requires data science tools to make the most of its contents [1].

For ages humanity was generating data. It is such an enormous amount that we can't even handle it and visualize properly. Our call history data, our movements, our internet behavior – all these things have become available and can have some value.

Data Science, or science how to operate data doesn't become a new fancy word in the IT world. It has become something bigger, something that can change the programming ecosystem, a business one, and even consumers. These changes can be compared to transformations caused by the invention of the personal computer or the steam engine. Data Science is already changing our world. As proof, we can see a lot of startups in the Big Data sphere or that of artificial intelligence.

Let's examine data scientist's activity for sustained analysis of required skills and knowledge. Data science involves a series of steps, one of them is – getting data. This process requires systemizing all the data, which must be analyzed. This can be taken from databases or different sources, for example extracting price value from one or more internet web-sites (this process is called web-scraping). Data can be provided in different formats, not only as numbers or text. This can be also images, videos, and sounds.[5]

Then the data cleaning stage comes. This process is needed to make data more human-friendly. This stage can be performed with such techniques as filling in empty values, creating new data groups, or getting rid of unnecessary data. In this process, you need to convert the data from one format to another to get one standardized format across all data.

The next stage is the data transformation. This stage can be used to make new useful groups of data, and to generate descriptive statistics. For example, if your data is stored in multiple CSV files, then you will consolidate these CSV data into a single repository so that you can process and analyze it [2].

After that, we have a very important step which is called data exploration. Primarily, we need to inspect the data and its properties. Different data types like numerical data, categorical data, ordinal and nominal data, etc. require different treatments [2].

The next step is to compute descriptive statistics to extract valuable features and test significant variables. Testing significant variables often is done with correlation (heatmap plot). For example, exploring the risk of someone getting high blood pressure in relation to their height, weight, and other physical parameters. Do note that some variables are correlated, but they do not always imply causation.

The term "*Feature*" used in Machine Learning or Modelling, is the data features that help us to identify the characteristics that represent the data. For example, "*Name*", "*Age*", "*Gender*" are typical features of members or employees' dataset [3].

Lastly, we will utilize data visualization to help us identify significant patterns and trends in our data. We can gain a better understanding through simple charts like line charts or bar charts to help us understand the importance of the data.

The final stage is called modeling. In this stage, we are trying to answer the hypothesis questions we had got in the data exploration part. One of the first things you need to do in modeling data is to reduce the dimensionality of your data set. Not all your features or values are essential to describing your model and predicting its further development trends. What you need to do is to select the relevant ones that contribute to the prediction of results. After this process, you will need to be able to calculate evaluation scores (or measures) such as precision, recall and F1 score for classification. For regressions, you need to be familiar with R^2 to measure goodness-of-fit, and using error scores like MAE (Mean Average Error), or RMSE (Root Mean Square Error) to measure the distance between the predicted and observed data points [5].

Data Science technologies have already made some impact in fields related to healthcare: medical diagnosis from imaging data in medicine, quantifying lifestyle data in the fitness industry, just to mention a few.

Nevertheless, healthcare has been lagging behind in taking data analytics approaches, which is a paradoxical situation, since it was already estimated by the Ponemon Institute in 2012 that 30% of all the electronic data storage in the world was occupied by the healthcare industry [4].

It is evident that within the existing amounts of big data, there is hidden knowledge that could change the life of a patient or, to a very large extent, change the world itself. Extracting this knowledge is the fastest, least costly and most effective path to improving people's health [3].

Data Science technologies will definitely open new opportunities and enable breakthroughs related to, among others, healthcare data analytics addressing different perspectives: (1) descriptive, to answer what happened; (2) diagnostic, to answer the reason why it happened; (3) predictive, to understand what will happen next; and (4) prescriptive, to detect how we can make it happen [3].

Data analytics technologies could help provide more effective tools for behavioral change. Especially mobile health (mHealth) has the potential to personalize interventions, taking advantage of lifestyle data (nutrition, physical activity, sleep) and coaching style effectiveness data from large reference population groups. Besides providing information to people, mHealth technologies exploit contextual information.

To prove the impact of Data Science and AI technologies on the healthcare sector, it is essential to apply these recommendations in large-scale pilots. The pilots are meant to serve as the best practice examples. Their objective is to demonstrate how the healthcare sector can be transformed with the aim to increase its quality, decrease costs and improve accessibility. This can be done by putting Data Science technologies at their core with the goal that their results can be scaled up and adopted by the whole healthcare sector.

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NEW ARCHITECTURE FOR WEBSITES CREATION

The JAMstack architecture of website creation is analyzed. The advantages of static sites over "classic" dynamic are given. Basic concepts of architecture are considered and described.

Nowadays most of websites are dynamically generated. It means that the prepared web pages are generated by web server which uses HTTP/HTTPS protocol and returns main page to the internet browser as a response for user request. Because of this, if site has more than one page, the time for load every single page increases proportionally to the number of media resources on the webpage.

The JAM stack architecture was developed exactly to solve the problem of long webpage load time. The main idea is the static generation of linked HTML pages. It provides loading of all pages once and such pages don't require additional loading when you switch from one page to another. This approach significantly increases website working speed.

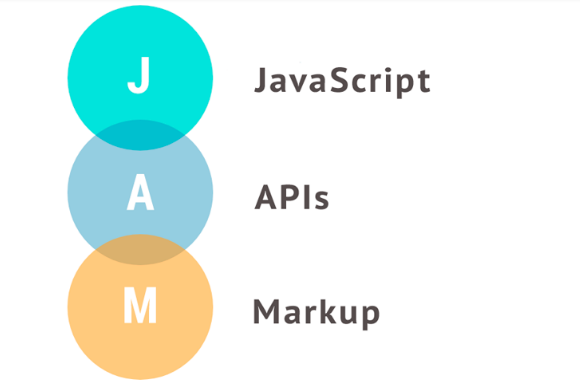

Figure 1 – main components of JAMstack architecture

Let's consider figure 1:

- JavaScript – common scripts for providing website interactivity and user's interaction with DOM elements of webpage;
- API (Application Interface) – is a source for input information or content which is built in Markup template. It could be presented as: the content files, which are located directly in content generator; third party administrative panel, which is plugged into the site generator; full REST API for output more complex and structured data;
- Markup – pain HTML files or third party SSG (Static Site Generator) for static webpages creation.

CONCLUSIONS

So, JAMstack is a modern architecture for websites creation which allows significantly increase websites working speed and reduce development time. Webpages are generated all at once and don't require additional loading from web server. Using this architecture, you also don't depend on web server, because your webpages are static.

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SMART HOME: COMFORT FOR SAVING LIVES

"Smart" objects are given the ability to connect in some way to the Internet, thus making it "smart". This development can range from your car, your watch, to things in your home.

The **aim** of our article is to consider the notion of "Smart Home" and some applications of Smart Home technology .

A smart home is also known as a Home Automation or Smart Building. In short, the technology in your house enables you to control your house remotely. A smart home consists of multiple smart applications. These applications are, in most cases, connected with each other and can be accessed through central points - laptops, tablets, smartphones or other smart devices. The smart applications can be used to execute various tasks in your house - control the temperature of your home, switch appliances on or off, control lighting or program other smart devices such as a smart BBQ grill. Smart Home appliances also have the possibility to include self-learning skills. With these appliances homeowners could be warned if any motion is detected in their homes while they're away or the Smart Home appliance can call the fire department in case of a house fire.

The future morning routine in your Smart Home could start with the preprogrammed: the shower water is already at a comfortable temperature, so you can immediately jump in. When you go downstairs your coffee will be set and already poured into a cup that comes from your smart coffee machine. Additionally, your toast will already be crisp and ready to consume. After your breakfast is finished, the smart fridge will detect if any goods are missing after breakfast and will put those on your shopping list. Your home will automatically detect when you leave your house and lock the doors, engage the security system and turn off the lights. During the day, you can remotely control your Smart Home and check in on your pets via webcams whenever needed. Then you can start preparing your pre-selected dinner, which will be finished by the time you get home.

In the past years there have been many developments within the domain of Smart Homes that focus on healthcare. Home health care services are traditionally designed to transfer data of a patient (blood pressure, body temperature or heart/pulse rate) to hospitals. Smart Homes could become a part of the home healthcare system in the future. The functions of this integrated system consist of the following:

1.Hospital-based health professionals giving teleconsultations and virtual visits.

2.Devices capable of integrated analysis providing support for making decisions and diagnoses, improving access to health care services and optimizing resource utilization for high-risk patients.

3.Hospital-based management only for acute illness or investigations, which cannot be undertaken at home.

4.Patients with the help of health professionals receiving care at home. From now home automation for the elderly is being implemented in more and more homes of older adults and people with disabilities to maintain their independence and safety. The Smart Homes provides elderly with the possibility of staying independent and it makes them feel more comfortable in their own homes.

So, these examples are just some of the many tasks that can be performed by Smart Home technology that is developing on and on. A smart home enables a personalized experience to your needs, schedules, and activities, simplifying the way you live day-to-day in your unique spaces and taking care of your lives.

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WHAT MAKES YOU VALUABLE AS A SOFTWARE DEVELOPER

There are so many programmers all around the world in different spheres but what makes them distinct among others. Here are some rules that define software developers as valuable, special and demanded specialists. It is explained how exactly it can make a software engineer crucial for a company and why it works if it is leveraged.

Rule № 1. Be passionate.

Nowadays, it is often a case when people tell they hate their job or don’t like to work at all. It is not only a problem for company to hire such employees, but this attitude to work makes life more frustrating and nihilistic. Our society spends about eight hours a day for job and it’s much time for feeling negative emotions if it’s known that approximately sixteen hours are available for every single day. That’s why it is better to quit doing anything that doesn’t bring positive emotions. If a person gets pleasure from job, it causes not only the joy but growing of confidence and getting life more meaningful.

Rule № 2. Be special.

There are a lot of software engineers who do their job well and know how to solve different problems, but there can be a few vacancies for some positions that might be interesting for them. It is a good question why a candidate is the best fit for certain job if there are many developers who can cope with work. There is a way to solve this conundrum by asking a simple question: “What makes you special fit?”. Not only developers, but many experts of different spheres often neglect to find out their values. It’s one of the best practices to emphasize traits that make candidate distinct amidst others.

Rule № 3. Be an authentic expert.

People are getting slack after they have got a desirable position. They do not have motivation to make further goals and achieve a next level because it is easier to think they have enough success. Well, it’s impossible to become a great specialist without being in a long-term self-development. Experts always have motivation - the momentum that drives them forward all the time, they never stop, they make a lot of mistakes, they learn from failures to become better. If there are some doubts, it’s precisely the best way to read biographies of all prominent inventors, scientists and businessmen to assure they are driven hard-workers and grit makes them successful.

Rule № 4. Don't limit yourself to specific tech.

It is efficient to be only competent at some certain domain all the time and there is nothing wrong with it while it brings benefits. But it’s strategic way to have broad knowledge and expertise. Sometimes unexpected situations have happened in life, technologies are getting to be outdated through the time, some demanding domains might become absolutely nothing. Adroit and sharp developers try to be agnostic in terms of technologies they know. It’s wise to be profound expert at couple of technologies and to be aware of others as much as it is possible.

Rule № 5. Act as a team member.

Software developers can’t act as a team without efficient and professional speaking to each other. Five senior developers who don’t leverage communication skills are way worse than five middle one’s who know how to be integral and work together. Team members should always discuss issues, it is easier to solve a problem by asking for help a coworker who is more competent at a domain. Communication simplifies the process of solving a problem because it’s not being solved by only one person and there is always something useful that can be shared to alleviate complexity.

Rule № 6. Be persistent and patient.

Everybody runs into difficulties and challenges. It is helpful ability to have guts to stay calm and be persistent while solving a problem. Disappointment and rage exacerbate a situation and make it even worse, because body is more likely to spend more energy under stress then in tranquility. If it is spent a lot of time and efforts to unravel a puzzle, then it is a good decision to make a break or change an activity if it is possible. Sometimes, everyone has tough time and research based on experience shows that the best decision is to put off a task and start doing something different.

Rule № 7. Be in a challenging environment.

If a developer has a habit to compete and run into challenges it makes development a way more efficient than just reading a book or attending courses in stability. Challenges always bring success even if it ends up with a failure, because a failure is an indicator that there is something to learn. It is a good method to develop courage and confidence. It is valuable not to lose a chance to have challenges if there is no significant reason to reject. Developers, who take a chance to win a challenge, are indispensable.

SUMMARY

Being a good expert is not an easy way that is why competent specialists are very demanding. It’s a lifestyle to be proficient and skillful, because it is needed to live that way of longing perfection. Seven simple rules were defined for improving professional life and it’s encouraged to follow them in case of striving for success.

No sources or references were used.

Session work № 3

CURRENT RESEARCH IN THE FIELD OF ECONOMICS

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THE PROBLEM OF RATIONAL USE OF TOURISM RESOURCES OF UKRAINE

The aim of this study was to show that in Ukraine it is possible to use tourism resources in a balanced way, to play tourism potential, and to realize the development of the tourism industry.

To analyze the security of the natural-climatic tourism resources as a basis we take the methodology of the study Badica O. A. The Scientist studying resource and recreational dominant regions of Ukraine, conducts the scoring of tourism resources for their structure. The researcher offers the climatic tourism resources to evaluate their structural characteristics, while highlighting speleological, orographic, climatic, hydrographic, vegetation and animals tourist resources.[1.p.150]

After some investigation, I came to conclusion that almost the entire territory of Ukraine has a balanced natural-climatic potential. So, most of the regions of Ukraine are characterized by the presence for the sole use of favorable natural-climatic tourism resources. Analysis of the data shows that the climatic tourism resources, create comfortable conditions for tourist activities and contribute to the organization of rest and recuperation. Primary among them are the climate, the waters, landscape, as well as some natural tourist sites having informative and attractive properties. Climatic resources determine the overall comfort of the area, its suitability for treatment and rest. Among the main climatic features that determine its comfort – temperature, number of sunny days per year, humidity, atmospheric pressure, winds regime. Regarding historical and cultural tourist resources, the greatest number of them are concentrated in the cities of Kiev and Lviv as well as in Kherson and Chernihiv regions. According to the research, based on official data, most of the regions have a sufficient level of historical and cultural tourism resources (Vinnytsia, Volyn, Dnipropetrovsk, Donetsk, Zhytomyr, Transcarpathian, Zaporozhye, Ivano-Frankivsk, Kirovohrad, Luhansk, Mykolaiv, Odesa, Rivne, Sumy, Ternopil, Khmelnytsky, Cherkasy and Chernivtsi region).[3]

The practical implementation of the recommended principles and a meaningful choice of approaches involve the systematic improvement of personnel, which will include the preparation of the resort doctors. The next issue concerns the medical and valeological education of patients and holidaymakers arriving at resorts. This will allow to increase the activity and responsibility of each person for their health. It is also appropriate to touch on certain issues of state regulation of activities of resort and recreational system, namely:

- development of effective laws on protection of natural medicinal resources, environment, recreational areas and mechanisms for their implementation;
- development of state acts that implement social policy in terms of availability to citizens for sanatorium and resort treatment and improving rest;
- promotion of cross-sectoral cooperation and collaboration, which includes the intensification of public control over the operation of the resort areas and resources, improving the information system, the establishment of branch offices or branches of international associations, foundations, clubs that traditionally operate in similar sphere of activity.[2.p.139]

Medicine requires revision and approval of new indications and contraindications for spa treatment, revision and improvement of the old order and selection rules for spa treatment and organized rest, as well as the development of conditions, procedures, and rights of use at the resort and recreational activities of paramedicine new and innovative technologies.

This is a vision of the pressing problems of the development of the resort business in Ukraine, namely: the study and construction of the resort and recreation system will have optimal development.

The whole set of these criteria of rationality will enable balanced use of tourism resources, play tourist potential, as well as implement the development of the tourism industry. Policy of rational use and protection of tourism resources should be applied without exception in all tourism enterprises, organizations and institutions of various ranks which are somehow connected with tourism in the context of preserving and strengthening the stability, integrity, and creation of favorable conditions according to the strategy of rational use and protection of tourist resources to keep them currently and for future generations.[4]

The government should promote tourism, rational use and conservation of tourism resources. The effectiveness of state incentives for tourism is evidenced by the fact that in 2005 the number of our compatriots resting and reviving trips increased by 12 percent. 30% increase in the number of organizations providing tourist services. Now in Ukraine 4,2 thousand such firms. One of Europe's most powerful recreational and tourism potential has been formed in Ukraine, with about 7850 sites with the potential to recover 8-10 million per year. The capacity of the recreational and tourist complex of Ukraine is 10 times higher than in the CIS countries. It is necessary to create a network of hotels and tourist destinations for different purposes: hotels for individual tourists, hunting and fishing bases, summer and winter sports bases, hotels for tourists for medical purposes, resort hotels, farms for lovers of agricultural work, transit motels etc.[5]

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PROSPECTS OF HUMAN CAPITAL DEVELOPMENT IN UKRAINE

The aim of this study was to show the features of human capital, significance of investment in human capital as well as problems and prospects of its development in Ukraine.

The current stage of socio-economic development is characterized by the transition from industrial, to post-industrial, information society, from the capital of the industrial economy to the knowledge economy. In such circumstances, the person and key factor in production is the person. The concept of human capital means awareness of the crucial role of a person in the economic system, especially in the conditions of scientific and technological progress, when professional skill, level of education, ability to know new achievements determine the success of the enterprise. Man is at the center of the socio-economic system both as a consumer and as a producer. The human factor should be considered as the main reserve of production development, the leading factor of development and stability of economy. In such circumstances, particular attention is paid to the problems of investment in human capital, without which both employees, enterprises and the state as a whole would not be competitive [1, p. 12].

Human capital is a prerequisite for the development of the knowledge economy, and the production of knowledge and ideas is the basis of economic development. Education, health, development of creative abilities are factors of formation of qualitative human capital, which will provide in the future a high level of personal and public income, multiplying macroeconomic effect.

According to World Bank experts, the knowledge economy has four main elements:

- education and training, which characterize the presence of an educated and professionally trained population capable of producing, sharing and using knowledge;

- a dynamic innovation infrastructure characterized by the availability of information and communication technologies capable of disseminating and processing information;

- economic stimulation and legal regime - economic environment that facilitates the free transfer of knowledge, their realization and development of entrepreneurship;

- innovative systems - a network of research centers, higher education institutions, private firms and organizations engaged in the production of new knowledge and their application [3, p. 43].

A characteristic feature of investing in human capital is that a person is not only the object of investment, but its purpose. Thus, the development and expansion of educational, intellectual, informational, organizational, managerial, motivational resources, the view of man as the main, determining and qualitatively inexhaustible factor of economic growth of a new type, as well as the purpose of this growth, is a defining feature of our generation. One of the central aspects of human capital formation is the provision that innate human capital develops as a result of conscious investment [1, p. 13].

Intellectual, educational, cultural and psychological potential, health are key elements of human capital development and knowledge economy development, and development and implementation of a large-scale long-term strategy of modernization of education, science and health care system, social protection and security, bringing it closer to quality EU standards. The needs of internal development of the state and society becomes a basic prerequisite for the reproduction, accumulation and multiplication of human capital in Ukraine.

The development of the knowledge economy is characterized by the dominance of human capital over other types of capital, which is especially prominent in high-income countries, in particular, in Japan, Switzerland, Germany, the United States, its share is 80%. Expenditure on education, science, health care, social protection and social security, spiritual and physical development, that is, human capital development, account for the largest share of investment in developed countries. In Ukraine, such expenditures increase annually, however, their size remains negligible compared to expenditures of developed countries [3, p. 54].

This is due primarily to the fact that since independence in 1991, Ukraine has been forced to create from the ground up the main institutions of a democratic state, while simultaneously solving structural problems inherited from the Soviet era, moving to a market economy and eliminating the devastating effects of the Chornobyl disaster.

In the last decade, our country has addressed urgent issues related to ensuring sustainable human development and the movement to democracy, which has required a stronger human rights culture and the formation of a strong civil society. Ukraine is now keen to create more favorable conditions for the implementation of these processes. This is manifested, firstly, in the commitment to achieve the Millennium Development Goals, and secondly, in the desire to become a member of the European Union.

That is why the preservation and development of human potential, both quantitatively and qualitatively, should become the main strategic goal of Ukraine's state policy [2].

In Ukraine, human development trends should be explored and new approaches to strategic human-centered national development planning introduced. The following ways of optimizing the link between economic growth and human development should be envisaged in Ukraine:

- increasing investments in the social sphere, in education, health care, vocational training, which contributes to the realization of people's abilities, their active participation in the production and distribution of goods;
- increasing innovative investment, introducing new research and innovation funding instruments that will help economic growth and job creation;
- promoting the development of high-tech and high value-added industries, which in turn will ensure the disclosure of human creativity;
- ensuring a more equitable distribution of income and wealth, which provides the material basis for the development of the human potential of less competitive population groups and guarantees the reduction of inequality;
- achieving a balance of social expenditures in order to strengthen the economic base of the social sphere and ensure social justice;
- improving the quality of life of the population on the basis of studying the projected impact of the planned measures on the state of life of the population;
- ensuring a decent standard of living for both traditionally vulnerable people and groups of the population with the so-called "new" vulnerability caused by the conflict in the east (referring to the population affected by the conflict in the east and to the group of internally displaced persons, who should be assisted) [4, p. 99].

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FINANCIAL MANAGEMENT AS THE MAIN STRATEGY OF THE ENTERPRISE

Financial strategy is extremely important in the strategic management of the enterprise. The strategy must be consistent with the goals, directions and objectives of the overall enterprise development.

The financial strategy makes it possible to create financial reserves for the enterprise as a means to counteract possible changes in the environment. With this strategy, you can evaluate the results of work and determine the management of the company in the future.

Recently, there have been significant transformations of the financial system and formation of a single world financial space. It significantly complicates the interaction of enterprises with the external financial environment, changing the preconditions and opportunities for financial activities of enterprises in the strategic period. It makes the general problems of developing and implementing a strategy for managing financial resources more difficult. [1]

In the current conditions of economic and socio-political instability, domestic enterprises face the difficult task of ensuring their stable and efficient functioning. In order to ensure financial sustainability, an enterprise must have a flexible capital structure, be able to organize its movement in such a way as to ensure a constant excess of income over costs in order to maintain solvency and create conditions for self-reproduction. The main purpose of financial activity comes down to one strategic goal - to increase the assets of the company. To do this, it must constantly maintain the solvency and profitability, as well as the optimal structure of the asset and liability balance [2, p. 254].

Therefore, the financial strategy of the enterprise is a system of long-term goals of the enterprise financial activity, financial ideology, and the most effective ways to achieve them. The financial strategy includes methods and practice of financial resources formation, their planning and ensuring the financial stability of the enterprise under market conditions of management.

The financial strategy covers all forms of financial activity of the enterprise: optimization of fixed and current assets, formation and distribution of profits, cash calculations, investment policy [3, p. 162-165]. It includes the analysis of financial condition; optimization of fixed and circulating assets; profit sharing.

The enterprise financial strategy, according to its strategic purpose, performs such functions as:

- formation and efficient use of financial resources;
- identifying the most effective areas of investment and focusing financial resources in these areas;

- conformity of financial actions to the economic condition and material capabilities of the enterprise;

- identification of the main threat from competitors, the right choice of areas of financial action and maneuvering to achieve a decisive advantage over competitors;

- creation and preparation of strategic reserves;

- ranking and gradual achievement of the goal [4, p. 14].

Therefore, the success of the enterprise financial strategy is guaranteed only if the theory and practice are balanced, and the strategic goals coincide with real economic and financial capabilities.

The process of forming the financial strategy of the company includes the following main steps:

1. Defining the period of strategy implementation.
2. Analysis of factors of the external financial environment of the enterprise.
3. Formation of strategic goal of financial activity.
4. Development of the enterprise financial policy.
5. Developing a system of measures to ensure the implementation of the financial strategy.
6. Evaluation of the developed financial strategy.

Therefore, a properly constructed financial strategy allows not only to provide the enterprise with financial resources and optimize risks, but also to define strategic goals for the further effective development of the enterprise. The financial strategy of the company covers all aspects of the enterprise, including the optimization of fixed and current assets, profit distribution, cashless payments, tax and pricing policy, securities policy.

Developing a financial strategy is a part of an overall economic development strategy, so it must align with its goals and objectives. In its turn, the financial strategy has a significant impact on the overall economic strategy of the enterprise, since the change in the situation at the macro level and in the financial market is the cause of adjusting not only the financial but also the overall strategy of enterprise development [8, p. 43-57]

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TYPES OF TEAM BUILDING

The psychological climate is an important component of each work collective. In a team where a friendly atmosphere prevails there are fewer problems, and employees are more loyal and motivated. It is not surprising that each manager tries to influence team unity and improve the microclimate in the organization. One of the effective methods for improving team interaction is team building. In recent years, this term has become very widely used in the fields of business, management, sociology and psychology. Here are a few definitions of this term:

Teambuilding is a measure aimed at creating a certain atmosphere in the team, which will contribute to achieving common goals and rallying staff. (M. Istakova) [2, p. 9]

Team building is a management technique used to increase the efficiency and productivity of working groups through various events. It provides a lot of skills, analysis and observation to form a strong and capable team. The main motive of this technique is to achieve the goals and objectives of the organization. (Gibb Durei) [3, p. 16-18]

After conducting research, we made our own definition: team building is a way to maximize the effectiveness of team work to improve the productivity and happiness of the team and departments.

The main task of team building is to unite each individual employee into a single system - a team for building relationships within the organization and the successful work of each of its links. When the team is united, working capacity is increased, the staff is more motivated and interested in successful work.

At the present stage, this method is very popular both among small enterprises and among giant organizations with a world-famous reputation. And every such company is trying to modernize or add a team building method specifically for its field of activity. So there were many types of team building. Here are the main ones:

1. Active.
2. Storyline.
3. Intelligent.
4. Creative.

The active type of team building is the most popular. This type is most suitable for the warm season, as it is most often carried out in the fresh air. Relationship building is fast, participants enjoy various sports games, quests, relay races. There are many scenarios for such activities, for example, team building in the style of the Olympic Games or a spy organization. The most interesting options include various sports equipment from classic futsal to cable cars and ATVs.

Team building programs are becoming more inventive and offer a variety of stories. The storyline of team building takes the form of a quest, a business game, competitive events. An interesting story captures the participants, there is a deep immersion in the process. Participants are interested in moving along the plot and the creation of the team goes unnoticed. Participants try new roles, for example, the role of a detective. The role-playing team building also includes historical role-playing games. In the course of such activities, the collective reproduces various historical events, plays the role of famous historical figures.

Recently, intelligent types of team building have gained popularity. This type of team unity contributes not only to the comprehensive development of employees, but also to everyone’s ability to make decisions quickly. Jointly solving complex problems is a good basis for building a team. Carrying out this type of team building does not require large space and attracting any equipment. It is enough to find interesting problems to solve them in a team.

Creative team building is also gaining popularity, because creativity is highly valued in the modern world. Companies want employees to engage in unusual and interesting tasks. For example, drawing a big picture. Participants in teams draw parts of the picture, at the end of the event the picture is combined into a single whole. After the event, participants retain the created objects. The big picture is often hung in the lobby of the company, as a reminder of the overall success.

Each type of team building is extremely effective, because any joint activity of the team, not directly related to work, has a positive impact on the relationship between each part of it. Companies often conduct such events, combining various types of team building, which makes such activities even more interesting and effective. Teambuilding of all kinds is a way of proving to a competitor that they are better than them. After successful teambuilding, employees interact more effectively with each other and feel more comfortable in the team.

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MARKETING STRATEGIES THE ENTERPRISE NEEDS

Many businesses chalk out marketing strategies to be ahead of them. However, only unique marketing strategies can help to compete a business in tough market conditions. Routine or clichéd marketing plans simply do not help in achieving greater marketing goals.

A well thought of marketing strategy is bound to work well for generating brand awareness and driving your potential customers to the business. But the marketing plan must be tailor made for your business. So, research and find out the specific marketing needs and challenges and then plan accordingly.

A survey has revealed that in 2017, 65% of companies think that generating traffic and leads is their marketing challenge. They found generating of leads the most daunting marketing task. Proving the ROI of marketing activities was the challenge for 43% of the companies. Some companies thought that their tight budget is the challenge. Find out your marketing challenge and resolve it before moving forward.

Marketing is crucial for business promotion. Still, not all the companies are exploring the marketing plans fully to their advantage. A CMO Council study shows that out of the surveyed marketers, just three percent marketers have their data fully integrated and aligned. The company may also be among the businesses that are yet to explore full potential of marketing.

But before launching the marketing campaign, it should be checked if the company’s website design is perfect and professional. People will come to the business website from different avenues on the web. Upon finding the website, they must be impressed by its colors, fonts, use of images, navigation, and presentation of the business information

1) Find Marketing Partnership

The company can look for marketing partners. This is the way to deliver a better content as the business can benefit from the experience of the collaborating partner firm. Moreover, the company will benefit in a number of ways. For instance, the cost of content creation will be lowered. The brand exposure to a new audience will be much higher than when the company does it alone.

Take for example the case of Converse. The music company collaborated with Guitar Center to record music. Due to the partnership, both the companies were able to generate useful content that they used for creating a series of YouTube videos about the musicians.

2) Explore User Generated Content

Customers like to share their personal stories. The business can gather these stories from the potential customers in the website's testimonial or comment section or a forum that you specially created for discussion on your products or services. You can initiate a discussion on a social cause and get the people exchange ideas. Or, you can ask them to make ads for your company just to engage them with your business. There are many ways to encourage the users to create content.

The user-generated content gives you some idea about the background of your target audience. You can know about their personal likings and disliking. You can then formulate your marketing strategy accordingly for your consumers based on their problems.

3) Use Influencers For Business Promotion

Find out the top bloggers and experts in your industry. Collaborate with them. For example, you can offer to write a guest post on an influencer's blog so that millions of users of the blog become aware of your company and its business.

4) Connect With Customers

Create an open forum on your website or at any other platform where your customers can openly have their say about your company and its products or services. In this way, you will have an insight of what your consumers actually feel about your business. Moreover, when you allow them to connect with your business, your potential consumers will increase their interaction with your brand and it will help build a trust for your enterprise.

A way to connect your brand with your potential customers is to encourage your employees to take the initiative. The employees should be specially asked to quickly respond to your consumers' queries about your business and its offerings via email, chat, phone and other means.

5) Make Your Customers Feel Special

Many companies have this tendency of ignoring their existing customers in their endeavor to find new consumers all the time. Their focus is more on increasing the number of consumers. While getting the new consumers is extremely important, making the old customers happy is also equally important.

To make your existing customers feel happy and special, treat them like VIPs. You should try to give them something extra such as a gift or coupons, invitation to an event and so on. This will generate a trust and word of mouth publicity for your brand.

To conclude, these tips will help your business generate brand awareness amongst your target consumers. Make sure that you have a dedicated marketing team which concentrates hard to implement these suggestions.

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PRINCIPLES AND MECHANISM OF REGULATION OF PUBLIC ECONOMY

Ukraine is currently in a transition period, so defining and researching the mechanism for regulating the state economy is quite a challenge. Based on scientific research in the field of public administration, we find out that countries with transformational economies need state regulation more, since self-organization (namely, it is peculiar to the market) is characterized by stable systems and ineffective in the transformation of systems from one to another. In this period, state regulation should be based on principles that are capable of ensuring the coherence of the economic interests of the entities of society, enterprise and state. Adherence to these principles will be a guarantee of protection against disorderly and destructive interference with the economic mechanism of management.

Nowadays, we do not have a clear definition of what the mechanism of state regulation of the economy is, since this statement should include the fact of the unstable state of the country's modern economy, its dynamism and instability. Therefore, the mechanism of regulation must be exceptional, be ready for any change in the direction, objectives and goals of state economic policy.

In a stable economy, the market mechanism is one of the most important socio-economic processes, and the state regulation of the economy in this case plays a secondary role. The main purpose of the latter is to provide conditions for the market to work, eliminate the negative consequences and solve problems that are not under the power of the market mechanism.

State regulation plays a significant role in the transition economy and, in order to ensure the development of market relations, the state's influence should not be diminished. Excessive state intervention in the economy can lead to negative trends and consequences, and it can lead to a decrease in the state's financial capacity. In order to better reconcile the interests of the entities, realize the economic and social goals of social development, the functioning of the social partnership institution is often involved in the market and state regulation of the economy.

The basic principles of state regulation of the economy are:

• scientific validity

• reconciliation of interests (reconciliation of interests of all subjects of economic life);

• systematic (caused by the activity of the national economy as a multi-level system);

• commitment (achievement of goals);

• priorities (identifying major problems and solving them with minimal use of resources);

• complexity (the state should use all possible means and tools available to it);

• adaptation (continuous analysis of results and impact on economic processes);

• minimum sufficiency;

• efficiency;

• economic and organizational support (use of resources to achieve adequate goals);

• comparison of costs (to provide the state administration apparatus) and the results of state integration into the economy.

Implementation of the principles of state regulation occurs through the proper methods, which are a number of specific means of regulation that affect the interested object to achieve its goals and objectives. The methods are more dynamic than the principles, and some of them may be 'sidelined' when tested, while others may appear to satisfy a specific socio-economic situation. The relationship between the principles of regulatory influence and the methods through which they are implemented is not identical, because the methods of regulation are governed by principles of regulatory influence and not the other way around.

We can conclude that the position of modern Ukraine in a market economy is rather unstable and requires a really effective mechanism of state regulation of economic processes, which would include the changing situation of the market environment, the need for an effective and rapid response to changes in economic processes. Adherence to the system of the abovementioned principles of state regulation in practice will open new opportunities and horizons in the interaction of subjects and objects of state regulation through the mechanism of 'reverse influence'. The implementation of the measures increases the 'pressure' of interest groups on specific state institutions through their representative bodies as structures of civil society. Public authorities, whose functions include regulatory activity, are guided in their actions by economic, institutional, legal, social and organizational methods, which are embodied by appropriate means of regulatory influence within the framework of the regulatory field.

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FEATURES AND ROLE OF STRATEGIC MANAGEMENT OF THE ENTERPRISE

The relevance and necessity of strategic planning is manifested both in the process of transition from a planned economy to a market economy, and in difficult, unstable conditions of the world economy development. The strategic planning process is central to the strategic management system. As a result of developing and achieving strategic goals, the company is able to control all the units and compare the results achieved with the goals. Strategic activity development and planning covers all sections and areas: production, financial, marketing, staff etc.

Strategic management aims to expand the forecast horizons, to create opportunities for timely response of the enterprise to changes in the environment in the markets of goods, services and technologies, in scientific, technical, social and political spheres [3].

Strategic management is a dynamic process of analyzing, selecting strategies, planning, securing and implementing the plans that are developed by the organization[1, c.18].

The tasks of strategic management are to:

1) to define the field of activity and formulate strategic plans;

2) to set strategic goals and objectives to achieve them;

3) to formulate a strategy to achieve the set of goals and results of activity;

4) to implement the strategic plan;

5) to evaluate the results and modify the strategic plan and / or methods of its implementation [2, c. 11].

Strategic management is based on the following principles:

- purposefulness and continuity;
- uniqueness and validity of methods of achievement;
- systematic approach and priority;
- flexibility and change management;
- efficiency and effectiveness.

Top management usually deals with the formation and development strategy, mission and objectives of the company. In the process of strategy implementation, each level of management solves certain tasks and performs the assigned functions.

The strategic management process generally consists of three interrelated steps:

1) preparatory, which serves as the basis of information support for strategy development;
2) the main stage - the stage of strategy development;
3) final stage - the stage of implementation, correction and feedback [3].

Strategy development and formulation involves the following actions:

- determining the direction of development of the organization;
- analysis of internal and external environments of the organization;
- identifying opportunities and threats;
- development and revision of the strategic plan;
- planning the implementation of strategies;
- inspection and control.

The most important factors before choosing a strategy are the organization's goals, top management priorities and interests, the experience of previous strategies, risks and time factor. The size of the organization is also a valuable factor.

The choice of business organization strategies is made by directors according to the analysis of key factors. They characterize the state of the firm and implemented strategies. The firm's position and position in the industry play a crucial role in choosing a growth strategy. Leading, strong firms should strive to maximize opportunities and strengthen this position. Leading firms, depending on the industry, must choose different growth strategies. If the industry is declining, you should rely on diversification strategies. But if the industry is developing, you should choose a concentrated growth strategy or an integrated growth strategy [2, c. 265].

Therefore, the main goal of strategic management is to reduce the negative effects and the response of the company to changes in the environment. Strategic planning is carried out by the management of the organization on the basis of defined principles and three main stages (preparation and research, development and implementation).

So strategic management is a continuous, purposeful and detailed forecasting process for the long-term management of the organization. In general, strategic management significantly increases the efficiency of enterprises in today's environment.

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COMPONENTS AND STAGES OF SALES PROCESS

Contemporary authors define the concept of "marketing" in different ways. Some researchers view sales as a process of physical movement of goods and identify them with the concepts of "distribution" and "commodity movement." Other authors consider sales as a customer engagement process. A.P. Pankrukhin believes that sales are "direct communication between the seller and the buyer" [1, p. 322]. Some authors identify the concepts of "sales" and "sales activities". P.I. Belinsky notes that marketing activity is a process of promoting finished products on the market and organizing commodity exchange in order to obtain entrepreneurial profit [2, p. 429].

There are following basic definitions of "sales", "sales policy" and "sales activities":

Sales policy is the behavioral philosophy or general principles of activity that a firm intends to adhere to in the construction of distribution channels for its goods and the movement of goods across time and space.

Sales policy aims to create a product distribution system that ensures that the product is accessible to the target consumer.

Sales activities are all that maximize the benefits of a trade agreement for each partner, taking into account the interests and requirements of the intermediate or end consumer.

Unlike a trading company, sales at an industrial enterprise can begin before the goods are physically manufactured. Industrial goods may have characteristics that prevent them from being manufactured in advance, since in each case the parameters and characteristics of the products must be agreed with the buyer. Therefore, through incentive measures, the company first searches for the customer. It is from this stage that the marketing activity begins at the enterprise.

Studying the Ukrainian legislation gives a more complete idea. Thus, in the Regulation (standard) of accounting 16 "Expenses" lists the costs of sales.

These include:

- costs of packing materials;
- the cost of repairing the container;
- remuneration and commissions to sellers, sales agents and employees of sales units;
- advertising and market research (marketing) costs;
- costs for pre-sale preparation of goods;
- the cost of business travel for employees engaged in sales;
- costs of maintaining fixed assets, other tangible fixed assets related to the sale of products, goods, works, services (operating lease, insurance, depreciation, repair, heating, lighting, security);
- costs for transportation, transshipment and insurance of finished goods (goods), freight forwarding and other services related to transportation of products (goods) in accordance with the terms of the contract (basis) of delivery;
- the cost of warranty repair and warranty service;
- insurance costs intended for further sale of finished goods (goods) stored in the warehouse of the enterprise;
- costs for transportation of finished goods (goods) between warehouses of subdivisions (branches, representative offices) of the enterprise;
- other costs associated with the sale of products, goods, works, services [3].

Sales features:

1. Transportation - any action to move goods from their place of production to their place of consumption.
2. "Division" - any action to ensure the availability of goods in quantity and form appropriate to the needs of the user
3. Storage - any action to ensure the availability of goods at the time of purchase or use in proper quality
4. Sorting - any action on the creation of kits, specialized or complementary products that are adapted to the situations of consumption
5. Contacting is any action that facilitates access to numerous consumer groups.
6. Outreach is any action that enhances knowledge of market needs and competitive exchange conditions.

Therefore, when summarizing the definitions and concepts of sales, it should be noted that they include many components and stages, so there is every indication that sales are a process. But since this process covers different components, such as commercial, legal, transport, communication, in this case it can be concluded that sales are a full component of the enterprise. Consequently, concepts such as sales and marketing activities are identical.

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ENVIRONMENTAL AND SOCIAL ASPECTS OF MODERN ECONOMIC RESEARCH

The study of the economic picture of the development of the economy has excited humanity at all stages of its development, from the most primitive observations from ancient times to the large-scale computer analysis of today. Undoubtedly, the studies of the first economists are significantly inferior in their methodology and depth of analysis to modern scientific theories, but these small steps have initiated a large-scale study of economic processes, which makes it possible to improve the economy, and, as a consequence, the standard of living of the population.

In the world today there isthe popular myth that the formation of a market economy is bound to make our society prosperous and happy. The United States, Germany, Japan, South Korea, rarely mentioned Italy, Turkey, and Spain have the same type of economy, but their effectiveness is different. There is virtually no mention of Bolivia, the Philippines or Colombia [2,p. 352]. So what makes some countries economically efficient and others inefficient? In order to find the answer to this question, several direct and indirect influencing factors have to be considered.

Ukraine, unlike many Eastern European countries, not only gets rido fits to talitarian heritage but also revive sits national state hood. Ukraine's departure from the planned economic command system necessitates not only orientation towards a market economy, but also a specific economic system. Certain features of each system make them highly effective in on estate and completely ineffective in others [4, p. 280]. The transition of Ukraine to the market requires the choice of one genetically related to the Ukrainian mentality, which can be taken as a basis for the formation of the national economic system.Studyingdifferenteconomicsystems, wewillkeepinmindthatUkraineneeds a good example of economic reforms. Who should be guided by Ukraine in the formation of its own economic system - Germany, USA, France, Sweden or any other state? Will any of them have an economic system suitable for Ukraine?

In addition, the legacy in the form of critical pollution and environmental degradation, complicated by the Chernobyl disaster, provides particularities to the economic system of Ukraine. Therefore, one of the main focuses of the modern economy is to consider the ecological and economic efficiency of states. Even superficial analysis shows that states can be economically but not environmentally efficient. Analyzing economies as ecological-economic systems allows us to look at the effectiveness of national economies. The subject of the study is a comparative analysis of not only the socio-economic but also the environmental performance of national economic systems.Against the background of dramatically rapid environmental changes, the economic sector is interested in the reasons that make economic systems environmentally high or ineffective. It is comparative studies, in contrast to pure theory, that make it possible to compare the ways in which different peoples went about forming a system of national values, ways of organizing production, and relationships with the environment.

The ecological and economic system has two large subsystems in its structure – ecological and economic. The environment, as a combination of natural and artificial systems, is not only the place of human existence and the object of its labor activity, but also the result of such activity [5, pp. 78-81]. Analyzing the environment as a system "is extremely diverse, both interms of sites (natural resources, pollution, geology, land use, ecology, etc.), and problems (modeling, prediction, management, etc.)". Until sometime, people live din the environment without disturbing the overall ecological balance, ecological systems were able to "mitigate" the negative impact caused by economic activity. But the rapid development of industry, since the end of the XIX century, thousands of times have increased the negative impact of human economic activity on environmental systems, which are increasingly unable to neutralize it. The result is the emergence of a global environmental crisis. Today, humans are unable to reproduce ecological systems (perhaps not in the future).For example, it is impossible to restore a forest if it has been destroyed as an ecological system. We can have a forest plantation very similar to an ecosystem called "forest", and even more, so what is called an "English park". Man is also an element of the ecological system, by the way, very aggressive to wardsit. The economic system, for med by a man, is extremely fast developing and is a destabilizing factor of the ecological system, which disturbs its general equilibrium.

Despite the fact that all material goods are created from raw materials removed from the ecological system, economic activity and social activity take place in the ecological system, the consequences of such activity deform and destroy it, many studies on comparative economic systems are limited only by the mention of "environmental factors", and even do not mention them. Whatever approaches to the characterization of economic systems and their functions, they would all be dead theory without an ecological system. After all, none of the material goods can be created except from raw materials extracted from the environment. Taking a broader look at this problem, we can say that the economic system has emerged and now it evolves and functions in the ecological system. V. Golesovsky illustrates this thesis by considering the structure of the social sub system and its interconnections.

Social and cultural factors also have a significant impact on the economic system. They reflect features based on race, religion, employment, income levels, health levels, traditions, national values [3, pp. 112-116]. These factors are indirect, but they have a significant impact on the perception or non-perception, implementation or failure of economic reforms. This approach was considered by the scientists of the Roman Club, to which the well-known Swiss economist of Ukrainian origin Bogdan Havrylyshyn belongs. B. Havrylyshyn considers the economic system as an element in the architecture of the social order. Thus, the social system, as a particular system, includes the following components:

- values- beliefs that affect relations hips between individuals or groups, relations hips within society;
- political rule - a set of political institutions and procedures;
- economicsystem - a wayoforganizingtheproductionanddistribution ofwealthcreatedin a society.

In some countries, basic values are understood and supported, while in others, they are not accepted by society. In most countries, a system of beliefs prevailing in society is proclaimed [1, pp. 144-151]. The most appropriate way of classifying values is related to the degree of importance that a person attributes to himself, to others or to society as a whole. Considering the criterion of significance, B. Havrylyshyn distinguishes the following types of values:

a) individualistic and competitive values. Their essence is that the individual is viewed from the point of view they are concerned with their own needs and aspirations, each looking for ways of self-affirmation and self-expression. For each person, the measure of their own achievements in any case is a comparison with the successes of others. So, with other people, success is achieved through competition. Some win and others lose. The public good is a by-product of the individual's aspirations for self-realization;

b) the bottom line is that a person is considered only as "a particle of the universe and a particle of the social order. Everyone is called to play their own role in it, to voluntarily subordinate themselves to higher goals, fulfill their responsibilities and fulfill their purpose through cooperative interaction with others." A person's dignity is assessed by his orher desire to live so as to meet the expectations of others and not to show their superiority over them. The virtue of man is to restrain himself rather than self-realization, adaptation to expectations.

c) egalitarian and collectivist values. In this kind of values, a person is viewed as a member of the community, inseparable from society, as a part of the collective entity. At the heart of these values are collectivist ideas and ideals that originate from certain ethical motives, religious beliefs, but are most clearly outlined in Marxism theory.

Therefore, economic research clearly has a purely economic basis. However, it is precisely contemporary economic research that draws attention to equally important factors, such as: environmental and sociological factors influencing the effective development of the economy.

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DEVELOPMENT OF BUSINESS PROMOTION STRATEGY AND MANAGEMENT METHODS IN THE FIELD OF IT SERVICES (ON THE EXAMPLE OF AN OUTSOURCING COMPANY)

When developing strategic goals, some features of the enterprise should be taken into account, such as its specifics, company problems, strengths, and current needs. The problems most often encountered in outsourcing companies in the IT sector are the lack of active projects, payment methods, which often have a fixed price, but not a fixed amount of work, the absence of companies with certain technologies required in the market. Accordingly, goals can fluctuate in their content, taking into account the needs of the company, but they have to be to achieved strictly according to the schedule. One of the most important planning rules is a clear setting of the time by which the plan must be completed. It is best to set global goals for 2-5 years, because in a few months it is difficult to evaluate the real outcome of strategic actions. It is worth mentioning that planning with appropriate techniques, such as Scrum, Ajile, control, focus on the result are still the main criteria for successful business development. Such systems help to be responsible for projects, not to neglect time limits, not to disappoint clients, and thus to achieve and maintain a decent reputation of the enterprise.

Outlining the company's goals is directly related to the strategic vision and strategic priorities of the business. The strategic vision, in turn, reflects how the manager of the company, in view of his professional sense and experience, sees the achievement of the developed goal, predicts the development of the strategy, considers possible options for planning, indicates the risks that may be identified in the process of the plan implementation. It is not necessary that the final strategic plan be identical to that of the manager. A strategic vision is first and foremost a benchmark for the company to follow, the foundation that will form the basis for the final strategic plan. The IT company manager needs to have independent experience in the field, be aware of changes in it, follow the innovations to guide the staff and, if necessary, identify difficulties in their beginning. At the same time, it will help together with the team to develop strategic priorities for the company: working closely together with the resources of developers, sales, managers and management is able in all directions to explore all segments of the business and outline exactly those priorities, considering which strategy will work the most productively. Given the specificity of the IT company staff, the manager must balance between discipline and creating a freer atmosphere than that required in other areas of business. It is best to choose a partner management style, but not to go beyond the bounds of a friendly relationship. The company manager should even be a coach. Working in the IT field does not require a rigid work schedule from 9 am to 6 pm, the main focus is on the result and timely completion of the task, which will fully meet the needs of clients. Thus, by making concessions to employees, managers in the company should as a rule arrange regular meetings with them, which will allow to check at what pace the project is being fulfilled or if it meets the set plan, to make certain conclusions and possible adjustments in the employees' schedules. In any case, the employee should have the support and ability to discuss the difficulties involved in the process. Everyone should understand that even recognizing personal incompetence cannot affect a company in the same way as termination of the contract with a client.

Understanding the goals and priorities of the company, it is advisable to move on to define the actions and their further implementation. Any plan should lead to increased competitiveness and position in its own sphere, the strategy can not be universal and it is designed according to the specific nature of the problem to be solved and the goals to be achieved. Strategies may include launching a company's products in a new market, securing positions on what has already been achieved, reducing staffing, the list of services provided, attracting loans and investments. You can move in any direction necessary for getting the result. For IT businesses, strategic ways to overcome a crisis or increase a company's revenue may be to expand the number of services provided which is called a diversification strategy. More specifically, employees can develop additional technologies that will provide even greater opportunities to win new customers, and start developing other products that are not typical of the business. This solution does not require a lot of costs, and developers with a certain level of motivation can improve their knowledge and skills even during non-working hours. In the future, or if the situation in the company has a stable status - overtime can be introduced to increase the speed of project implementation or increase the number of ongoing projects. Another strategy option is concentrated development as the company seeks to strengthen its position in the already well-researched market. A method that can help to achieve this is to attract more competent employees to the sales team. The use of third-party capital, such as credit, is not desirable before the critical stage of the enterprise. An important step is to pay attention to the development of marketing, social networking, creation of an informative site and its promotion in search engines. Sending advertisements to your target audience will also have a positive effect. Contacts can be gathered on appropriate platforms. In general, in any case, all companies should strive for the highest level of success - when they learn about it by the "spoiled phone" method. Such company popularity indicates a high level of trust in it and customer loyalty.

Every step in the implementation of the strategy plan must be monitored, and the complex must be monitored for the weaknesses of the enterprise in order to prevent their impact on the current work. The strategy has to be flexible, it has to take into account global trends and changes in the market. The unity of the entire enterprise hierarchy, when all divisions work towards one global goal, needs to improve organizational conditions and comply with them. The results of the strategy implementation should be evaluated at the end of each stage by comparing the desired with the received, this approach can also be the basis for correcting the actions already in the process. It is often a positive experience to monitor the business development of competitors and the feasibility of incorporating some of its components into a personal strategic plan. This approach is a sign of following a copy strategy, but it should not be completely followed by the IT business. In the midst of the IT industry, there are some specific metaphors where employees at different levels openly share their experiences and give tips that make sense, especially for start-ups. Or there is an alternative approach to familiarize yourself with the concept of competitors' businesses - to make a completely different product, create a fundamentally new approach and strategy, create a trend rather than follow the existing one.

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MODELING THE PRICE OF A FOREIGN TRADE CONTRACT CONSIDERING INCOTERMS 2010

To improve financial condition and increase profitability, an enterprise needs to expand its product markets, partner with new customers, and enter into contracts.

When entering foreign markets, it is important for the enterprise to set and calculate the price for its product correctly, since price is the main criterion for making consumer decisions.

Enterprise selected for research is a subsidiary company «Romanivski lisgosp APK». The company plans to export lumber.

The exporter, «Romanivski lisgosp APK», must determine the country which company's products to be exported to, investigate its business environment, comply with international and national rules on the content of the FEA contract. The exporting company must choose the trade term of Incoterms 2010, and calculate the total cost of the FEA contract according to the research.

Thus, the process of modeling the price of a foreign trade contract involves a number of stages, in particular:

1. Identification of the largest lumber importing countries

The Atlas of Economic Complexity was used to determine the largest importers of lumber [1].

The world's largest lumber importers have been identified, and the largest lumber importers are: the USA, China, Japan, Germany, the United Kingdom, France, Italy, the Netherlands, Canada and South Korea.

2. Search for potential importers of products that will be manufactured by the company

The largest lumber importing companies were identified: «Montana»(USA), «GION» (China), «ORICO» (Japan), «Kruger» (Germany), «LISPANT» (the UK), «LAZ» (France), «Ambassador» (Italy), «TARB» (the Netherlands), «Royal» (Canada) and «NOMU» (South Korea).

3. Assessment of the business environment of countries of registration of potential counterparties.

The next step is to evaluate the business environment of potential buyers, to study tax rates and import payments for lumber in the countries of import of these products. For this purpose we will use the site of the International Trade Center [4], and the data on tariffs by groups of the International Classification of Goods. To determine VAT rates we will use the site of consulting and audit OLZA [3].

4. Construction of alternative routes, choosing the best ones.

The next step is the choice of route and means of transportation, as well as the cost of delivery. In order to build the route and calculate its cost we will use the global transportation aggregator, supplied with the access to the largest network of independent SeaRates agents. [2].

5. Negotiating with potential counterparties.

After the negotiations and prior agreements were reached, the bases of delivery, the price per unit of the goods, the cost of packing the entire volume of the goods and the currency of payment and the contract currency were agreed.

6. Calculation of the cost of alternative import offers of potential sellers and justification of the price of the FEA contract.

The calculations for this stage are presented in table 1.

Table 1

Calculation of cost of delivery of exported products, taking into account trade terms of Incoterms 2010

Indicator	*Supplier / Base (Formula) Incoterms 2010*									
	«Montana» /FCA	«GION» /CPT	«ORICO» /DAP	«Kruger» /FCA	«LISPANT»/ EXW	«LAZ» /DDP	«Ambassador» /CPT	«TARB» /DAT	«Royal» /DAP	«NOMU» /CIP
Delivery volume	200	200	200	200	200	200	200	200	200	200
The suggested price	110	110	110	110	110	110	110	110	110	110
Delivery cost	22 000	22 000	22 000	22 000	22 000	22 000	22 000	22 000	22 000	22 000
Export customs formalities	0	0	0	0	0	0	0	0	0	0
Transportation costs in Ukraine	930	930	930	930	930	930	930	930	930	930
Payment at the terminal in Ukraine	435	435	120	435	120	435	435	435	435	120
Cost of basic transportation	1 000	1 490	1 420	950	690	1000	850	1 350	4 100	885
Cost of transportation within the country of export	100	906	244	584	331	367	179	640	2 549	127
Payment at the terminal of the buyer's country	581	325	325	362	375	279	325	424	200	295
Import customs formalities, incl.										
- import duty	704	1 320	814	0	0	0	0	0	0	1 760
- VAT	-	3 964.40	1 825.12	4 180	4 400	4 400	4 840	4 620	1 320	2 376
Insurance costs	4 400	4 400	4 400	4 400	4 400	4 400	4 400	4 400	4 400	4 400
The cost of production, according to the proposed basis	**23 365**	**26 086**	**25 039**	**23 365**	**22 000**	**29 411**	**24 719**	**25 779**	**30 214**	**28 757**

7. Choosing the best buyers.

The simulation of the cost of delivery of the exported products, based on the trade terms of Incoterms 2010, allows to argue that the most advantageous are the proposals of these companies:

- Royal from Canada (Incoterms 2010, trade term – DAP) estimated cost to complete contract and product delivery is $ 30,214;
- LAZ from France (Incoterms 2010, trade term – DDP), $ 29,411;
- NOMU from South Korea (Incoterms 2010, trade term – CIP), $ 28,757.

Therefore, the type of products to be exported, the potential buyers and the country to which the products will be delivered were selected. The business environment of each country was studied, and the international and national legal norms regarding the content of the FEA were taken into account.

The cost of delivery of the exported products was calculated taking into account the trade terms of Incoterms 2010 and the most favorable offers were identified.

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ART MANAGEMENT: HOW TO SELL YOUR ART

"The artist is not a profession" - is constantly heard by young artists. The idea that an artist is always poor is a stereotype that has long been dispelled. It is a matter of inability to convey your art, not the hopelessness of the profession. To help people who want to live and make art comes to art management.

Art management is management in the field of art; a combination of methods, principles and means to implement business opportunities in the arts. Like any branch management, it has its own peculiarities. First, the saturation of the market; the difficulty of staying in business for a young artist. Secondly, the subjectivity of the cost of the painting is unknown (especially in the case of modern art).

Now it is necessary to find out what makes a successful art management.

1) A message to society. You need to be firmly aware of what you do it for. A good idea is the foundation of success. If you believe in your idea, make others believe it.

2) Uniqueness. Each person is special, and the artist must express it and explain what makes him another. In addition you must be confident in their abilities to achieve the goal, despite the difficulties. Stock up on energy, optimism and endurance.

3) Communications. In importance, they are not second, but on an equal footing with the presence of a message. Connections need to be established and maintained not only with buyers of paintings.

First of all, it is a desirable audience - art, in most cases, "to taste", so you should not try to please everyone at once. Select contingent and maintain contact with him.

The next ones who need attention are your own team. It is difficult to create and solve all the problems associated with the promotion of the picture. The artist has to decide what he can do on his own, and what duties to delegate. At the same time it is necessary to maintain a friendly atmosphere in the team, optimism and belief in a common cause.

Do not forget about "people of art". It is necessary to maintain strong ties with gallery owners, valuers and other artists and creative people. It is advisable to attend creative evenings and exhibitions. Demonstrate that you are now also in the creative business and, at the same time, ready to collaborate creatively with others.

4) Investments. It is difficult to start from scratch. In any case, investment is needed. Find support everywhere. Many foreign investors are ready to invest in the development of contemporary art.

5) Own attitude. Society evaluates, first and foremost, not the work, but the one who created it. Environmental awareness, violence not only on humans but also on animals, gender and racial equality, tolerance and more are important. This creates your image.

Still, don't be afraid to be yourself. This are important. Open yourself to the world and do not be afraid to shock. Shock, aggression, tears, laughter - arouse emotions. It's appreciated, because it's real.

6) Technology. Do not forget about innovation and Internet space. Keep up with the news, it can help create something unique and new in nature.

Art and uniqueness have always been in fashion. It is important for you to be noticed. Many contemporary artists have proven that in life you can become famous and rich at the expense of your own art. The main thing is to adhere to the principles of art management and not be afraid to be yourself.

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VETERANS ATO / OOS IN FRANCHISING

The long course of hostilities in eastern Ukraine has led to an increase in the nu mber of servicemen who have received veteran status and category of combatant. Aft er serving their country, veterans deserve to be honored for their sacrifice and commit ment.

The issues of integrating veterans into society and adapting them to a peaceful life are becoming more and more relevant. Veterans often find the transition from the military to careers in the civilian world challenging. It's not just simply moving from one job to another. It's adjusting to a world far different than the structured one they're leaving behind.

Taking into consideration international experience, veterans' training, retraining and opening their own businesses are the basis for their successful professional adapt ation.

In international practice, particularly the American one, programs of professional adaptation of veterans that stimulate the opening of their own business and the granting of privileges for franchising are very widespread.

More than 5,600 veterans have become franchisees in the past four years, according to the International Franchise Association [2]. That's thanks in no small part to the organization's VetFran program, through which some 650 member companies offer discounts, mentorship and training to veterans seeking to become business owners.

Franchisors find that veterans, with their leadership and teamwork skills and propensity for following a system, make ideal franchisees.

According to the International Franchise Association, one out of every seven franchises in the U.S. is owned by a military veteran. Military veterans make excellent franchise owners because their training and experience have prepared them for these unique roles. The main reasons why military veterans make great franchise owners are: 1) they are easily trained, 2) they are leaders, 3) they get "systems" (veterans understand that systems exist for a reason and they adhere to those systems), 4) they are committed, 5) they understand the concept of being part of something bigger, 6) they can handle the stress [1].

There is a lack of relevant scientific works by Ukrainian authors in this area. Among domestic researchers, issues related to various aspects of labor adaptation of combatants were considered by: O.H. Husak, P.V. Razov (interprofessional mobility, labor adaptation of dismissed servicemen), etc.

Some aspects of professional adaptation of veterans through the opening of their own business are covered mainly in the scientific works of foreign authors, among which are the following: Anna Zogas, Steve Cloetingh, Kedma Ough, Jeremy C. Shorta, Miles A. Zacharyb, David J. Ketchen Jr.b and others.

Research on entrepreneurship and franchise development for veterans is done by profile organizations, including the International Franchise Association, the Washington Franchise Association, the Center for Excellence for Veteran Entrepreneurship, the Federation for the Development of Franchise, Hospitality and Infrastructure in Ukraine, and others.

The aim the study is to investigate the prospects of franchise development and substantiation of directions of international experience introduction in the development of franchising in the programs of professional adaptation of Ukrainian veterans.

Franchise ownership is an opportunity for veterans to build upon the experience and skills they acquired during their military service. The ability of veterans to succeed within a structured system may contribute to the fact that veteran-owned franchises have a higher success rate than that demonstrated by all types of veteran-owned businesses.

Choosing the right veterans franchise depends on personal goals, preferences and financial resources.

For example, in USA Veterans franchises exist in all types of business models which are a significant potential market for franchise clients, including: Automotive and Mechanical Franchises (Maaco auto repair, Sears Handyman Solutions and Mr. Appliance repair services), Health and Fitness Franchises (Title Boxing Club, Pro Martial Arts Karate), Home-Based Franchises (Expedia CruiseShipCenters travel planning, ClaimTek medical billing), Low Cost Franchises (Novus Glass windshield repair, Pillar to Post home inspectors), Senior Care (Accessible Home Health Care, Home Helpers Home Care [3].

It should be mentioned that the owners of a veterans franchise will have the same challenges inherent in all types of franchises: a significant amount of time and effort. But the their advantage is in that fact that the same qualities that help servicemen thrive in the military make them great candidates for owning their own businesses or leading others in key positions of employment, as veterans are very process-oriented and are trained to perform well under stress and are committed to excellence, learning perseverance and dedication during their service. Also veterans are responsible and accountable, because they know the importance of teamwork.

Self-employment and involvement of veterans in business can not only be an ef fective tool for adapting to civilian life, but also become a powerful catalyst for socio -economic change in Ukraine.

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CONCEPT OF POSITIONING IN BRAND MANAGEMENT STRATEGY

Today, branding is the main link between production and a consumer. That is why more and more successful companies are developing a detailed brand management strategy to maintain strong competitive positions in the market and future growth. In the process of developing a brand management strategy, the key element is the concept of positioning, which encourages the further development of all marketing communications that come out of the brand.

According to J. Trout and E. Rice, positioning is an operation on the minds of potential buyers. Positioning creates a certain dogma in the mind of a consumer. Positioning is the influence on the image of consumers' opinions (the product is positioned in the mind of the consumer) [2, p. 307].

The concept of brand positioning is a system of approaches and ways of knowing the phenomena and processes of forming possible brand positions depending on its benefits and advantages and the relevance of this position for the target segment of consumers [1, p. 40].

Brand positioning determines the direction that is needed for concentration of a company's strategic efforts. It happens under the influence of the environment and should not be done without the brand itself. Thus, brand positioning is at the same time the main source of internal and external development of the company [1, p. 40].

In the process of brand positioning, the first (main) step is to find and choose the right strategy. This stage determines the ability of the brand to be better than competitors, to attract the customers’ attention, to establish loyalty to the brand and the enterprise itself.

According to the research, eight main strategies of brand positioning in the market were identified: 1) Competition-oriented positioning; 2) consumer-directed positioning; 3) price positioning; 4) positioning aimed at prestige; 5) positioning oriented to the development of a specific type of goods; 6) customer positioning; 7) positioning depending on the situation; 8) positioning oriented to unique properties.

Competition-oriented positioning is a confrontation with a competing brand in order to get a relevant market share. The brand can be positioned as something completely new, unlike the brand of potential competitors, or with an emphasis on higher quality compared to competing products. This strategy is based on assessing the status of market leaders and identifying their weaknesses, and also based on finding the unmet consumer needs.

When choosing a competitor-focused strategy, you need to remember your own reputation. In order not to lose customer trust, the company needs to focus on the strengths that really exist. It should not try to gain new market share by providing consumers with false information.

Examples of applying this strategy are such well-known brands as Coca-Cola and Pepsi, which constantly compete with each other, changing the shape of the bottle, the taste of the drink and its sugar content. In addition, with regard to McDonalds, KFC, for example, often positions itself as an institution with a larger assortment, better quality and lower price. For example, when a McDonald's advertisement showed a horn promotion, KFC offered the consumer three types of horns at an even lower price.

Consumer-oriented positioning is justified only when the company wants to attract the attention of a specific target audience to a certain type of product. This strategy can also be used by small businesses that specialize in the production of a specific type of product with specific properties. As a rule, the advertising of such products contains phrases «made for...», «for those who...», for example: Skoda advertises a new car brand under the slogan: «Created for those who want to be different» and Kiwi finishes advertising the new TV with the words: «For those who understand».

Brand positioning by price has a specific feature: it can take on three different values, moving in one of three directions: the same, but cheaper; great value – great opportunity; lower cost – low cost.

«The same, but cheaper» strategy is used mainly by those companies that do not have a stable consumer audience and rationally assess their market share. As a rule, such companies are not well known compared to their competitors and their brand is still under-formed. Therefore, without being able to sell the product more expensive due to the lack of high level of popularity, firms often make analogues of branded products that already exist on the market, and sell them at times cheaper. This type of positioning is usually targeted at low-income segment of consumers and uses the following slogans: «At home, only cheaper»; «Like everyone else, only cheaper»; «If you can't see the difference, why pay more?».

Positioning «Great value - great opportunities» usually works for those consumers who want to emphasize their own status or want to look like those «who can afford it». In this case, the customer pays not only for the product itself, but also for the popularity of its brand, image and prestige.

The concept of «Less Opportunities – Low Cost» positioning is typical of companies whose target audience does not want to pay extra for what they can do without. Thus, firms offer customers a product at a low price but lower quality, for example, Aushan launched its own line of products – «Every Day», which cannot be described as «high quality» products, but at the same time have a lower price, compared to analog products, which may be of interest to a certain category of consumers.

Prestige positioning is somewhat similar to price positioning, namely on the principle of «Great price – great opportunity», but the positioning of prestige does not focus on the price of the product, but only on its brand.

This positioning is used by companies that are really well known in the market, whose products are luxury, premium, elite; it arises where people are willing to pay for the opportunity to «rise in rank». This applies not only to precious jewelry and expensive homes or fashionable clothing, and is often reflected in food and goods of everyday demand. Companies, that use this positioning strategy, often create a number of stereotypes in society, among which, for example, such as: «if the clock, then Rolex», «if the perfume, then Chanel», «if the pens, then Parker», etc.

Positioning directed to the development of a particular type of goods is based on the promotion of the brand as a leader at the expense of a particular type of products. This strategy is often used when entering a new market. This kind of positioning is justified only in the situation in which the company can offer an innovative approach to existing problems, a product with unique properties or a new solution for the market.

An example of applying a brand positioning strategy for the development of a particular type of product is the Xerox company, which in 1949 invented the first ever copier, creating a completely new market. Even today, the company is a leader in the market for photocopiers, and the word «photocopier» has become a leading name for all its analogues.

The strategy, which is based on consumer requirements, is characterized by two directions of benefits: emotional (desire to be better than others, self-realization that means becoming more visible, etc.) and rational (spend less money, have a good appearance, improve your health, etc.) . This positioning automatically asks the consumer: «What needs can this product meet?». But such a strategy, as a rule, is only relevant in the monopoly market, in conditions of low competition, because competitors often copy each other, which leads to the loss of value of the proposed benefit. For example, «Crest» toothpaste tries to stand out due to the rapid fight against caries, but today, almost all pastes use this advantage.

When a brand is positioned depending on the situation, the purchase of a particular product is underpinned by a specific situation, which influences the choice of the customer so that he will consume the necessary product in this situation. It is important to remind that consumer preferences are constantly changing, and their behavior is changing in new color, which can lead to an «aging» situation. An example is the «Coca-Cola» drink, which in winter is positioned as a festive Christmas drink.

A strategy aimed at positioning a brand by unique attributes focuses on the distinctive features of the brand. This strategy is the most widespread and involves not seeking to differentiate from competitors with better characteristics, but the search for unique qualities of the product that make it completely special. For example, «Rud» company has become a leader in the Ukrainian market due to the appropriate certification of quality and taste, as well as through a wide range of products and the opportunity to see the process of production with your own eyes, pre-registering for a tour; and the Pillsbury brand began identifying flour as «flour that has ideas» by simply attaching the recipe to the package.

Therefore, brand positioning is a complex and time-consuming process of building a brand reputation, image and characteristics in such a way that it is easy for target consumers to distinguish it from the competitors' brand. There are several brand positioning strategies, but really successful is one with a long-term perspective. Choosing the right positioning strategy will allow the company not only to determine its own place in the market, but also to strengthen its competitive position in the market.

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Session work № 4

CURRENT RESEARCH IN THE FIELD OF LAW AND SECURITY

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TERRORISM AS A WORLD THREAT OF 21ST CENTURY

The aim of this study was to investigate Terrorism, its types, how it is conducted and how to counter it on different levels.

Terrorism is the use of intentional violence for political or religious purposes [1,p 3]

Nature of terrorism:

- Independence or separatist movements (Ukraine, Georgia)
- Adoption of particular political philosophy (ISIS, Boko Haram);
- Spread or dominance of a particular religion (Sunny and Shiites in Syria, Boko Haram in Africa);
- Responding to a violent acts against religion or particular country (in most cases it is "Jihad")

The main types of terrorism are:

- Civil disorder(a form of collective violence interfering with the peace,);
- Political terrorism(violent criminal behavior designed primarily to generate fear in the community);
- Non-Political terrorism(IEDs);
- Official or state terrorism(ISIL);
- Quasi-terrorism(the fleeing felon who takes hostages).[2,p 6]

Terrorism is carried out in order to achieve political or religious goals. It is sponsored by:[3,p10]

- ➢ Russia (proxy wars in Ukraine and Syria);
- ➢ Iran (internal terrorism);
- ➢ North Korea;
- ➢ Sudan;
- ➢ Syria;

- Cuba;
- Iraq;
- Libya;
- South Yemen.

The main reasons to sponsor international terrorism:[4, p 121]

- A way to influence on another country without a war (during peacetime);
- It is much easier to create special groups or private armies that don’t pay attention to International Humanitarian Law, Red Cross and so on (So-called DPR and LPR, ‘Их там нет’ and so on);
- It is almost impossible to find and to judge a foreign citizen for sponsoring terrorism. (responsible soldiers that shut down the boing 737 didn’t even come to court)

Aftermath: the war on terrorism

- Afghanistan (op. “Enduring Freedom”);
- Iraq and Syria (ops. “Iraqi Freedom”, “New Dawn”, “Inherent Resolve”);
- Pakistan;
- Africa (op. “Horn of Africa”) and many others

The main aim of the research was to understand terrorism and its nature.

On the basis of this research the data from different material were received

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BASICS OF INFORMATION SECURITY AND CONCEPTS OF INFORMATION LAW

Today, in the context of the development of the information society, with the increase in the volume of information processed in information and telecommunication systems, the probability of risks associated with the existence of threats to information security also increases. Therefore, solving the problem of information security is an urgent task and is important for society. Due to the development of the information society, information security should reflect the state of protection of state and public interests in the information sphere from external and internal threats, so information security problems are of paramount importance in all spheres of activity.

The object of the study is information security and law.

The subject of the study is the concept, content, essence and most important features of information security and law.

The purpose of the study is to find out the concept, elements, features and meaning of information security, means of ensuring as well as the basic concepts of law on the basis of the developed scientific material.

The concept of information security can be viewed from several perspectives:

1). Information security is a state of protection of the information environment of the society that ensures its formation, use and development in the interests of citizens, organizations, and the state. The information environment is understood as the sphere of activity of subjects related to the creation, processing and consumption of information [1, p. 54].

2). Information security is a state of protection of vital interests of person, society and state, which prevents damage through: incomplete, untimely and inaccuracy of information; negative information impact; negative consequences of using information technologies; unauthorized dissemination, use, and violation of the integrity, confidentiality and availability of information.[2, p. 130]

Objects of information security can be: consciousness, subconsciousness, psyche of people; information and technical systems of various scales and purposes. Social objects of information security include the individual, the collective, the state, society, and world community.

The subjects of information security include: the state that performs its functions through the relevant authorities; citizens, public or other organizations and associations that have the authority to ensure information security in accordance with the law. [3, p. 84]

The essence and content of information security is manifested in a special way at each level of governance, in particular at:

1) strategic – Cabinet Of Ministers of Ukraine;

2) tactical – the Central bodies of Executive power;

3) operational – local Executive authorities, the leading place among which is occupied by local state administrations.

The levels of information security:

- legal regulations – laws, regulations, etc.;

- administrative action of a General nature taken by the organs of public administration;

- procedural – specific information security procedures;

- software and technical – specific technical measures to ensure information security. [6]

Types of information security:

1) information security of the individual is characterized by the protection of the psyche and consciousness from dangerous information influences: manipulation, misinformation, incitement to suicide, image, etc.

2) Information security of society and the state is characterized by the degree of their security and uniformity of the main spheres of life (economy, science, technosphere, management, military Affairs, public consciousness, etc.) in relation to dangerous (destabilizing, destructive, which affect the interests of the country, etc.) information impacts, both to the introduction and to the theft of information. It is determined by the ability to neutralize such effects [3, p. 79].

The concept of information security of the state is a systematized set of information about the information security of the state and ways to ensure it.

In the concept of information security of the state:

- a system classification of destabilizing factors and information threats to the security of individuals, society and the state is carried out;

- the main provisions on the organization of information security of the state are justified;

- proposals on ways and forms of information security are being developed.[4, p. 24-25]

Threats to information security – a set of conditions and factors that create a threat to the vital interests of the individual, society and the state in the information sphere. The main threats to information security are divided into three groups:

1) threats of influence of low-quality information (false, incorrect information, misinformation) on the individual, society, and the state;

2) threats of unauthorized and illegal influence of third parties on information and information resources (their production, formation and use systems);

3) threats to information rights and freedom of the individual (the right to produce information, distribute it, search for, receive, transmit and use it; the right to intellectual property of information, including material).

Threat factors are divided by species into political, economic, and organizational-technical [7].

Information security is a set of measures designed to achieve a state of security of the needs of the individual, society and the state in information [6].

Information law is a complex branch of law, a set of legal norms that defines public relations regarding information as a public resource, functions of information systems in order to meet the needs and interests of a person, citizen, social communities, society, state, and international community.

Main functions of information law:

1) normative – definition of norms and rules of behavior of subjects of information relations;

2) communicative – indication in separate articles of references to legislative acts that are the backbone of various intersectoral institutions of law;

3) regulatory – defining the rights and obligations of subjects to regulate public information relations;

4) security-establishment of guarantees and boundaries of lawful behavior of subjects who carry out measures to prevent and prevent offenses, as well as monitoring compliance with lawful behavior;

5) protective-definition of legal conditions, procedures and subjects that protect against committed offenses, as well as responsibility for them in accordance with the norms of civil, administrative, labor, and criminal law;

6) integrative system combination of a set of certain legal norms regulating information relations in Ukraine in various subsystems of law (regarding information law, it is a link between the leading traditional branches of law) [5, p. 4].

An important factor is the dynamism of information law, which was formed due to such factors as: the strengthening of the role of human and civil rights and freedoms in the information activities of society and the state, the development of information technologies, the official recognition of the processes of globalization and the formation of the information society and related changes in the production, political and social spheres of public life. Consequently, the role of legal regulation of information relations and interest in forming a stable and self-sufficient legal regulation in this area is growing strongly [2, p. 42].

Conclusion

Therefore, information security is important, as a large amount of information is stored on electronic media and the necessary means to protect information from a variety of threats. Information security is one of the aspects of considering information relations within the framework of information legislation from the point of view of protecting the vital interests of the individual, society, and the state and focusing on threats to these interests and on mechanisms for eliminating or preventing threats by legal methods.

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NETWORK SOVEREIGNTY

The aim of this study was to tell about actual topic nowadays – network sovereignty. Because now the Internet is everywhere and, in my mind, this question should be considered at the legislative level.

Network sovereignty is the effort of a state, to create boundaries on a network and then exercise a control, often in the form of law enforcement over such boundaries.

Most of the states invoke sole power over their physical territorial boundaries, state sovereignty, such governing bodies also invoke sole power within the network boundaries they set and claim network sovereignty. In the context of the Internet, the intention is to govern the web and control it within the borders of the state. Often, that is witnessed as states seeking to control all information flowing into and within their borders.

The concept stems from questions of how states can maintain law over an entity such like the Internet, whose infrastructure exists in real space, but its entity itself exists in the intangible cyberspace. Some Internet Scholars, such as Joel R. Reidenberg, argue, "Networks have key attributes of sovereignty: participant/citizens via service provider membership agreements, 'constitutional' rights through contractual terms of service, and police powers through taxation (fees) and system operator sanctions." [1] Indeed, many countries have pushed to ensure the protection of their citizens' privacy and of internal business longevity by data protection and information privacy legislation (for example the EU's Data Protection Directive, and at Ukraine Council of national security & defense of Ukraine decision from April 28, 2017 “On approval of the Rules for the implementation of activities in the field of telecommunications”

Networks are challenging places for states to extend their sovereign control. In her book Sociology in the Age of the Internet, communications professor Allison Cavanagh argues that state sovereignty has been drastically decreased by networks. [2]

Many governments are trying to exert some form of control over the Internet. Some examples include the SOPA-PIPA debates in the United States, the Golden Shield Project in China, and by decree of the President of Ukraine Petro Poroshenko No. 133/2017 of May 15, 2017 on the enforcement of the NSDC decision of April 28, 2017 “On the application of personal special economic and other restrictive measures (sanctions)” The peculiarity of the new sanctions was the requirement to block Internet service providers from accessing web-resources of VKontakte, Odnoklassniki, "Mail.ru", "Yandex", "Kaspersky Lab", "Dr.Web", the official distributor of "1C" on the territory of Ukraine.

On the other side, many experts believe that the government has no right to be on the Internet. As Law Professor David Post at the University of Georgetown argued, "'[States] are mapping statehood onto a domain that doesn't recognize physical boundaries,'" at least in the context on the Internet. He went on to say, "'When 150 jurisdictions apply their law, it's a conflict-of-law nightmare. [3] Some oponents of the Internet, such as John Perry Barlow, argued that the current form of the Internet is ungovernable and should remain as open as possible. [4] Network Sovereignty can affect state security, law enforcement on the Internet, фnd the ways that private citizens use the Internet, as many people attempt to circumvent the protections and legal devices, placed by many governments on the Internet, by using tools such as VPNs.

Virtual Private Networks (VPNs) are a significant tool to allow private citizens to get around network sovereignty and any restrictions their government may place on their access to the Internet. VPNs allow a computer to route its Internet connection from one location to another. For example one would connect from a connection at point A to a connection at point B, and to others, it would appear that they are accessing the Internet from point B even if they are in point A. For example, in China, VPNs are used to access otherwise-blocked content. Also for the example of website «Vkontakte» stating that with VPN, "smut that's banned in the Ukraine can wind its way into Ukrainian homes through electrical impulses in, say, Amsterdam. In that example, by using VPNs, an Internet user in Ukraine could access banned material that is hosted in Amsterdam by accessing through a server, hosted in Amsterdam, to make it appear that the user is in Amsterdam, based on the IP address. Therefore, citizens have a way around network sovereignty, simply by accessing a different server through a VPN. That greatly limits how governments can enforce network sovereignty and protect their cyberspace borders. Essentially, there is no way that a government could prevent every citizen from accessing banned content by means such as VPNs.

Summarizing the above, network sovereignty has implications for state security, Internet governance, and the users of the Internet's national and international networks and state must regulate this issue.

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CONTEMPORARY SCIENCE ABOUT THE ESSENCE OF SOCIAL AND LEGAL STATE, PROBLEMS AND PERSPECTIVE OF ITS DEVELOPMENT IN UKRAINE

The study and learning of the theoretical principles of our research gives an opportunity to understand the process of the formation of law and social state. We focus on special features of its existence in the modern period more widely, specifically in Ukraine. The analysis of this knowledge and principles makes the basis to define a clear estimate of the present social and legal status of our country. It helps to outline problems, find solutions and, consequently, develop theoretical substantiation of development prospects.

The legal state is a product of new time. This concept was unknown in ancient times or in the period of the Middle Ages. Although, according to some lawyers, the idea of legal state goes back to ancient society. The search for more perfect and simple forms of life was associated with the idea of the legal state.

For example, Plato stands at the beginnings of the concept of the legal state. He emphasized in his work "Laws" that state is only where laws prevail [5, c. 247-311].

The term «legal state» entered into scientific circulation in the early 19th century. The research of this question has gained considerable scope in most European countries at the end of the 19th century. «Various aspects of the legal state have been actively researched in pre-revolutionary Ukraine and Russia by many scientists such as B. Kistyakovsky, S. Dnestryansky, M. Dragomanov, M. Korkunov and others. The idea of legal state in Ukraine has been reviving and beginning to develop actively, since the Soviet Union fell into decay in the second half of the 1980s» [9, c. 36].

Each of the thinkers and lawyers identified certain features that distinguished or, on the contrary, summarized the understanding of the legal state. Worth mentioning is the classification of Rabinovich [6, c. 9]:

1) Socially significant (physical):

- rule of law in all spheres of public life;
- securing fundamental rights by the constitution and other laws;
- regulating relations between the individual and the state on the basis of the principle: "a person is allowed to do anything that is not forbidden by law explicitly ";
- equality of law for all and equality for all before the law;
- mutual responsibility of the individual and the state;
- high level of legal culture of all members of society;

2) Structural organizational (formal):

- legal protection of the person;
- division of power into branches: legislative, executive and judicial;
- accountability of state power to society, limited sphere of its activity by the right and vital public interests;
- the independence of the court and its high position in public and public life as a fundamental guarantee of human rights;
- steady and prevalent enforcement of laws and regulations by all participants in public life, especially those who are endowed with state-power powers.

The legal state can only exist in a democratic society, where the power of the majority guarantees the respect for rights of minority.

“However, not only the legal but also the social form is distinguishing for the modern democratic state. The legal state is focused on the protecting human rights from the state restrictions and non-interference with the life of civil society. Whereas the social state provides an active state policy aimed at ensuring high social standards [9, c. 38].”

So, the processes of formation of a democratic, legal and social state are interconnected.

The idea of social state was being formed from the late 19th to early 20th centuries. As you see it happened later than the appearance of the idea of legal state.

The state was named social in the Constitution of Germany for the first time in 1949 [2]. One way or another, the principle of social state is developed in the constitutions of France, Italy, Portugal, Turkey, Spain, Greece, the Netherlands, Denmark, Sweden, Japan and other countries.

Among the basic elements of the social state [1, c. 136]:

- the required subsistence minimum;
- social equality;

- social welfare;
- increasing of overall welfare.

The social state provides its functions by evolving social programs intended to ensure a fair redistribution of income, promote charitable activities, influence on the pricing processes, and eliminate the monopoly in production and trade by means of the budget and taxation.

To fulfill its functions effectively a social state and a legal state requires a balanced economy, an effective legal system and a reliable social foundation based on the civil society.

The Constitution of Ukraine of year 1996 states that Ukraine is a democratic, legal and social state [3, c. 4]. But, unfortunately, it proclaims not real but the desired status of the state. Only now the legal preconditions for the development of the "perfect type" state have been created in Ukraine. It is a complicated and long process.

To build a legal state in Ukraine first and foremost the civil society is to be formed, where [10, c. 55]:

1. free and comprehensive development of each individual and society is ensured, citizens and the state must act as equal partners;
2. diverse, independent, democratic public institutions (political parties, trade unions, cooperatives, etc.) are functioning;
3. freedom of speech and information is ensured, there is a diversity of ideological and cultural life of citizens;
4. public control over the activities of state authority and the officials; citizens influence on the formation and implementation of public policy through democratic institutions;
5. the level of general and legal culture of citizens, their legal consciousness, as well as the awareness of the need to balance personal interests with the interests of society and the state constantly are increased

The concept of the legal state is an integral part of the concept of the social state in many countries, so the formation of a real legal state principally depends on the level of social and economic development of the country, the accumulation of goods, which would enable effective social and economic policy, ensuring the social and economic rights of citizens.

The incapacity of the state to provide effective social guarantees, to create conditions for a sufficient standard of living for its citizens, has a negative impact on the population`s support of public policy, decreases the level of their law-abiding qualities and respect for the law.

For example, the most serious problems of Ukraine include unemployment, imperfection of health care and pension systems, housing problems, corruption of the management apparatus, high commodity prices and the effects of inflation. The current state of our state is also complicated by the situation in the East.

Of course, the government is taking some measures to overcome this situation, but the lion's share still depends on the level of our civil society and its attitude to reform.

That's why the process of the formation of our "ideal" is slower than in Poland, for example. Poland, unlike Ukraine, did not suffer from such rigid totalitarian conditions. In particular, their democratic traditions were not as trampled on the ground as ours [4, с. 6].

When we consider about the prospects of Ukraine's development on the way to a social legal state, we should not be resorted to "neither extreme political or legal pessimism nor often nationally colored non-critical optimism" [8, с. 8]. Dr. K. Patrich, Chief Economic Advisor to the United Nations Development Program, said that “the fact that Ukraine is making real steps towards the implementation of the principles of the social legal state, which are manifested in the Government's development of a social budget and planning to allocate considerable funds to the social sphere, nevertheless, it gives reason to be optimistic about Ukraine's prospects” [7,с. 48].

So, we analyzed and compared different types of sources such as: regulatory and constitutional sources, scientific works of other researchers, the opinions of some scientists. To conclude despite all the existing problems that are on the way to the formation of a social and legal state, Ukraine is holding the right course for its construction: democratic reforms.

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THE INFLUENCE OF CORONAVIRUS ON THE UKRAINIAN ECONOMY

In the middle of December 2019 the disease outbreak of the COVID-19 was found in Wuhan in the central China. The government has initiated the emergency actions in order to prevent the distribution of the infection. The traffic in the city was disrupted and the quarantine measures were set. Universities, schools, cafes, enterprises and shopping centers were closed during this isolation period. The trade was restricted. That was when the Chinese economy suffered heavy losses for reconstruction which it can take more than one or two months. The Ukrainian government believed that this virus would not extremely spread worldwide and it would circumvent Ukraine. That is why the government continued their political, economic and social activities. Unfortunately, special efforts and tools were not being taken to prevent these spheres from unexpected losses, gaps and the future crisis. But it happened.

Ukraine had good achievements in economics during the 2019, particularly it was characterized by increasing liquidity to banks, gold and exchange stocks, economic growth, more funds thanks to a successful placement of bonds on the international market and strong currency appreciation. The country was ready for the coming year. Despite of these facts, Ukraine stay being weak and addicted to other countries and the disease outbreak became a real challenge for it. Now there are more losses during this pandemic than after the global financial crisis in 2008.

Introducing quarantine measures has the impact on a number of enterprises. Small and medium-sized enterprises have the most negative influence of it. They force to put their employees on leave with full pay. If the term of the quarantine continues till the summer and the government doesn’t support the enterprises, they can face bankruptcy and in the result many people will be dismissed from their job. That’s can lead to increasing of unemployment. One of the most main sources of raising public finance is the working results of these enterprises, so, in addition, the government receipts will decrease.

Now we can trace the total non-compliance of planed stated budget 2020 because of the emergence of the coronavirus in Ukraine. The lost tax revenues are 3,3 billion hryvnias, customs – about 15 billion hryvnias for January and February 2020. What can we say now, when the government has exempted economic entities from paying part of the taxes, including the single social payment, and canceled the sanction of non-payment of maintenance or housing costs in the right time? Most of the expenses differ from the planned, because now the priorities for the government are the support of the unemployment people, pensioners (because they are the most vulnerable to become ill), the business’ and the providing the special equipments and material sources for pandemics treatment. Unfortunately, we don’t know how much money will be needed for it.

The public debit is increased by 46 billion hryvnias (2,6%) during the two months, especially the external debt – by 61,2 billion hryvnias (6.6%). What about the domestic debt, it is reduced by 14,8 billion hryvnias (1,8%). The sum of servicing the public debt is also increased by more than one quarter – by $6,2 billion. The Ukrainian banks have good gold and exchange stocks, but it will not be enough to the gross external debt, covering it only by 20%. Together, the gross external debt payments and the current account deficit can compose more than 60% of all gold and exchange stocks. Nowadays the government is thinking about the replanning the state budget 2020. The assumption of the lower United States dollar position to the estimate of the state budget also prejudges the shortfalls in the income to the budget and it is the barrier to build the rational economic policies.

A gradual depreciation of the Ukrainian hryvnia is expected to continue in 2020 because of falls in foreign exchange earnings as the result of the export operations. It will be a deficit of particular products in Ukraine over the time as a consequence of restrictions on traffic of goods and services across the foreign borders. These measures are used not to spread the infection. Sadly, that is what might become an incentive to the development of the domestic market. Ukraine can strengthen the position of producing high-tech products. In future it can lead to the increasing of its part in gross value added of the economy and the provoking of rising growth rate in manufacturing. So how the specialization of Ukraine is agricultural products, it can work to our advantage, because now the products of the first necessity are in demand as never before. The reserves of such goods are enough in other countries for the time being, but the export of its can becomes one of the main sources of raising public finance in the near future.

A significant component of balance of payments is export of labor, that's why the economy becomes dependent on the economic performance of foreign countries, where our people are working in. According to data for 2019, there were about $2271 billion remittances. Nowadays almost 70 thousand of people returned to Ukraine in relation to the appearing of the COVID-19. And now they don't have any profit-making activity outside the country. It provokes the budget shortfalls in Ukraine.

The most measurable influences of the coronavirus on the Ukrainian economy were listed. They conceal other problems, in particular it can reduce the flow of foreign investment in hryvnia's securities and the prices for ore and metals (that will have a negative influence on the Ukrainian metallurgy and related industries). Also it will be industrial decline and in the result an expected loss of 2% ($2 billion) of GDP.

So, the negative impact on the economy of Ukraine is smaller when the sooner the virus will be stopped. Now our economy is trying to keep the same level as early not to have the serious socio-economic consequences. But the impact of the coronavirus will be explicit only in 3-6 months. To my mind, the main priorities for the government should be a resumption of cooperation with the International Monetary Fund at first. Secondly, it is worth supporting the manufacturing and landownership and boosting domestic demand. Thirdly, the implementation of the correct taxation and allowance policies is also very important. Remember, that every crisis is not only the time for trials, but for opportunities equally.

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PROBLEMS OF NECESSARY DEFENSE IN UKRAINE

The aim of this study was to investigate the modern criminal legislation of Ukraine in the direction of the implementation of the constitutional right to self-defense, as well as the problems of necessary defense and its borders, to point out the shortcomings in this area that have become an obstacle to the exercise of this right.

This topic is relevant for a long time since the adoption of the Criminal Code of 2001, when amendments were made to the articles concerning the necessary defense, the definition of the necessary defense was given, in connection with the recent developments in the foreign policy of Ukraine, namely Eurointegration, this issue is particularly acute, since it directly concerns the issue of the lawful protection of the legitimate rights of a person from an unlawful encroachment on the part of another person.

The attention to the problems of the necessary defense and its excess in science and practice has always been given. In particular, this issue was investigated by M.I. Bazhanov, Y.V. Baulin, O.M. Kostenko, M. I. Korzhansky, A.A. Piontkovsky, M.I. Yakubovich, A.F. Koni. The name of Great Britain professor K.S.Kenny is worth of noting too.

The object of this work is the analysation and systematization of knowledge about legislative regulation of such circumstances that exclude the crime of the necessary defense`s act, as well as study of the problems of its application.

The subject of this work is the problem of necessary defense and her application.

To study the problem of the use of necessary defense, as well as the analysis of international legal experience in defining the concepts and features of the necessary defense from the point of view of legislation.

To analyze international legal experience in defining the concepts of required defense

To identify the differences in the use of the necessary defense in different countries of the world.

To identify the problems of regulating the necessary defense According to Article 1 of the Constitution of Ukraine: "Ukraine is a sovereign and independent, democratic, social and lawful state" [1,c. 5], hence the state must provide all the necessary conditions for the normal development of society, to protect the rights and freedoms of man and citizen, Article 3. The Constitution of Ukraine establishs that "Man, his life and health, honor and dignity, inviolability and security are recognized in Ukraine as the highest social value" [1,c. 5], therefore the question of their protection is a priority area of the Ukrainian state, including in criminal law so the issue of the necessary defense is acutely facing everybody in nowadays.

The right to defense is enshrined in Article 27 of the Constitution of Ukraine: "Everyone has the inalienable right to life, nobody can be arbitrarily deprived of life. The duty of the state is to protect human life.

Everyone has the right to protect his life and health, life and health of other people from unlawful encroachments. "[1,c. 10], Implementation of the constitutional provisions on the right of a person to protect his life and health, as well as life and health other people from unlawful encroachments are the institution of necessary defense, provided by the current Criminal Code of Ukraine in rticle 36 "Necessary defense as a circumstance excluding criminal offense" [2,c. 14].

Some authors consider causing damage with the necessary defense without exceeding its limits as a socially neutral behavior. As a general rule, injury within self-defense excludes criminality.

article 118 "Intentional murder in excess of the limits of necessary defense, or in case of exceeding the measures necessary for the apprehension of the offender" and article 124 "Intentional infliction of grave bodily harm in case of exceeding the limits of the necessary defense or in case of exceeding the measures necessary for the apprehension of the offender". [2,c. 14]

Since criminal liability for serious harm is provided for by Articles 118 and 124 of the Criminal Code, official statistics on such crimes should be rather low, but the dynamics of the registration of crimes provided by the articles is increase. In general, in Ukraine, for decades, the situation with the number of cases involving the prosecution of individuals for causing serious harm exceeding the limits of the necessary defense remains extremely difficult. Problems of necessary defense and its excess in science and practice have always been given close attention. In particular, Y.V. Baulin notes that not only private but also specially authorized persons (in this case, law enforcement officers) may also participate in the protection of law-protecting interests in the form of necessary defense. In such cases, such actions by private individuals should be assessed in accordance with the rules of the necessary defense, and special subjects - in accordance with the requirements for the performance of official duties [3,c. 241].

There is no definition of the "limit of necessary defense" in the theory of criminal law. The definition of this concept was tried to give a lot of scientists, in particular Y.V. Baulin, who stated that "the boundary of necessary defense is recognized as causing harmful damage that corresponds to the danger of an encroachment or the protection of the environment" [3,c. 248].

Analyzing the experience of foreign countries regarding the application of the institute of necessary defense, one can conclude that the necessary defense is defined as the lawful behavior necessary to protect citizens, society and the state from socially dangerous encroachments.

The criminal codes of most countries recognize the possibility of exceeding the limits of the necessary defense and causing significant harm to the offender. In the states of distant foreign countries, the death of an offender in excess of the limits of the necessary defense is not punishable.

In the CIS countries, responsibility for exceeding the limits of the necessary defense is maintained.

In order to solve the problem of the use of the necessary defense, it is necessary to clearly define the limits of the defense and to fix them in the legislative acts.

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PRECONDITIONS AND MAIN ASPECTS OF LAND REFORM IN UKRAINE

In this article, I explored the history from the first land moratorium in 2001 to his abolish and opening land market in 2020. The purpose of this study was to investigate the main problems which caused the land moratorium and main aspects of Law "On amendments to certain legislative acts of Ukraine regarding agricultural land circulation".

Preconditions. Our country has always been famous for soils and especially – black-soils. Ukraine has some of the best land in Europe of the total area of 60 million hectares; 42.7 million hectares (70.8%) are agricultural land with very fertile soil. Another 17.6% of the territory is occupied by forests, 4.2% is built-up areas. Land is one of the key resources for the development of villages and cities. If used effectively, it will promote economic development, stimulate investment and increase productivity in agriculture and in other sectors. However, this growth is hampered by problems that land reform must overcome.

Land reform began in 1991 with the transfer of ownership and land management from the state to collective farms (agricultural lands) or local self-government bodies (land in cities), and subsequently to private individuals. Its purpose was to create rental and sale markets for land and related market infrastructure. As a result, 6.9 million villagers (about 16% of the total population) received 27 million hectares of agricultural land (about 45% of the country's total) into private ownership by splitting up the land of former collective farms.

According to the decisions of local self-government bodies, about 4.5 million hectares of land of other uses were privatized. By 2017, 52.2% of the land was privately owned, and 28.8 million hectares (47.8% of the total) remain in state or communal ownership (of which about 10.5 million hectares are agricultural land).

However, since 2001, the rights of private owners to dispose of their land have been limited by a moratorium on the sale of agricultural land. This moratorium was adopted as a temporary measure. Thereafter, the "temporary" measure was extended by the Parliament 9 times. [0] All this led to the fact that in 2018 the European Court recognized that a moratorium on trade in agricultural land violates the rights of Ukrainians, and recommended to amend the legislation.

On September 20, the government promulgated a draft Law of Ukraine "On amendments to certain legislative acts of Ukraine regarding agricultural land circulation", which will regulate the creation of a land market in Ukraine.

Problems of land market. Only 6 countries in the world do not have a free land market: North Korea, Tajikistan, Congo, Venezuela, Cuba and until recently Ukraine. Therefore, the development of land relations in Ukraine remains outdated. This is hinders the development of the agricultural sector. According to the latest data about 1,000,000 Ukrainians have died without waiting for opportunity to sell their land and about 1.5 million hectares of land of Ukrainians who died has been appropriated by the state. [0, c.2]

The land moratorium has caused many problems in the agrarian sector of Ukraine:

1) The land moratorium was a violation of the constitutional rights of citizens.

2) Ukrainian peasants every year receive less about 18,000 UAH because of the lack of a land market.

3) The land market in Ukraine is actually worked, but in a shadowy and distorted form. Because there were many ways to circumvent the moratorium. For example: long term lease, emphitheusis, fictitious testament, outpost.

4) The land moratorium impeded the economic development of Ukraine in the agricultural sector.

The solution of all these problems - opening of the land market and abolish the land moratorium. 31 March the Ukrainian parliament passed the law "On amendments to certain legislative acts of Ukraine regarding agricultural land circulation".

The main theses of the Law:

1) On July 1, 2021, the moratorium on the sale of agricultural land will be lifted;

2) From 2021 to 2023, the right to buy land will be for natural persons only. Legal entities are prohibited from buying agricultural land.

3) In the first two years will be prohibition on the sale of state land

3) Set a minimum starting price for the sale of land of state and communal ownership of land auctions at a level not lower than the normative monetary valuation. By 2030;

4) Banks will be able to become owners of the land only if the land was acquired by them as a collateral on outstanding loan.

4) A limit is imposed on the aggregate area of agricultural land that may be owned by the citizen and the legal entity and its related persons. Restrictions do not allow the acquisition of more than 15% of agricultural land in the region and 0.5% of agricultural land in Ukraine. This thesis is necessary in order to prevent land monopolization;

5) The preferential right of the tenant to purchase the parcel of land;

6) The right of foreigners to buy land will be decided on the referendum;

7) Foreigners are forbidden to buy land closer to 50 km from the state border of Ukraine, despite the results of the referendum.

8) In the first two years will be restrictions on land purchase – not more than 100 hectares per person. [0, c.2]

Also, a necessary step for progress in the agricultural sector is the restructuring of the State Geocadastre. Because Law «On Land Cadastre» and the Decree «On the State Geocadastre» contains numerous conflicts of interest that are the source of corruption.

Conclusion. In general, system implementation of market circulation of agricultural land in Ukraine, based on a favorable economic environment using the best of the world experience, will create the necessary conditions for economic and land relations, in order to prevent abuse of land property, establishing rational land use, real value of Ukrainian black-soils and reproduction of soil fertility.

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WOMEN'S CRIME AND METHODS OF PREVENTING IT

Today women's crime is an important criminological problem. The aim of this study is to find out the content and nature of female crime in criminology. Consideration of the issue of female crime was initiated by the classics, in particular by Ch. Lombroso, who covered the phenomenon in his work "The Crime Woman and the Slut". It should be noted that the problem of women's crime has been repeatedly researched in the scientific works by prominent domestic and foreign scientists. (Yu. M. Antonyan, I. S. Basenko, A. B. Blaga, M. M. Gernet, A. I. Zelinsky, I. V. Korsun, O. V. Sereda)

Although many scholars have been involved in the study of women's crime, there are still a number of unresolved issues in this field, since at this stage of its study, women's crime is considered to be secondary to men's crime.

Women's crime is a set of crimes committed by female persons in a specific territory over a period of time.

In recent years, there has been an increase in the number of crimes committed by women in Ukraine. It has doubled since 2000. Dispite this fact, t remains much lower than among men. Thus, if in 2000 it amounted to 97 people per 100 thousand population, then in 2010 - 190. The ratio of female and male crime is now 1: 8.

The share of women among the perpetrators of certain types of crimes is as follows: theft - 80%; fraud - 41%; murder - 12; robbery - 8%; injuries - 7%; careless crimes - 5%. [3, c 1]

Women's crime is closely linked to general crime. However, it has certain features that are determined by the socio-psychological and biological status of women. From male crime, which dominates virtually all indicators of general crime, female crime differs in quantitative indicators, features of the structure and nature of crime, the role of women in crimes committed together with men, methods and tools of crime. [1, c 12] In terms of quantitative features and differences, over the centuries, female crime has always been significantly inferior to male crime.

O. Pollack puts forward and develops a thesis about the "disguised nature" of female crimes. He notes that women are not more moral than men, or vice versa, and that women are hardly held accountable for committing certain types of crimes for which men are usually prosecuted. [4, c 27] This attitude to the woman and the very nature of her role in society allows her to enjoy the benefits of her sex for criminal purposes and to commit unlawful acts, with little concern for the possibility of their disclosure and prosecution.

Modern female crime has a new character. Often a woman not only leads a criminal group, but also organizes and commits the most violent and sophisticated crimes. C. Lombroso noted that "true female crime types are more horrible than male ones."

The study of women's crime and its emergence as an independent structural element is associated with a name such as C. Lobmrozo.

C. Lombroso attached great importance to the anatomical and physiological features of the organism in the mechanism of criminal behavior. By declaring a woman at a lower level of development than her husband, the scientist concludes that women are more likely to commit crimes.

C. Lombroso studied the anatomical structure of the skulls of men and women who had been imprisoned for committing crimes. The researcher has put forward a theory according to which the skulls of persons who have transgressed through the law have anatomical deviations from the norm. Such deviations include: low forehead, pale face, large cheekbones, deep set eyes.[2, c 21]

Ch. Lombroso concluded that they do not become criminals but are born.

Unfortunately, there are no official statistics on the structure of female crime, so we can only rely on sociological surveys of places of detention. Thus, thefts are about 32%, premeditated murder and grievous bodily harm - 23%, robbery and robbery - 11%, economic crime - 15%, crimes related to drug trafficking - 16%. The aggressiveness of the female part of the criminal environment is noteworthy: 35% of convicted women are punished precisely for violent crimes, which are most often committed in the family and domestic sphere. The motives for murder and grievous bodily harm are the desire to resolve persistent conflicts, revenge, jealousy, and sometimes benefit

In his book, Crime among Women, Yu. M. Antonyan highlighted the reasons that contribute to the commission of crimes by women: the mass involvement of women in social production; weakening social institutions, and especially families; growing social tension in society, the emergence of conflicts in it, hostility; growth of antisocial phenomena such as drug addiction, alcoholism, prostitution, begging.

Crime cannot be eradicated, but it can be prevented.

Female crime is not given such close attention, but is considered secondary to male crime. However, female crime at the moment has a faster growth rate than male crime, which can not but cause concern in society. Also, female crime has a higher latency. At the same time, women who have “gone through” imprisonment are more difficult to re-socialize. All these factors should be taken into account when further developing the problem and implementing programs to prevent and combat the effects of female crime.

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DIVORCE IN A MODERN SOCIETY

The aim of my study was to investigate the factors that affect the divorce rate in Ukraine. Over the past few years, Ukraine’s divorce rate has risen to the top among European countries, with 5.3 divorces per 1,000 people. Despite the fact that Ukrainians are overwhelmingly eager to get married – more than people in Western Europe where every third marriage is civil, compared to every tenth in Ukraine. Experts claim that Ukrainians often get married as early as possible and then they do not know how to maintain their marriages.

I analysed the major factors leading to broken families: financial instability; disappearance of love; adultary; economic crisis, alcohol addiction; drug addiction; manipulation, imperfect laws in the Family Code and so on.

In general some of the men who cause divorce also mention such reasons as the propensity to spend the couple's money, the lack of money. As for women, in the demographic exception of a huge number of women compared to the number of men, male infidelity is therefore devastating. [4, c. 3]

People have become more free of morals, less supportive, less attentive, more open to certain questions, but also more friable to selfishness. It is precisely the change in values that has made the nest of divorce.

As said social psychologist Andriy Strutynsky: “Ukrainians are a matrimonially active nation but this is more of a bubble: people get married early and easily, and they split up the same way. The family is no longer the crucial element holding society together. Very often, we don’t take marriage seriously, and we break it. Financial factors matter, too. As a result, respect for marriage fades. And remember alcoholism, one of the fiercest pandemics tormenting Ukraine. It destroys 20-25% of all marriages.” [3, c. 1]

Some divorces have a very negative effect on children because of women’s manipulation. Serhiy and Liudmyla have lived together for six years. They have a son, Oleksiy. Serhiy wants a divorce because he has met another woman and wants to start a new life with her. The only unresolved issue between him and his ex-wife is the child: Liudmyla threatens never to allow him to see his son. However, Ukrainian statistics signal that children rarely hold marriages together, as up to 50% of divorces occur in families with children. Such an ultimatum prevents a man from participating in the life of a child, which causes children to suffer.

Moreover, the divorce procedure is very simple and the cost of child support is absurdly low. These are two more factors that encourage Ukrainians to treat marriage irresponsibly. An average divorce procedure in Ukraine takes a month and a half compared to at least a year for the court to register the appeal in many European countries.

According to 183 article of the Family Code of Ukraine child support payments of one child - one quarter, two children - one third, three or more children - half the earnings (income) of the alimony payer, but no more than ten subsistence minimums per child of the appropriate age for each child. [1, c. 50]

As the sociologist says Serhiy Mazurets - “A normal government is always interested in encouraging people to get married and keep their marriage strong. Statistics show that married people spend twice as much as single people do, thus families make a much more significant contribution to a stable social life. However, in 20 years of independence, the Ukrainian government has never articulated a clear marriage or family policy.” [3, c. 2]

But the state regulates the family relationships. This is evidenced by the fact that in order to protect from such situations, the law provides mandatory lines for the reconciliation of the parties. According to Article 106 of the Family Code of Ukraine it is one month in the registry office, and the court can give from one to six months to think it over.[1, c. 27]

According to research conducted by the Research & Branding Group, 79% of Ukrainians got married following their emotions, while 15% were guided by reasonable motives. The problem is that feelings alone can not solve any problems once the initial wave of emotions has faded, leaving bare routine and reality. There is another interesting difference: most Western Europeans first live in a civil union and then get married officially. By contrast, most civil unions in Ukraine fail to generate a full-scale family and eventually fall apart. This is because Ukrainians have no confidence in the future or themselves, and society is infantile.

According to the Institute of Demography and Social Studies, over 80% of Ukrainians aged 50-54 are married, compared to only 44% of Ukrainians under 30. The average marriage age in Ukraine is 30 for men and 27 for women. 10-12% of couples, predominately young people under 35, do not register their relationships. [2, c. 66]

In despite of all the negative factors, the family plays an important role in the country.

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PSYCHOLOGY OF THE MODERN FAMILY

The aim of this study was to identify the main manifestations of modern marriage transformation.

The Family Institute is one of the oldest social institutions. It preceded religions, states, educational systems and economic formation. However, the modern type of family is based on economic, social and ideological prerequisites.

In primitive times, the family relied on instincts laid down by nature. However, social development, economic pressure, religion and traditions have distorted family relationships. Natural prerequisites in family formation have changed with the economic priorities.

Marriage has undergone a huge number of transformations before it is accepted a modern form. However, society is changing faster than traditional family rules and norms, and now marriage is in a serious crisis.

Along with increasing well-being and by reducing the pressure of the laws of morality, the divorce rate has increased dramatically. Fewer people are planning a traditional family life. Statistics show that there is a ratio of two marriages to one divorce. Divorce is one of the major stresses in a person’s life.

Divorce destabilize society, exacerbate such psychological problems as the problem of suicide, mental disorders, adversely affect on processes of education**,** stimulate crime [1, 208 p.].

The orientation of social values also changes. Previously, family was an undisputed priority for man, a way of securing material existence. Now family and marriage are opposing career advancement. More and more young people see marriage as an obstacle to self-fulfillment and personal development [3, pp. 25-34].

Such vivid statistics show that the traditional family values do not work. However, public consciousness in Ukraine is not ready to realize it. Public movements are gaining in popularity concerning the traditional family values, which mostly express their categorical denying of the legalization of homosexual marriage. An example of such movement is the protest in Ivano-Frankivsk in April 2018. The possibility to change 51 article of the Constitution "union of man and woman" to "union of two" is regarded as the decline of the family institute.

According to Burova, "the state of marriage and family relations today, in our view, are not evidence of decline, but confirmaty on the increasing diversity of marriage, family and sexual relationships ”[5, p.425].

Homosexual marriages have already received official and public recognition in many Western countries. Alternative forms of marriage among heterosexual couples are in the shadows, but their numbers are steady growing.

Traditional marriage is a marriage formed under the pressure of the religious views and economic needs. It gives more and more cracks. The union of two self-sufficient individuals needs a stronger foundation than economic needs and moral pressure from society. Trying to squeeze into the narrow confines of traditional ideology leads to emergence of such traumatic phenomena of family life as incomplete family, a bad atmosphere in the family.

Attempts at state regulation of the family institute have not give any positive shifts. More stringent regulation of the process divorce only reduced the number of marriages. For scientists, psychologists, political scientists, sociologists have a new task. It is necessary to build a new one the ideology of marriage [2, 360 p.].

Marriage is always in the center of attention of many scientists. Problems of young families in modern society is represented in the work of such sociologists as Andreeva T., Alyoshina U.

The novelty of the work is the study of open marriage in Ukraine, causes of its occurrence, features and characteristics, interpretation open marriage by his supporters, as well as consideration of future ones prospects for this type of relationship in Ukraine, its benefits and destructive disadvantages [4, pp. 49–55].

An open marriage is a type of relationship built on trust and openness, as well as freedom in intimate relationships with other partners, respect for the interests and desires of the partner, openness in communication; built on feelings of true love.

The modern type of traditional family relationships formed under the influence of historical and economic factors. Economic and political instability in Ukraine has negative affects on the marriage situation in the country. The diversity of marital relations in modern society testifies about finding a new channel that would make family relationships more accessible, stable and happy.

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THE IMPORTANCE OF THE REFERENDUM

What is a referendum? Cambridge dictionary gives a definition of a referendum as a vote in which all the people in a country or an area are asked to give their opinion about or decide an important political or social question. A referendum from Latin – "things to be referred". A referendum is different from an election and the difference is in the subject of voting.

Switzerland is the birthplace of the referendum because the first referendum was held in 1439 in the Swiss canton of Bern. Over the years, more and more democratic countries have started holding referendums and recognizing them as an important form of direct democracy. The first nationwide referendum in Ukraine was held on December 1, 1991, when people decided thar Ukraine would be independent country.

Thomas Jefferson, the third president of the United States, said "That government is the strongest of which every man feels himself a part." It goes without saying that referendum is a way of taking part in governance of the country.

It is logical to ask why are referendums so important and fundamental for democracy?

Many politicians and lawyers argue that referendum plays a crucial role in democratic country. First of all, a referendum is an embodiment sovereignty. Secondly, it is a guarantee of civil rights and freedoms. Besides, it helps to contol public authorities. Undoubtedly it empowers people to decide the most important issues in the country, so decide the fate of the country.

What about referendums in Ukraine?

The people are the bearers of sovereignty and the only source of power in Ukraine. The people exercise power directly and through bodies of state power and bodies of local self-government (Part Two of Article 5 of Constitution). [1]

Part first of Article 38 Constitution of Ukraine says that citizens have the right to participate in the administration of state affairs, in All-Ukrainian and local referendums, to freely elect and to be elected to bodies of state power and bodies of local self-government. [1]

Part two of Article 69 of the Constitution approves that the expression of the will of the people is exercised through elections, referendum and other forms of direct democracy. [1]

Therefore at the highest level of legislation referendum in Ukraine recognized as a form of direct democracy, through which people exercise power. Even though, there are problems in Ukrainain legislation on holding All-Ukrainian and local referendums.

First of all, Law of Ukraine "On All-Ukrainian and Local Referendums" expired in 2012. A new law regulating local referendums has not yet been adopted. Consequently, there has been no legal regulation of holding local referendums since December 2012.

Moreover, The Law of Ukraine “On the All-Ukrainian Referendum” (2012) was declared unconstitutional by the Constitutional Court in April 2018. Furthermore, the Verkhovna Rada of Ukraine has not yet resolved this legislative gap. [2, c. 17]

Thus, there are currently no legislative mechanisms for exercising citizens' constitutional right to participate in all-Ukrainian and local referendums. Nevertheless, the election program of the President of Ukraine V. Zelensky provides the introduction of the bill "On People's Authority”.

So there is no doubt that referendum is an integral part of democracy. As a democratic state, legislative body of Ukraine is obliged to adopt laws regulating All-Ukrainian and Local referendums.

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HISTORICAL STAGES AND MODERN PROSPECTS OF COUNTERACTION TO CRIME BY LAW ENFORCEMENT AGENCIES OF UKRAINE

The main task of law enforcement agencies of Ukraine is to protect the rights and interests of citizens, social groups, society and the state, ensure law and order, suppression of offenses, apply state coercion or measures of public influence against persons who violate the law and public order [6]. But the main question for law enforcement officers is how to successfully prevent and counter crimes? To answer this question, you need to analyze the action and understand what it takes to eliminate it. One type of crime analysis is criminal analysis – a mental-analytical activity of law enforcement officers, which is to verify and evaluate information, interpret it, establish links between data obtained in the investigation process and are relevant to criminal proceedings, with the aim of their use by law enforcement agencies and the court, further conducting operational and strategic analysis [1].

The general beginning of militia formation is considered to be April 1917. After the February Revolution, voluntary militia units began to form. At the same time, they created the Disciplinary Statute of the Workers 'and Peasants' Red Militia in 1919. The main aspects of criminal implementation began to emerge, and they acted as an analysis of the functions of the authorities. After the Second World War, the legal base of law–enforcement agencies was finally formed. At the same time, the structure of crime analysis has already been formed. In the early 70's of the XX century the Soviet Union was gaining popularity with the analysis of Soviet scientists who have covered the subject of the importance of discipline in the Ministry of Internal Affairs. The issue was rather acute as sufficiently prepared and morally organized criminal groups began to commit more aggressive crimes.

In 1997, Article 49 of the Constitution of the USSR stated that every citizen has the right to submit to the state bodies their proposals to improve their activities [5].

In 2006, due to the dynamic growth of offenses, an innovative system of criminal analysis was introduced and a decree of the State Border Guard Service of Ukraine of January 15, 2008 № 28, was introduced. The Instruction on the Organization and Introduction of Criminal Analysis by the Operational Investigation Units of the State Border Guard Service of Ukraine was put into effect. This resulted in an increase of 63% of the investigative cases [2].

In the world of crime today, law enforcement agencies need to use not only analysis but also the tools and methods that would enable such work to be done quickly and efficiently. In accordance with Article 31 of the Law of Ukraine "On the National Police" it is fixed the use of technical instruments and equipment that have the functions of photo and film, video, photo and film, video. Currently, it makes it easier for police officers to deal with crime with a 4G personal chest video recorder, it allows them to record and instantly transmit information to the general system, and police. Moreover, police officers have tablets that receive call signals and event circumstances [4]. They have an alarm sensor that detects an explosion, shot or cry for help. These tablets are equipped with a special program that provides police officers with information from a unified MIF database about cars and drivers.

But from a legal point of view, this program has drawbacks. According to the Law of Ukraine "On Protection of Personal Data" in paragraph 4 of Article 2 it is stipulated that for processing of personal data it is necessary to have a permission from the subject of personal data in accordance with the formulated purpose of their processing, expressed in writing form or in a form that allows to make a conclusion on consent [3].

Therefore, unfortunately, technical innovations cannot function properly, because such legal differences lead to suspension, and their full work depends only on changes in legislation.

Patrol officers do not even have the opportunity to immediately check the data of a person. So they are legally and logistically unsecured.

Thus, at each historical stage there were certain changes in the fight against crime, which required the conditions of the time at which they occurred. At present, the main problem is the differences at the legislative level regarding technical innovations, so it is necessary to pay attention to the regulatory framework, which still does not allow to reveal the full potential of criminal analysis as one of the effective methods of combating crime.

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IMPLEMENTATION PROCESS OF EUROPEAN LEGAL STANDARDS IN THE LEGAL SYSTEM OF UKRAINE

Actuality of theme. The modern world's expanse requires much more legal development according to international legal system. The aspects of globalization and integration have a great impact on the successful implementation process of European standards in Ukrainian legislation. Nowadays Ukraine strives to get closer to European standards (technical and non-technical) for the implementation of the European Union Association Agreement.

The research aim is to analyze the real necessity of the European legal standards implementation process into the legal system of Ukraine.

The results and discussion. The development of the current world's legal system occurs due to the best legal humanity achievements. The international standards and the European principles of human rights and freedoms, international legal standards and administration are gaining more importance in the political arena [1, p. 33-34]. At present the process of European implementation is one of the most strategic guides to the development of Ukraine [2, p. 12].

The legal standards are implemented on the basis of European practice, which consists of two aspects: mandatory and optional. The main characteristics of mandatory standards are expression in legal norms, recognition of the general directions of legal system development, constitutive nature of legal norms. The main characteristics of optional aspect are advisory by its nature.

It should be mentioned, it is difficult to imagine any sphere of everyday life without universally recognized international standards today. European legal standards are formed in two biggest regional international organizations – the Council of Europe and the European Union (EU). The legal source of the EU is the Constitutional Treaties, which intensively regulate public relations in the EU countries.

During the research it should be noted that the human-being, his rights and freedoms priorities are the main guideline of the domestic legal system development in general, which are enshrined in Article 3 of the Constitution of Ukraine. A well-known international document is the Agreement signed between Ukraine and the EU on June 27, 2014. This Agreement defines the newest format of relations, the principles of political association and economic integration. Also the process of globalization manifests itself in the EU case-law implementation in the national judicial practice of Ukraine.

Certainly, the global law market plays a great role on the national achievements of economical potential. This interconnection drives to the introduction of eventual intellectual property tools. The Government of Ukraine had recently made a significant decision to launch a project entitled as «National strategy for the Development of the Intellectual Property of Ukraine for the period up to 2020». The goal of the project is to increase the legal level, institutional and social base according to the EU standards.

The Agreement between Ukraine and the EU has a multi-vector nature that is why it highlights the deepening into various spheres of Ukraine's integration with the EU. Firstly, in the field of energy Ukraine is like a comprehensive system of legal measures aimed at achieving the market integration, creation Ukrainian energetic market with approximate standardization to the EU legislation. Secondly, in the field of transport, cooperation is the implementation of special international transport agreement and international organizations. Another focus is on the management of state finances, which must also be controlled in accordance with international standards. A bright contribution to the changes to the local government system of Ukraine is the full national legislation alignment with the European Charter of Local Self-Government principles.

Conclusion. The analyzed data of the signed Association Agreement between Ukraine and the EU gives the opportunity to expect a significant step from state towards convergence with the European legal standards and towards a successful prospect of engaging in the process of further European integration.

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Session work № 5

CURRENT RESEARCH IN THE FIELD OF HUMANITIES

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METHODOLOGY OF TEACHING CHILDREN ENGLISH AT THE KINDERGARTEN

I study in Berdychiv pedagogical college. My future profession will be connected with children's education and English studying with them, as my speciality gives me an opportunity to teach English. I like to work with children, especially with pre-school age children. Moreover, in this period the children's brain can absorb a lot of new information, it is called a sensitive period.

There have been many researchers in the field of English language teaching. Among them the Helen Doron technique is one of the first systems for early learning English in the world. It is based on the maximum immersion of the child into the English language environment to create conditions similar to those in which English-speaking children become native speakers, allowing schooling begins at the age of three months.

Furthermore, Helen Doron, a linguist and experienced teacher, quickly saw an analogy. If children can successfully learn music as a language, why can't they learn a language as music? In 1985 Helen developed an early-stage English language course based on the principles of group learning, positive attachment, and continuous listening. Helen made amateur recordings of songs, rhymes, and short stories. Today, more than 700 Helen Doron Early English training centers in 32 countries teach more than 700,000 children. In Ukraine the Helen Doron network Early English has been operating since 2004 on a franchise system. Nowadays the Helen Doron network Early English in Ukraine is represented by 45 training centers in 16 cities of Ukraine [2].

That is why, the aim of our paper is to explore the principles and tools for better teaching children English at the kindergarten.

For better understanding how to teach children English more effectively, I have decided to work in the private kindergarten. I have a group of children with whom I spend lots of time studying. To my mind, the best way of child's teaching is to study through the game.

So, I would like to characterize some ways how to teach children English at the kindergarten. I must admit that a teacher should start with himself or herself. Correct pronunciation plays the main role in teaching English. That is why, every teacher must pay attention to it.

Firstly, studying new language a child must repeat new information regularly. It is not necessary to give a lot of material and to ask repeat many times. It is better to give less information and repeat it several times, for example, in the morning and in the evening. Parents must repeat the information with children at home too.

In addition to this, there is an interesting type of studying English which is called "LOOK and SAY". The main task of this type is that children can see a picture and pronoun the word in it. For doing this task the children must have creative thinking.

The next step is using picture and drawing. Children like to do something by themselves, especially to draw. After that using games and actions is very productive. Here every teacher can use his or her fantasy and physical abilities, for example, the game "Hot and Cold" and many others.

Apart from this, there is interesting way to study English with the help of a song. At the beginning of the lesson a teacher can use the song "HELLO", repeat the material and describe the weather also with songs.

To conclude, the paper examines the main ways of teaching children English at the kindergarten. Taking everything into account, teachers must do everything to make children interested in studying English and be not only teachers but friends for them.

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AMERICANISMS IN MODERN ENGLISH

In recent years, researchers have become increasingly interested in the issue of language communication. Today the most existing languages are prone to penetrating their lexical borrowing from other language systems. The English language is not an exception.

The problem of the use of Americanisms in the English language is constantly attracting the attention of domestic and foreign scholars and educators – V. D. Arakin, G. A. Weikhman, A. A. Evseev, K. V. Dushenko, N. K. Ivanova, Ya. A. Goldovansky, L. P. Kislyuk, A. V. Klimenko, M. M. Moskovtsev, H. V. Nesterchuk, A. I. Smirnitsky, H. D. Tomakhin. This is evidenced by the large number of books, journals, articles devoted to this topic "Stages of development of words of foreign language origin in the system of the recipient language" (Ya. A. Goldovansky), "To the sources of the term "Americanism"(A. A. Evseev), "Realities-Americanisms" (H. D. Tomakhin) and others. However, the problem of the use of Americanisms in modern English still remains insufficiently studied.

The aim of the article is to investigate Americanisms in modern English and their features from the point of view of linguistics, to show the main advantages and disadvantages of Americanisms. The article focuses on magazine and newspaper texts, advertisements on the Internet, books in the fields of lexicology, phonetics, theoretical grammar, history of English and translation studies.

At the moment the topic of Americanism is quite relevant as the studies show that the American version of English is widely used not only in America.

Americanisms are lexical, phonetic, and grammatical features of English in the US, representing relatively few deviations from the British literary norm [1].

Americanisms include:

1. Words that have turned into archaisms or dialects in England but are still widespread in the United States (tardy – "late", fall – "autumn").

2. On the contrary, words that are still in common use in England and in America are used only in common sense, such as: to roil, to guess, to reckon in means "to think", "to consider".

3. Words that have real or only imaginary American ancestry but they are now in common use, such as: lengthy, to progress, to advocate.

4. Words used both in England and in the US, and in which the specific American is only one of their meanings: market – "grocery store", career – "professional", pavement – "paving stone".

5. Words that originated in the United States and did not spread in England: the names of plants and animals of the North American continent moose – "North American moose", various phenomena associated with the state and political system

of the United States, for example: the word faculty in England is used in the meaning "faculty", and in America "teaching staff".

The American English version includes a set of elements of lexical, phonetic, spelling, grammatical, stylistic, semantic features that create national colour and relate to the natural climatic conditions, culture, traditions and history of the United States. Because Americanisms are the only verbal notation of these phenomena and objects of American reality, these words are linguistic references that reflect features of the English language in the US or they are borrowed from the American English language by both Americans and foreigners.

So, under the influence of local conditions in the USA, a number of new words that are not used in England have appeared, for example: squaw man – white, married to an Indian, trailer park – a parking lot with mobile homes, permanently installed. Some words have a new meaning or meanings: block – city block, not building, apartment – apartment, not room, etc. Although Americanisms do not significantly change the basics of the English language – its grammatical structure and basic vocabulary – they must be taken into account in the interests of accuracy and correctness of translation.

Much of Americanism is attributed to the slang used by modern American authors of gold-digger – "an adventurer seeking a rich man", blind date – "a date with a stranger".

The British have long been accustomed to the influx of Americanisms into English. However, in recent years this invasion has led to the increasing use of Americanisms in the British language by neglecting equivalents from British English. According to well-known British journalist Matthew Engel, some Americanisms pose a threat to the identity of the English language. He writes about it in an article published on BBC News [2].

He believes that Americans' technological, economic, and cultural achievements should not be used as an excuse for the senseless, or even ugly, predominance of Americanism instead of their equivalent English equivalents in the British media and their penetration into the everyday language of the English.

According to M. Engel, they are increasingly using rookie (American) instead of newcomer, elevator (American) instead of lift, wrench (American) instead of spanner, apartment (American) instead of flat and freight train (American) instead of goods train and so on.

Differences of using American and British:

Orthography:

Color (American) - colour (British)

Program (American) - programme (British)

Center (American) – centre (British)

Monolog (American) – monologue (British)

Traveled (American) – travelled (British)

Grammar:

a) Instead of the Present Perfect formula, Past Indefinite is used:

She already did it (American). – She has already done it (British).

They just left (American). – They have just left (British).

b) The omission part of the passive infinitive in the construction of "Complex Object":

He ordered the money (to be) withdrawn immediately.

c) The "economy" of words is manifested in the omission of the word "should" in additional additions:

They suggested that I (should) do it myself.

It is important that they (should) correct this mistake.

d) The Americanism is also the use of have got instead of just have, and have gotten instead of became.

Vocabulary:

Hike (American jump or lift), price hikes (multiple and sudden increases in prices) – a walk, a trip (in British English).

Block (American city quarter) – building (in British English).

Corn (American corn) – wheat (in British English).

Consequently, English is in constant development interacting with other languages. The processes of intercultural communication are reflected in the language. The close interaction of British English with American has led to the emergence of such a phenomenon as Americanism in English.

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IDIOMS AND THEIR ROLE IN BUSINESS DISCOURSE

Each language has its own features that are most evident in communication. The most prominent features that distinguish one language from another is using specific idioms.

Idioms are widespread in all the aspects of the English language including business English and business discourse. Idioms and idiomatic expressions can be found in magazine articles related to the area of business discourse and therefore speak the language of business people. The present research focuses on analyzing materials related to business discourse for the purpose of finding idioms used in those materials and categorizing them.

For the purpose of this research the author had evaluated the total of five articles in the field of business discourse from such popular online version of magazine related to business, as “The Economist”. The findings are shown below.

Table 1. Analysis of the chapter “Business” in the “The Economist”

Title of the article	*Idiom*	*Syntactic structure*
Kim Sang-jo. South Korea’s chaebol sniper	to break a/the law behind bars landslide victory a think-tank in the air to give (someone) face to mind the shop	V + N Prep + N N + N N + N Prep + N V + one + N V + N
Ant Financial and Moneygram. Blocked transfer	to play fair to get hold of don't mean jack under way	V + N V+ N+prep V + S.C. Prep + N
Money-laundering in Canada. Snow-washing	money-laundering to take steps to make sure to do business to do (one's) best under cover	N + N V + N V + N V + N V + N Prep + N
Salesforce. The tower of Benioff	to keep track to do good in order to do to have an edge	V + N V + N Prep + N + Prep V + N
Schumpeter. The year of the incumbent	to give someone a run for their money to make the running matter of life and death	V + one + N V + N N + prep + N

* Source: “The Economist” (January 6th, 2018)

Conducted analysis has shown that idioms are present in all of the researched articles. Frequent use of idioms in business discourse shows that idioms are important in terms of core vocabulary and thus in language acquisition in general.

The results of the research in Table 1 indicate that at least 3 idioms, a maximum of 7 idioms were used in each article, in general 24 idioms were found. The syntax feature of analyzed idioms is as follows: 15 idioms are verbs, 4 idioms are nouns, and 5 idioms are prepositions.

It is obvious that the most common idioms have syntactic feature of the verb, which is more than half of the total number of idioms. Idioms that function as adjectives and adverbs have not been found at all.

As a result, it was established that idioms of business-edition “The Economist” are an integral part of lexical stock and used to refer to the characteristics of individuals, relationships, and processes.

After analyzing the idioms from the business-edition “The Economist” for 2018, we can conclude that business style requires a concise statement, clarity and directness of expression but idioms perform their functional-semantic function, they add expressiveness and coloring.

So, idioms play an important role in English. Although scientists are still debating about the definition and classification of idioms, the fact that idioms' frequent use in business discourse indicates their importance as a basic vocabulary as well as in the process of learning the language.

Results need further exploration and justification due to the lack of analyzed articles because the sphere of business discourse is wide and needs more researches.

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VIRTUAL LEARNING ENVIRONMENTS IN EDUCATION

The aim of this study was to investigate effectiveness of virtual learning environments (VLEs) in terms of learning approach and outcomes.

There has always been a need to make learning resources more engaging and available on-line. Recently, various learning environments, which refer to systems that offer digitally-based solutions aimed at creating interactive and active learning environments, have been developed using such platforms as Active Worlds, Second Life, OpenSim, Traveler, Croquet, Adobe Atmosphere, and There [2].The most commonly used examples of VLEs include Moodle and Blackboard.

Extending the space of the physical learning environment VLEs enhance existing educational practices and can be identified by the following features:

1) It is a designed information space.

2) It is a social space (educational interactions occur in the environment, turning spaces into places).

3) The virtual space is explicitly represented (the representation of this information/social space can vary from text to 3D immersive worlds).

4) Learners are not only active, but also actors (they co-construct the virtual space).

5) It is not restricted to distance education (it can also enrich classroom activities).

6) It integrates heterogeneous technologies and multiple pedagogical approaches.

7) Most virtual environments overlap with physical environments [1].

First developed for the purposes of entertainment and gaming, at present, these platforms also allow users to design interactive environments with the content they want, to view a given problem from different perspectives and can include virtual activities that are difficult to practice safely in real life, access virtual contents simultaneously, share information, receive multifaceted feedback, and conduct activities by interacting with objects and individuals from different locations.

There are different types of VLEs, which all perform the same function and can deliver the same learning materials. These integrated distance learning platforms can incorporate different learning tools that are external to the classroom experience (such as course materials, homework, tests, and assessments) and may also include social media tools that allow learners and educators to interact via chat or online discussion boards [4].

At the same time, while virtual worlds have many affordances to support applying different learning strategies, they also have some obstacles. For example, Ho et al. (2009), in their study proved that role-playing approach was not well applied in virtual worlds since learners could not demonstrate their mimics and physical movements [3].

Additionally, though some international standards are aimed at facilitating the sharing of content between VLEs, it is not always organized in exactly the same way by each different VLE type. Thus, using VLEs does not guarantee effectiveness by itself, but must integrate with numerous learning strategies, which in their turn must profit from various facilitating features of VLEs.

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THE IMAGE OF WOMEN IN ADVERTISING

Images which are totally divorced from reality are still common in advertising and this applies to many stereotypes concerning the role and functions of women and men in society. It is chiefly women who are vulgarised in advertisements and commodified or presented as sex objects – usually in ways which have nothing to do with the actual product. Advertisers bear a heavy responsibility, since they exercise a decisive influence on the public and particularly the young – often, indeed, with lasting effects on their vision of themselves and others [3].

In recent years, advertisers and their agencies have received criticism from a wide variety of sources concerning the manner in which women are portrayed in advertisements [8]. The critics state that the women shown in ads are too often “only housewives”, stupid or incompetent, dependent on men, decorative or sex objects, passive, and not involved in making major decisions.

Amid common themes in the representation of females, there are the following:

1. The artificial look.

The idealized image of female beauty means women must transform themselves, to be who they are naturally is not OK. In the media images, she is often transformed into a doll, a puppet or a mask, a thing rather than a human being.

2. Commodification.

Women are frequently presented as a product for male pleasure and consumption. A visual association may be made between some product, often alcohol, and the female form. The female and the product become equivalent and interchangeable, and both are promoted as a pleasure object. Females are presented as a thing, a commodity, and in doing so their humanity and subjectivity is denied.

3. Relative size.

When females and males are shown together, males are mostly shown as taller than females, even though if females and males were randomly paired together, in one in six pairs the woman would be taller. However, the tall female with the short male displays a relationship in which the female has power, according to conventional indicative codes, and so the reverse is preferred, since the cultural ideal is the male “should wear the pants”.

4. Ritualization of subordination.

Women are commonly pictured in a childlike role, sitting on a male’s knee, or being shielded and protected by the male. Females may also be shown being lifted up in the air just as adults toss little children around. Women may also be shown infantilized, putting their finger coyly in their mouth, standing pigeon-toed, wearing little girl clothes, sucking on lollipops [1].

There is another classification of images of women in commercials, which reveals in more detail the nuances of the image of women in modern advertising:

1. The exploited woman (she is only the background for advertising certain products; frequently there are three, five or more women in the frame of such advertising, mostly they are almost naked).

2. Devoid of intelligence (such a woman is only interested in stains on the tablecloth or clothing or toilet cleaning products; she is not used as an expert in high-tech products, in the field of Finance or the latest technologies).

3. Dependent on her husband, it makes no sense to live differently (in every second ad, a woman does something for her husband, in front of him, for him, or his voice is present behind the scenes, his assessment or approval is the meaning of such a woman's life).

4. "Berehynya" with a monopolized function of caring for children and performing household duties (a woman who constantly washes something, cleans, irons, bleaches, cleans dirt, prepares food and "serves" her husband and children).

5. Likened to certain things or goods (a woman is depicted only in order to "excite" the imagination of the male viewer and encourage him to buy a certain product).

6. It is deprived of being a person (the image of a woman is simplified, primitivized, becomes fictional and unreal; the woman appears as a mythical person who flies or lives under water (fairy, sorceress, little mermaid)).

Women face overwhelming pressure to meet an often unrealizable "beauty" ideal. The result is that 80% of women report being unhappy with their appearance, and three-quarters of all women engage in some form of disordered eating such as crash dieting or skipping meals. Many companies have capitalized on this trend, offering a veritable cornucopia of products designed to "fix" women's perceived flaws [2].

The advertisements for these products, however, frequently leave women feeling bad about themselves, particularly when images in these ads contain unrealistically "perfect" women. The overwhelming majority of cosmetic and clothing advertisements are digitally enhanced [5].

Nevertheless, women are increasingly aware of the effects of digitally manipulated advertisements, and some retailers are abandoning the practice of presenting women with unrealistic images. This means if the stereotypes can be recognized, firstly, they have less impact on us as consumers (willing or unwilling) of media images, and, secondly, we can educate both producers of these images, and other consumers [6]. That gives us hope that by changing the narrative, the images we use, the stories we tell about women, we can dramatically change the way the world values women and how women and girls see themselves [4].

In Ukraine, there is much to complain about the sexist subtext of advertising too. Among the state institutions that are working to combat discriminatory advertising are the State service of Ukraine for food safety, the Industrial gender Committee for advertising, the national Council for television and radio broadcasting, the Office for child rights, non-discrimination and gender equality of the Secretariat of the Commissioner for human rights of the Verkhovna Rada of Ukraine [9].

Public organizations, such as the Harmony of equal women's rights League, are also working to reduce sexist content. The organization has launched a service through which people can complain online about those who, in their opinion, replicate sexist messages in advertising.

Current Ukrainian legislation explicitly prohibits discrimination in advertising based on gender. This is stated in article 8 of the law "on advertising". The law also stipulates that ads must not contain information or images that violate ethical, humanistic, or moral norms or violate the rules of decency.

The Verkhovna Rada has registered draft No. 8558 on amendments to the Law of Ukraine "on advertising" on countering discrimination. The author of the bill proposes to understand the term "discriminatory advertising by gender" as the content that demeans the dignity of people on the basis of sex, broadcasts stereotypes about the intellectual, physical, social or other benefits of one sex over the other, replicates the stereotypical roles limiting freedom of life choices, uses a person solely as a sexual object in order to attract the attention of consumers, demonstrates physical violence of members of one sex over the other, or is based on ambiguous expressions with hints of sexual relations.

It should be noted that only producers of discriminatory messages degrading the dignity of women or portraying men as helpless face penalties in the form of fines.

Thus, we can conclude that television commercials often use the following modern image of women: the woman-housewife, woman-mother, woman chef, woman doctor, woman-vamp [7]. The most relevant today is the image of a woman as a desired sexual object, it is quite dangerous though, because it deprives a woman of inner freedom in advertising, levels her value, spiritual beauty, and her own desires. It is assigned the function of a catalyst for buyers' needs and an incentive to buy goods or services. However, there are new trends and images that require further research.

So, women's images are very actively exploited in modern advertising, it is worth noting that most often the image of a woman is used for pragmatic purposes. Stereotypes, both male and female, have a great influence on the formation of a person as a personality. It is through established stereotypes that norms of behavior, occupation, profession, etc. are attributed to people. Strict restrictions and stereotypes are imposed on women, which often leads to stress and failure. It can be concluded that advertising has a great influence on the human subconscious and thus creates gender stereotypes, a certain perception of the world, and an attitude to the place of women in this world. Unfortunately, based on advertising images, this place is subordinate, secondary.

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THE MEANS OF LOVE EXPRESSING IN SHAKESPEARE'S SONNETS

The article deals with the means by which love is expressed in Shakespeare's sonnets. Lately there has been an increase in the lack of honesty in life. People do not show personal feelings, trust and, as a result, it causes mental trauma. Shakespeare's century is not an exception to psychological experiences, so the writer described it in his sonnets. In this work we have investigated how Shakespeare described love. In addition, this article includes quotes from his sonnets, sorted by various means of expressing feelings to confirm the study of the article. The results show that there are many means of love expressing in Shakespeare's sonnets.

In previous years, many scholars have studied Shakespeare's sonnets. Among them there are Yu. Siruk, H. Semen, N. Torkut. However, we want to go deeper into the topic of love. The aim of our study is to research Shakespeare's sonnets and means of love expressing in them.

As technology constantly evolves, interests, lifestyles and leisure also change. Only the feelings stay permanent, because they are laid by nature. As long as there is humanity, there will be love.

There are many popular sonnets and poems, but not all of them have powerful energy and sophistication. One of the best poets of all time is William Shakespeare.

During his life he wrote 154 sonnets. Although it was a long time ago, they remain relevant today. First, sonnets are undoubtedly aesthetically appealing to people because they are beautifully designed and have a large amount of resources. Secondly, it concerns everyone, because almost everybody loved, was disappointed or suffered from love.

One of the main tasks of our study is to prove the presence of different means of love expressing in sonnets. Reading these works can be one way of overcoming mental anxiety.

In total, each sonnet consists of fourteen lines. The first stanza defines the theme, the second explains, the third solves the problem, and the latter concludes. Sonnets is a genre of poetry in which the soul of the lyric hero is especially revealed.

Shakespeare's sonnets use a variety of artistic means to express love. The next section will be described below. So one of the main means is epithets, that is, artistic definitions. They allow the reader to understand better the quality of the subject or the person [1].

- If hairs be wires, *black wires* grow on her head.

I have seen roses *damasked*, *red and white…*(Sonnet 130)

- I love to hear her *speak*, yet *well* I know

That music hath a far more *pleasing sound…*(Sonnet 130)

- And haply of our *old acquaintance tell*. (Sonnet 89) [2].

The metaphor also helps the author discover his feelings more deeply. It is a hidden comparison built on similarities or contrasts of phenomena [1].

- No! It is an ever-fixed mark

That looks on tempests and is never shaken;

It is the star to every wandering bark…(Sonnet 116) [2].

As for rhetorical questions and appeals, Shakespeare loved to use them not only in plays, as in Hamlet: to be or not to be, but also in sonnets.

- *But why of two oaths' breach do I accuse thee,*

When I break twenty? I am perjured most…(Sonnet 152)

- *For how do I hold thee but by thy granting?*

And for that riches where is my deserving? …(Sonnet 87)

- *Say that thou didst forsake me for some fault,*

And I will comment upon that offence;

Speak of my lameness, and I straight will halt...(Sonnet 89) [2].

There is also antithesis in sonnets. This is a juxtaposition where the reader can more clearly imagine the lyrical hero's favorite [1].

- I grant I never saw *a goddess go* –

My mistress when *she walks treads on the ground*…(Sonnet 130) [2].

To make the feelings more tragic, Shakespeare uses hyperbole – exaggeration.

- So, love, be thou; although to-day thou fill

Thy hungry eyes even till they wink with fullness,

To-morrow see again, and do not kill

The spirit of love with a perpetual dullness.(Sonnet 56) [2].

To conclude, we want to say that the world of Shakespeare's sonnets is truly capable to capture everyone through the use of various artistic means. In addition, thanks to the poet’s ability he could create masterpieces. So, for our own development and spiritual enrichment we need to read and use Shakespeare's sonnets in our life.

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MASS MEDIA AS A MODELLING FACTOR OF THE COUNTRY IMAGE

Within the last fifty years or so, the world has entered into an information revolution. The information revolution that began in the 20th century has been driven in most part by a geometric growth in the production of high-tech electronics, including computers and its components, video display and audio equipment [3, c. 13]. Particularly with the creation of the Internet in the last few decades, humanity has entered to the information stage of development, which has led to deep changes in society [4].

Today, information has great impact on different transformation processes. Information power and, above all, information power main tools – media – are an integral part of country image modeling and forming the political image of modern world leaders. By the way, the image of politics is a symbolic image formed in the minds of voters and emerges as a product of communication processes between the politician and his social groups, so as a result the contemporary concept of the image is multidisciplinary [1, c. 353]. It’s important to be mentioned that the effectiveness of the mechanism of forming both country and leaders image depends on influence of the media as powerful institution, which can create and control public opinion. Nowadays the mass media is a powerful influence on psychological and social condition of the people. Abraham Mole, French psychologist, writes about media: “They actually control our entire culture passing it through their filters and separating certain elements from the total cultural phenomena mass giving this mass special value; they bring much value of one idea devaluing another polarizing the entire field of culture. As a result, in modern times, ideas, which have not got into mass communication channels, have almost no impact on the development of society”.

Due to the media, public opinion is formed, what is a state of mass consciousness with the hidden or apparent attitude of different social communities to the problems and events. In the age of information transparency, if the state doesn't ensure communication openness or doesn't prioritize respect for the fundamental rights and freedoms of the person and freedom of expression of the media, it is impossible to achieve a positive image of a democratic state in the international community [2, c.83]. In view of the above, the media and the image of the state are interconnected because freedom of the press is an important characteristic for the country in the international arena, and the media, in turn, is a significant tool for forming the acceptance of the state both in the internal and external levels. Positive perceptions of the state domestically and globally are keys to the success of global political, social and economic movements, which in essence are reforms. The dominant role is played not only by reforms in those fields but also by the way in which they are brought to public. Undoubtedly, impact of the media can be both positive and negative but, surely, they serve to transmit information.

The media reports in a newspaper, news or on the Internet can be accepted by the public, on the one hand, as facts about some events, on the other hand, news may form the basis for voters' political activity which can be added with their political preferences or with their subjective opinions. As a result, an effective combination of political advertising and free political information can ensure the formation of a positive image of the political party, association, government and state in general. It is quite natural for authority in a democratic society to seek to influence the media in order to use their capacity. The image exists in the heads/the mind of the audience, but it is based on the ability of individuals to decode messages and to interpret the behavior of political leaders, parties send while building their image [5, c. 601], which has the important position in the media. The state should be an important factor in a media regulation and freedom of expression. It is important to remember that the lack of clear boundaries can lead, on the one hand, to increase of the elements of totalitarianism, especially when control dominates, or, on the other hand, it leads to loss of constructivism and efficiency because of permissiveness and lack of control.

The forming of state power and image of a country is a process of political communication and as a result it is implementation of certain images into the mass consciousness using advertising, propaganda, PR and other tools of the mass media. Annually mass media get more and more modern technologies and opportunities to use these technologies to form authority and state image, which is a conglomerate of truth and untruth, real and desired. These things face and compete in the mind of personality but the outcome depends on the mass media that will introduce a certain image to the broad masses which will subsequently find a favorable ideological and political environment for justification.

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ARABIZI - THE LANGUAGE OF SOCIAL MEDIA

This study investigates widespread phenomena of Arabic-English code-mixing known as "Arabizi" in communication, as one of the leading detrimental factors to the Arabic language and Arab identity. It also indicates the causes of using "Arabizi" and its prevalence in the social media among youth in the Arab countries in very informal settings. This research highlights the views of Arab scholars about the negative and positive impact of "Arabizi" on Arabic literary language. This study describes the most popular abbreviations of "new" simplified Arabic and some methods of transformation Modern Standard Arabic into "Arabizi".

"العربيزي" لغة وسائل التواصل الاجتماعي

احدثت وسائل التواصل الاجتماعي مظهرا جديدا يمثل اهمية كبيرة في تكامل عصر العولمة الذي غيير مظاهر الحياة بشكل عام على مدى العقود الماضية، وتنفرد وسائل التواصل الاجتماعي المختلفة بقدرات هائلة للتواصل ونقل المعلومة بسرعة غير مسبوقة. وسبب تطوير الشبكات الاجتماعية ظهور العربيزي أو الفرانكو أو العربتيني أو الإنجليزي المُعرب وهي أبجدية غير محددة القواعد مستحدثة غير رسمية ظهرت منذ بضعة سنوات. يستخدم البعض هذه الأبجدية للتواصل عبر الدردشة على الإنترنت باللغة العربية أو بلهجاتها، وتُنطق هذه اللغة مثل العربية، إلا أن الحروف المستخدمة في الكتابة هي الحروف اللاتينية والأرقام بطريقة تشبه الشيفرة. ويستخدمها في الكتابة عبر الإنترنت أو رسائل المحمول. إلا أن هناك العديد من الآراء والحملات انتقدت هذه الطريقة مبررين ذلك بطمسها للغة العربية والأبجدية الأصلية وتشويهها.

هدف البحث هو دراسة لغة العربيزي في مجال وسائل التواصل الاجتماعي .

وظائف البحث فيما يلي:

- كشف في ظاهرة لغة العربيزي في وسائل التواصل الاجتماعي؛
- تعيين الاثار الإيجابية وسلبية على اللغة العربية لظاهرة لغة العربيزي؛
- تحليل بحوث العلماء بشأن هذه المشكلة.

وسائل التواصل الاجتماعي هي محتوى معلوماتي يضعه الناس على الإنترنت ومن أمثلتها مواقع تويتر، فيسبوك، لينكد ان، إنستغرام، يوتيوب، وحتى مواقع ويكيبيديا.

تُظهر آخر الإحصائيات تنامي استخدام وسائل التواصل الاجتماعي في المجتمعات العربية بشكل واسع. فوفقًا لموقع Go-Gulf.com أكثر من 40% من سكان المنطقة متصلون بشبكة الإنترنت و88% من هؤلاء يستخدمون وسائل التواصل الاجتماعي المختلفة بشكل فعال[1] .

ومع مطلع الألفية الثالثة، شهدت مواقع التواصل الاجتماعية تغيراً جذرياً للمستخدم العربي الذي تحول من الاكتفاء بالتشارك والتعليق إلى الإنتاج دون هوادة، وحتى الإنتاج شهد تطورات كبرى في زمن قصير. بات تواصل معظم الشباب الناشئة عبر مواقع التواصل الاجتماعي ووسائل الاتصالات الحديثة يجري عبر لغة " هجينة " يطلق عليها" العربيزي".

العربيزي هي أبجدية غير محددة القواعد مستحدثة غير رسمية، تستبدل الأرقام بالأحرف العربية لا مقابل لها في الأحرف اللاتينية. فيما يلي نماذج لاستخدام العربيزي و مقابل الأحرف العربية في نظام رموز العربيزي:

أحرف نظام كتابة العربيزي					
الحرف العربي	مقابله في العربيزي	الحرف العربي	مقابله في العربيزي	الحرف العربي	مقابله في العربيزي
ا	a أو 2	ز	z	ق	8 أو q أو g
ب	b	ش	sy أو sh أو ch أو$	ك	k
ت	t	س	s	ل	l
ث	t ' أو th	ص	9 أو s	م	m
ج	j	ض	9' أو d h	ن	n
ح	h أو7	ط	6 أو t	ه	h
خ	5 أو 7' أو kh	ظ	6' أو d	و	w أو o
د	d	ع	3	ي	i أو y
ذ	d' أو z أو th أو 4	غ	3' أو gh		
ر	r	ف	f		

تكتب عادة باللهجة الدارجة وليس باللغة العربية الفصحى ويضاف لهذه الطريقة الكثير من الكلمات البسيطة والختصارات المتعارف عليها في اللتيني ألانجليزي مثل:

SMS	رسالة نصية قصيرة	لول	LOL - اضحك بصوت عالي
hi	مرحبا	g2gأو gtg	إنني مضطر للذهاب آلان
برب	Be Right Back - وتعني سأرجع	IDK	I don’t know - لا أعرف
ISA	In Sha2a Allah - إن شاء الله	JAK	Jazakom Allaho khayran - جزاكم الله خيرا
MSA	Ma Sha2a Allah - ما شاء الله		

على سبيل المثال:

hi 7bibi kifak wenak ma 3am nshufk, CU man

هاي حبيبي كيفاك وينك ما عم نشوفك (سي يو مان) وتعني: (هلا حبيبي، كيف حالك، أين أنت لم نرك منذ زمن، أ ارك لاحقا).

saba7ul 5eir 9/ shou 25barak? - ana b5ir nsh2allah

صباح الخير، شو أخبارك؟ - أنا بخير، إن شاء الله

لماذا يفضل المستخدم العربي لوسائل التواصل الاجتماعي العامية على الفصحى؟ هناك العامية أسهل من الفصحى، وأكثر دورانا على الألسن، وأقل تطلبا للقواعد قلة من يتقن اللغة الفصحى والمسألة مرتبطة بالاحتلال الأجنبي.

هناك آثار إيجابية ناتجة عن استخدام هذه اللغة، وهي:

- مساعدة من لا يملك لوحة مفاتيح عربية بالكتابة باللغة العربية؛
- عند وجود نظام موحد للرومنة فإنه يساعد جميع الجهات المسؤولة في كتابة الأسماء العربية باللغة الإنجليزية، وبخاصة الجهات المسؤولة الخارجية، التي لا تتحدث اللغة العربية؛ مما يسهل عملية البحث عن الأسماء في أنظمتهم التي لا تدعم اللغة العربية؛
- تساعد وتسهل عملية التواصل لمن يجيد التحدث باللغة العربية ولا يجيد الكتابة بها، شريطة أن يكون الشخص الأخر على علم بهذه اللغة؛

أشارت العديد من الدراسات إلى الآثار السيئة لاستخدام لغة "العربيزي" بين الشباب والفتيات، ومدى تأثيرها على اللغة العربية الصحيحة، ومن الأثار السلبية مثلاً:

- كثرة استخدام هذه اللغة قد تؤدي إلى قلة استخدام اللغة العربية؛ وهذا الأمر يقود بطبيعة الحال إلى ضعف التحدث باللغة العربية، أو إتقان مهاراتها النحوية والإملائية واللغوية؛
- كثرة استخدامها تؤدي إلى ضعف المحتوى العربي في الإنترنت وقبلته بشكل عام؛
- تقليل الاعتزاز باللغة العربية والدفاع عنها، وتسويتها باللغات الأخرى من حيث توفير الدعم اللازم لها من قبل الشركات المصنعة وصناع القرار في العالم.

يوعز الباحثون والدارسون ظاهرة "العربنجليزية" في وسائط العالم الجديد إلى عدد من الأسباب:

- أن ظهور لغة جديدة بين الشباب أمر طبيعي يتكرر بين مدة وأخرى، ويعكس التمرد الاجتماعي وعدم تفاعلهم مع الكبار، ويظهر عادة في نمط مميز من اللغة أو الملابس أو السلوكيات اليومية، كما أوضح أن الإنترنت ليست وحدها المسؤول عن تغير لغة الشباب، فالعديد من المصطلحات الجنبية المنتشرة بين الشباب سببها استخدام الإنجليزية كلغة تعامل في بعض أماكن العمل، إضافة إلى تردي التعليم الجامعي الذي اليهتم أصال باللغة العربية، وصول إلى الدراما العربية وما تقدمه في المسلسلات والأفلام من ألفاظ شاذة.
- لغة هي مزيج من لغتين هدفه الاختزال؛ استعمالها في كتابة الرسائل القصيرة في الهاتف المحمول يعود إلى صغر الشاشة ومحدودية الإشارات التي يسمح بها في الرسالة الواحدة. وفي أساس إنتاج كل من الهاتف المحمول والحاسوب، لم تحتوِ لوحة المفاتيح على أحرف اللغة العربية، فاعتاد الشباب التعبير بكتابة لغتهم العربية بالأحرف اللاتينية، واستمروا في ذلك على الرغم من توافر الأحرف العربية في لوحة المفاتيح في وقت الحق .وبالتالي، فإن التكنولوجيا هي التي أدت إلى تداخل اللغات.

فقد كشفت دراسة أجرتها الطالبة في جامعة الملك خالد، ظافرة الأحمري، أن 52 % من مستخدمي وسائل التواصل الاجتماعي يرون أن هذه الوسائل أثرت بشكل سلبي على لغتهم العربية جاءت الدراسة بعنوان " اللغة العربية وأثرها وتأثيرها في وسائل التواصل الاجتماعي"، وشارك فيها 460 من مستخدمي وسائل التواصل الحديثة تراوحت أعمارهم من 16 سنة إلى 45 سنة، وكشفت عن إهمال في الكتابة باللغة العربية الصحيحة في وسائل التواصل الحديثة حتى من قبل الذين تلقوا تعليماً جيداً، ومن الملمّين بقواعد وإملاء اللغة العربية الصحيحة. وأشارت الدراسة إلى أن أهم وأبرز ما يقع فيه المستخدمون من أخطاء يكمن في الاختصارات غير المفيدة للكلمات، أو إدخال حروف الجر في الكلمات مع تكرار حروف المد في الكلمة دون فائدة، أو كتابة الكلمات والجمل دون مسافة بينها نظراً لقلة مساحة الأحرف المسموح بها في بعض التطبيقات [2].

عبر أستاذ اللغة العربية بجامعة البحرين ناصر المبارك بأن اللغة الانجليزية اندفاعنا لها هو بسبب غلبة السوق وحاجتنا لها لأنها المسيطرة في سوق العمل والتجارة والاقتصاد وسوق القوى العالمية فالطبيعي أن الناس يندفعون لها ويتعلمون اللغة الانجليزية لأنها اللغة العالمية والاكثر انتشارا .وفسر أنه لا يتم التركيز على اللغة العربية لان الجامعات والمدارس تلبي حاجات السوق وتكثف تركيزها على اللغة الانجليزية .وأوضح أن الشباب بعدم حاجة للنحو والصرف في اللغة العربية لان في الاخير اللغة الانجليزية هي المطلوبة ولان الشباب يفضلون تعلم أشياء أخرى مواكبة للتطور والتكنولوجيا وقد اخترعوا هذه اللغة الهجينة. [3]

الخاتمة: إن في الوقت الحاضر ظاهرة العربيزي منتشرة بشكل واسع، فهي أبجدية غير محددة القواعد مستحدثة غير رسمية، تستبدل الأرقام بالأحرف العربية لا مقابل لها في الأحرف اللاتينية. يفضل المستخدم العربي لوسائل التواصل الاجتماعي العامية في استعمال العربيزي على الفصحى لأن العامية أسهل من الفصحى، وأكثر دورانا على الألسن، وأقل تطلبا للقواعد قلة من يتقن اللغة الفصحى والمسألة مرتبطة بالاحتلال الأجنبي هناك آثار إيجابية ناتجة عن استخدام هذه اللغة مثلاً مساعدة من لا يملك لوحة مفاتيح عربية بالكتابة باللغة العربية. أشارت العديد من الدراسات إلى الآثار السيئة لاستخدام لغة" العربيزي "بين الشباب والفتيات مثلاً كثرة استخدام هذه اللغة قد تؤدي إلى قلة استخدام اللغة العربية، وتؤدي إلى ضعف المحتوى العربي في الإنترنت وقبلته بشكل عام. كشفنا في ظاهرة لغة العربيزي في وسائل التواصل الاجتماعي وقمنا بتحليل بحوث العلماء وأراءهم بشأن هذه المشكلة.

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THE IMPACT OF LIFE CIRCUMSTANCES ON THE CREATIVITY OF BRITISH ILLUSTRATORS

Each person's destiny depends only on themselves, because everyone has the right to choose. This is what most of our contemporaries think, so we think. But is this true? How do life circumstances influence the choice of hobbies, profession, lifestyle? In this we see the relevance of our work. The novelty of our scientific research is that the subject of British illustrators has been repeatedly explored by historians and art historians, such as T. Bennett, N. Demurova, R. Dale, K. Nudd, J. Love and others, but the researches of different eras, historical events and different figures have not been considered in such a large scale. That is why, the purpose of our article is to investigate the influx of life circumstances on the works of British illustrators George Cruikshank, Charles Wirgman, Christopher "Chris" F. Foss, Edward Lear, Helen Allingham, Louis William Wain, Sidney Edward Paget, Rob Scotton.

Events that are now history to us have been contemporary for many artists. *George Cruikshank (1792 -1878)* is a leading master of book illustration and satirical-political caricature of the 19th century. In the 1820s, his caricatures were ridiculed with equal vigor by Whig and Tory parties. The political and economic situation of Great Britain was a direct impact on the work of the illustrator and cartoonist [1].

Difficult circumstances forced fifteen-year-old *Edward Lear (1812 - 1888)* to make a living on their own: he lived hard, and his talent to draw was very helpful. "I started drawing in 1827," he recalled, "to make bread with cheese. I made some strange drawings for the shops and sold them, receiving from nine pence to four shillings". He painted lithographs, screens, fans, drew scary images of diseased organs for hospitals and doctors. The drawings of the birds, made with great precision and sophistication for the Zoological Society, created him the reputation of a first-rate ornithologist, and further work in this direction confirmed his glory of an ornithologist and an animal artist [5].

Charles Wirgman (1832 - 1891) is an English painter and book illustrator. His arrival in Japan, where he lived and worked for the rest of his life, was closely linked to two specific historical events: in 1858, the Shogunate arbitrarily entered into a Japanese-American treaty of friendship and trade. Subsequently, similar agreements were signed with the Netherlands, Russia, the United Kingdom and France. The artist is the author of "The Japan Punch" and the illustrator of "The Illustrated London News". His drawings have a plot theme of life in China and Japan of the Edo period [3].

In 1890 *Helen Allingham (1848 - 1926)* was the first woman accepted as a full member of the British Royal Society of Watercolours. An early age girl had a talent for drawing. Due to the need for housing and daily expenses, during her studies, Helen began to work as an illustrator in various publishing houses and after a while decided to opt out of further education in favour of a professional artist's career [6].

In the life of the English artist *Louis William Waine (1860 - 1939)* there were many trials, but it was in the drawing that he found a real delight. Since childhood, he had a talent in the visual arts. When Emily, Louis's wife, was diagnosed with cancer, Peter's black-and-white kitten became the woman's only pleasure. At this time Louis began to draw from him numerous sketches. Later Waine wrote of Peter: "It was he who laid the foundation for my career; he gave me the impetus to develop my skills and gave me the foundation for my work". Peter was depicted in many of Waine's early works. In his paintings cats play musical instruments, drink tea, play cards, fish, smoke and listen to opera. He later became known for his numerous anthropomorphic images of cats, cats and kittens [7].

But the British portrait painter and illustrator of the Victorian era *Sidney Edward Paget (1860 - 1908)* became famous for his illustrations of Arthur Conan Doyle's stories about Sherlock Holmes, which were published in Strand Magazine. However, Paget received this work through absurd coincidence. The magazine's art editor actually intended to hire Sidney's brother, Walter Paget. But, he forgot the artist's name and addressed the letter to Paget. He was opened by Sidney. After all, he illustrated stories about Sherlock Holmes since 1891 [8].

Christopher "Chris" F. Foss (1946) is a contemporary English artist and illustrator, creating his works primarily in science-fiction subjects. He was born in Guernsey (Channel Islands). During the Second World War, the Nazis built a number of fortifications along the coast. As Chris Foss was born less than a year after the end of the war, the war made a great impression on him. He recalled that the German fortifications on Guernsey were almost entirely new when he studied them. It was a creepy experience, and it mentioned a heavy depressing atmosphere. Many of these memories are now reflected in Christopher's works [4].

Our contemporary *Rob Scotton* (1960) is an English children's writer, one of England's most renowned illustrator artists and one of the world's finest gift industry designers. He is the author of two popular children's book series – "About the Lamb Russell" and "The Cat Splet". He writes about himself this way: "Drawing really intrigued me from the moment I finally realized that it was much easier to get my parents' attention by drawing with pencils rather than poking them in the direction of my younger brother". This man has chosen his own life path and is completely happy [9].

So, the life of each of the British illustrators we have studied has been influenced by certain life circumstances. *George Cruikshank* ridiculed politicians, *Charles Wirgman* adjusted to the current situation, *Christopher Foss*, became a slave to childhood impressions. For *Edward Lear*, *Helen Allingham* drawing became a real salvation because of a lack of funds, *Louis William Waine* found a soul cure in it. To *Sidney Edward Paget*, painting brought him centuries of glory thanks to chance, and *Rob Scotton* just realized that his hobby can be turned into something more, and did not lose.

To conclude, the paper has examined the influence of life circumstances on the works of British illustrators George Cruikshank, Charles Wirgman, Christopher "Chris" F. Foss, Edward Lear, Helen Allingham, Louis William Wain, Sidney Edward Paget, and Rob Scotton. The present study has analyzed the conditions of their lives, studying and creative careers. The impact of art on the lives of artists and ordinary people should be explored further, as it is necessary for every educated person to know it.

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HISTORY OF MUSIC IN GREAT BRITAIN

Musical activity in Britain has reached the highest level since Tudor times. UK music is one of the largest representatives of the world music industry originating from English church music and ancient traditional folk music.

The history of music in Britian has been explored by such scholars, as C. T. Allmand, T. Reuter, D. Abulafia, R. Mckitterick , W. Covelock and others. These scientists researched the entire history of Europe and history of music. Firstly, they examined the origins and development of music at different ages in the UK. Secondly, the scientists proved that the music of Britain had its own history, not just formed through the music of other countries. But not all aspects of music development have researched, that is why, the aim of the paper is to investigate the history of music in Great Britain in detail.

England has a long and diverse history of folk music dating back at least to the medieval period and including many forms of music, song and dance. Through three periods of revival from the late nineteenth century much of the tradition has been preserved and continues to be practiced. It led to the creation of a number of fusions with other forms of music that produced subgenres such as British folk rock, folk punk and folk metal and continues to thrive nationally and in regional scenes, particularly in areas such as such as Northumbria and Cornwall.

Ireland, including Northern Ireland, has vibrant folk traditions. The popularity of traditional instruments such as fiddles has remained throughout the centuries. Perhaps the most famous modern musician from Northern Ireland influenced by folk tradition is Van Morrison.

Scottish folk music includes many kinds of songs, including ballads and laments, sung by a single singer with accompaniment by bagpipes, fiddles or harps. Alongside the other areas of the United Kingdom, Scotland underwent a roots revival in the 1960s [2].

Wales is a Celtic country that features folk music played at communal dances and music festivals. Welsh music also includes male voice choirs and songs accompanied by a harp. Having long been subordinate to English culture, Welsh musicians in the late 20th century had to reconstruct traditional music when a roots revival began. This revival began in the late 1970s and achieved some mainstream success in the UK in the 1980s with performers like Robun Huw Bowen, Moniars and Gwerinos [2].

Moreover, British popular music can be seen to originate in the sixteenth and seventeenth centuries with the arrival of the broadside ballad, which were sold cheaply and in great numbers until the nineteenth century. Further technological, economic and social changes led to new forms of music in the 20th century, including the brass band, which produced a popular and communal form of classical music. Furthermore, the music hall sprang up to cater for the entertainment of new urban societies, adapting existing forms of music to produce popular songs and acts. In the 1930s, the influence of American Jazz led to the creation of British dance bands, who provided a social and popular music that began to dominate social occasions and the radio.

Forms of popular music, including folk music, jazz, rapping / hip hop, pop and rock music, have particularly flourished in Britain since the twentieth century. Britain has influenced popular music disproportionately to its size, due to its linguistic and cultural links with many countries, particularly the United States and many of its former colonies like Australia, South Africa, and Canada, and its capacity for invention, innovation and fusion, which has led to the development of many of the major trends in popular music [2].

To conclude, music in Britain has come a long way in order to achieve international success. British performers have secured an important place in the world of pop and rock music. Since then music collaborations with transatlantic genres have led to the exchange of pop and rock styles, which from time to time move into each other and then be transformed into new movements and then re-exported. Genres that originated or developed extensively in the UK are blues rock, heavy metal, progressive rock, ska, hard rock, punk rock, banana, british folk rock, folk punk, acid jazz, trip hop, shugging, drum and bass, gothic rock, makeup, britpop, industrial and dubstep. So, the paper examines the historical development of music in Great Britain and its genres. Every person who studies English should know culture and history of Great Britain.

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CHARACTERISTICS OF QUALITY OF LIFE IN UKRAINE AND IT'S COMPARISON WITH FOREIGN EXPERIENCE

Quality of life is recognized as one of the main characteristics of the level of social development of the countries by the modern international community. Priority in economic results and achievements of scientific and technological progress are gradually moving away in the past, without taking into account the priority of human development. For Ukraine, which declares itself as a democratic social state, it is of particular relevance to ensure a decent quality of life for the population, including it's level of every individual region.

Particularly relevant are the issues of content, constituents, the formation of further ways of improving, measuring and assessing the quality of life, which helps to clarify certain aspects of structural changes in the state, to assess the strengths and weaknesses of the model of life of modern society. Assessing the quality of life and shaping directions for its improvement make it possible to identify ways and mechanisms of transition to a policy of improving the quality of life as a strategic task, which depends not only on the future of an individual country, but also on civilization as a whole. Therefore, Ukraine, which aspires to belong to the European civilization, has the need to develop a new modern socio-economic concept of its sustainable development, with the aim of ensuring an adequate level of quality of life by transforming social policy models, finding new ways, directions, mechanisms, tools for social and economic development.

To assess the quality of life of the population, we use indicators of social standards and determine the real opportunities of the population. And to confirm our results, we compare the quality of life in Ukraine with other countries. An important issue is the income of the population, which defines additional opportunities for well-being. In the income structure, the largest share is work payment, so the state can influence the wealth of citizens. Every year, we see an increase in the cost of living and the minimum wage. Each budget for the next year is intended to increase the solvency of citizens through the growth of different social guarantees and standards. The first problem is the low rate of growth of citizens' incomes. Although the minimum wage is rising by 15% or 20%, however, real wages, taking into account the consumer price index, are growing slowly. The experience of foreign countries shows that a high level of remuneration is the foundation for a successful social policy of the state. This can be explained by the fact that people are able to secure a comfortable life and do not require additional payments from the state. Household savings are channeled into retirement insurance, financial market operations or consumption. Unfortunately, the quality of life of the population is low in Ukraine, which requires additional control and support from the state.

Despite the positive dynamics of the subsistence minimum and the wage level in Ukraine, the correlation between these indicators remains unjustified. The European Social Charter is an international document that sets out the individual social economic rights of the citizens of the countries that have signed this treaty. The document provides for the social orientation of each country's economy and fixes high material standards of living. The European Social Charter was ratified by the VRU on 14/09/2006. As we can see, the governments of European countries consider social development of citizens a priority. The policy is based on the principle that a country cannot be rich if the population is poor. That is, raising citizens' incomes is both a goal and a tool for economic development and enrichment. For example, the minimum wage should be at least 2.5 subsistence wages. Today, the Ukrainian government's policies does not fully comply with the Charter requirements.

In order to compare the quality of life of citizens in Ukraine and in other countries of the world, two world rankings are worthy of attention: the Quality of Life Index for Country 2019 and the Social Development Index developed by the American non-governmental organization Social Progress Imperative with the support of Deloitte.

Ukraine ranked 62nd in the survey of Quality of Life Index for Country 2019, which annually compiles the Numbeo service.

As a result of using these metrics, we have standardized values of quality of life for comparison and ranking. The assessment includes the factors that affect the outcome differently. The formula offers the following qualitative estimates: "Very Low", "Low", "Moderate", "High", "Very High" (Table 1).

Table 1.

CHARACTERISTICS OF QUALITY OF LIFE IN UKRAINE *

	Quality of life indicato	*Ukraine*
	Purchasing Power Index	32,16 (Very Low)
	Safety Index	51,59 (Moderate)
	Health Care Index	50,75 (Moderate)
	Climate Index	70,69 (High)
	Cost of Living Index	28,86 (Very Low)
	Property price to Income Ratio	14,57 (High)
	Traffic Time Index	37,58 (Moderate)
	Pollution Index	66,17 (High)
	Quality of Life Index	102,16 (Moderate)

* Based on the Quality of Life Index for Country 2019 rating system

According to the information in Table 1, we observe mostly low and average quality of life indicators, except for the climate index, pollution index and the property price to income ratio, the purchasing power level in Ukraine is estimated to be very low.

Among the countries ranked in the Quality of Life Index for Country 2019 above Ukraine were: Lithuania, which ranked 29th, Latvia ranked 34th, Poland ranked 35th, and Belarus, ranked 37th.

According to the results of the 2019 Global Survey of the Social Development Index, developed by the American non-governmental organization Social Progress Imperative, with the support of Deloitte, Ukraine ranked 80th among 149 countries in the world. This index determines country ratings based on indicators that have a direct impact on people's quality of life.

Michael Green, a Chief Executive Officer of the Social Progress Imperative, noted that Ukraine has relatively stable indicators in the Social Progress Index. Ukraine shows quite good results in the field of education. In other sectors of the economy there has been no significant progress. In environmental and inclusivity, progress has also been relatively weak compared to other countries with similar prosperity. According to Michael Green, an important conclusion for Ukraine is that while the level of social progress of the country has remained fairly equal in terms of indicators, there are other countries with similar levels of development that have been able to improve their results quickly.

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YOUNG URBANISTS: A CHILD IN A BIG CITY IN CHILDREN'S LITERATURE DISCOURSE

The aim of the investigation is to review and make the analysis of the illustrated books, assisting a child in making an acquaintance with the modern urbanistic environment, becoming a part of it and mastering its rules and adapting to them.

Literature of the XX-XIX centuries as a whole have witnessed significant changes related to the problematic, thematic, narrative, compositional and language style aspects of the writing. Nowadays, literature is regarded as a constantly developing field at the intersection of science and art; therefore, sophisticated literary texts are considered to be a literary *"fusion"* – the combination of different art forms, trends, customs and tropes [22]. *Children's literature* of these days is not an exception, requiring scrutinous investigation, thoughtful analysis and interpretation through new literary views and approaches. In accordance with the new approaches children's literature should:

– correspond to all the adult book requirements;
– take into consideration the child's outlook as an additional literary criterium;
– develop artistic taste of a child;
– assist a child in his/her personality formation, self-understanding and perception of the surrounding environment.

"Children's literature" is viewed as an integral part of the general literature with all peculiar to it features at the same time being focused on the interest of a child as a reader and having specific nature defining child's psychology [6, p. 240].

Besides, children's literature scholars define the notion of *"children's literature"* according to two basic criteria stating that:

− it is actually created by children or for children [3, p. 220].
− it is written or adapted for children [13, p. 20].

The multitasking nature of *children's literature* lies in the functions it performs in relation to the reader like addresses to the imagination, emotions and feelings of a child, affects his/her cognitive capability, develops tastes and preferences. In addition to those, children's literature entertains a child [13, p. 20], promotes the contact establishment with the young reader and aims at getting him/her involved [20, p. 15], shares with a child the society's centuries-old experience [15], letting adults get into the world of excitement, entertainments and amusing discoveries [8].

Thereafter the issue of child's perception in children's literature is currently topical. Experienced writers and publishers state that writing a book for children is a challenge as children are sensitive to anything fake and have their unique outlook [12]. *Children's literature* is the piece of art world about what a child is, the way a child perceives the surrounding environment. The uptake of content by a child is based on his/her perception and is considered to be one of the main components of child's creative activity – the starting point for the future creative activity. The better ideas of an object a child has, the more fulfilled and clearer the object will be. In its turn, *artistic perception* is a special form of creative cognitive activity, characterized by the emotional understanding of a work of art through the comprehension of a specific figurative language of art and the building up a certain aesthetic attitude expressed in evaluation [4, p. 208]. Attention is the key to a child's perception of the content and their understanding [14, p. 248]. Only through listening to the text, looking at the illustrations a child perceives it being an unexperienced reader for whom reading is a complex intellectual activity process, requiring great attention and concentration, distracting a child sometimes from the very content [7, p. 5].

The easiest way to draw a child's attention to the text is through illustration to it, as the bright cover of the children's book captures both the child's attention and prepares a child for perceiving the content, contributing to his/her aesthetic upbringing.

Illustrations to the text are an indispensable element of children's books, assisting a child in understanding more deeply the meaning of the text, getting into the world of described in the book events. Thus, visual perception is one of the main means of direct knowledge of objects and phenomena of surrounding reality. To all that, an illustrated children's book has a significant impact on the child's perception formation and is possible only because the attitude of a child toward the image as the reflection of reality is changing, the ability to correctly compare an image with reality is developing, the interpretation of an image, understanding of its idea is improving.

Naming and counting separate objects depicted on the image, giving a brief description of the, fully, accurately and figuratively characterizing an image by means of different means, − these are a few steps a child takes toward perceiving the illustrations met in a book [11, p. 236-238].

The interpretation of illustrations, understanding of the situations and evens depicted on them depend on both the adequate perception and the nature of the illustrated plot, its complexity and accessibility. Adequate and clear understanding of the illustrations, quality of the children's narrations to a significant extent rely on the *communication* while getting through them. It is clear that the perception of illustrations by a child varies a lot depending on how complicated the content of the images is. In case a child is familiar with the idea of the image, he/she can describe it in details. However, when a child is unfamiliar, he/she proceeds to the naming the separate figures, objects being unable to understand the whole composition, gets distracted from the content and, of course, begins to fantasize, thinking up something new to the native content of the story, making it special [5, p. 206-208].

As soon as sophisticated literature has become less *"literary and profound"* but more *"dynamic"* [19], a new system of children's literature genres is being formed and beside the traditional literature genres like a novel, a fairy-tale, a legend, a poem there have appeared world-famous and widely read a *"picturebook"* and a *wimmelbook* (hidden picture book) etc [1].

A *picturebook* is focused on making an emotional impact on a child – joy, excitement, sympathy, laughter; it is a correlation between a visual and a verbal in which the content is transferred through illustrations and the text (if any) has a nature of inscriptions [10]. A *wimmelbook*, in its turn, is viewed as a large-size book made of board paper containing no inscriptions but for the front page, introduction and short lines integrated into illustrations. It can be interesting to readers of all ages, fosters the development of different perception forms and information analysis, motivates a reader, can be the first manual to develop skills of connected speech, encourages a child to observe and think up stories by discovering images [21].

The present day's market of children's literature demonstrates significant changes related to the artistic design of a child's book conditioned by, first and foremost, the increase of thematic variety. Publications aim at getting a child acquainted with the surrounding environment: house, shop, animals, plants, vehicles, important events, holidays, favorite cartoon or film characters.

The investigation focuses on the urbanization subject: a child in a big city (architecture, design) and the perception of a city by a child. These books are sure to visually delight readers of all ages while teaching kids how to become the next generation of smart thinkers, inventive creators, and model citizens.

Among the examples, the worth mentioning ones are: *"The Sound of Silence"* (2016, author: Katrina Goldsaito, illustrator: Julio Kuo) [16], *"Last Stop on Market Street"* (2015, author: Matt de la Pena, illustrator: Christian Robinson) [17], *"Maybe Something Beautiful: How Art Transformed a Neighborhood"* (2016, authors: F. Isabel Campoy, Theresa Howell, illustrator: Rafael Lopes) [18], etc. A big city, a megapolis, is the first hostile environment for children to get acquainted with it. For someone this acquaintance turns out to be an interesting journey into something before unknown just to broaden the outlook when for others it causes stress when facing challenges with the dangerous spirits of a city. A modern child is developing incredibly fast and preparation of a child to the *"adults' life"* in a big city addressing to *picturebooks* is a topical form of communication between the world of adults and the world of children and fostering the socialization process.

The Ukrainian market of children's literature is mostly stuffed with *picturebooks* of foreign authors and illustrators while the domestic publishing companies are taking first, but successful, steps in their upgrading the skills in this very genre of children's literature. The question of a child's perception of a big city and the process of socialization is of high importance these days requiring a more scrutinous investigation by the domestic literary scholars.

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TRANSLATING ALLUSIONS TO MACBETH INTO UKRAINIAN: A CASE STUDY OF WYRD SISTERS BY TERRY PRATCHETT

Intertextuality as a notion common for modern literature provides real challenges for translators. One of the most widespread intertextual devices is an allusion which is defined as "a brief and indirect reference to a person, place, thing or idea of historical, cultural, literary or political significance"[8]. As an interpreter and translation scholar Yulia Behen-Herus notes, "allusion is a hidden double-layered surprise for the reader. First of all, the meaning of the word is read in a specific context. Then, if the reader is ready to move on, a hidden treasure will be waiting for him"[1]. It means that allusions widen the text's dimensions, widen reader's horizons and enrich the style of the author.

The works by William Shakespeare are among the most popular sources of allusion for many writers. Firstly, they are part of the educational and classic literature canon. Secondly, the topics, raised in these works have become eternal ethical issues for humanity. As for English-speaking writers, allusions to Shakespeare's texts are also the way to refer to the home ground of Britain [9] which is especially true for the works by a contemporary fantasy writer Terry Pratchett.

Shakespearian intertextuality has been studied by many scholars [0]. Our paper aims to analyze the strategies of allusion translating into Ukrainian a Discworld novel *Wyrd Sisters* (1988) made by Olexander Mykhelson [4]. The intertextual base of the novel is wide Shakespearian ground with plot referring to Macbeth and Hamlet and a number of allusions throughout the text.

As the manager of Ukrainian Discworld translating project Olia Renn sates, the specific of Pratchett's humor, based on numerous metaphors and allusions common to the English language space, creates significant challenges for the translators, as the word play and allusion are difficult to recreate in other languages [0]. That is why the object of this study is some of the most prominent allusions to Macbeth and their recreation in the Ukrainian text by O. Mykhelson.

The interpreter's intention is not only to translate the text, but also to maintain the reader's recognition of the reference to Shakespeare's tragedy. At the same time the interpreter has to reproduce Pratchett's irony and word play. Like in the example:

'Something comes,' she said.'Can you tell by the pricking of your thumbs?' said Magrat earnestly. Magrat had learned a lot about witchcraft from books. 'The pricking of my ears,' said Granny. [10, p.22]

"У нас гості, сказала бабуня Дощевіск. – Ви визначили це за особливим відчуттям у великих пальцях? – нетерпляче спитала Маграт. Значну частину відьомських знань вона запозичила з книжок. - За особливим відчуттям у барабанних перетинках…" **[4, p. 20]**

This quote clearly shows Shakespeare's allusion to the play "Macbeth" act IV scene one, where one of the witches feels Macbeth approaching with the trembling of her thumbs. First off, Pratchett used this to show the simplicity of the young witch and her improper desire to obey the witch rules. Secondly, he wanted to hint to the reader that witches might be unpleasantly surprised with an unexpected visit. First of all, the English-language reader immediately hears the hidden content - it's not just three girlfriends at a picnic, it's three witches, "sisters of fate", according to Shakespeare.

Another example is when the Duke, the King's murderer, is anxious by what he did:

"He'd tried to wash the blood off his hand. If he could wash the blood off, he told himself, it wouldn't have happened. He'd scrubbed and scrubbed. Scrubbed till he screamed".[10, p. 52]

"...Руки. Він шкріб і шкріб, але, схоже, це не давало жодного результату…Що сильніше він шкріб, то більше крові було на руках. Він злякався, що з’їхав з глузду…". [4, p. 68]

In Shakespeare's play, Lady Macbeth unsuccessfully tries to wash the blood off her hands after killing Duncan. Pratchett uses this allusion to add tragedy mood and reveal the real face of the murderer.

Let’s consider the examples of such allusions to Macbeth in the text of the novel:

Таблиця 1

“Wyrd Sisters” Terry Pratchett	“The Tragedy of Macbeth” William Shakespeare
'***When shall we three meet again***?' There was a pause. 'Well, I can do next Tuesday.' [10,p.6]	***When shall we three meet again*** In thunder, lightning, or in rain? [act 1, scene 1]
"'Can you tell ***by the pricking of*** your ***thumbs***?' said Magrat earnestly.	***By the pricking of*** my ***thumbs***, Something wicked this way comes [act

[10,p.22]	4, scene 1]
"There had been something about him being half a man, and... ***infirm*** on ***purpose***?" [10,p. 165]	***Infirm of purpose!*** Give me the daggers" is what Lady Macbeth calls her husband in [act 2, scene 2]
"…***who would have thought*** he ***had so much blood in him?"*** [10,p. 332]	"Yet ***who would have thought*** the old man to have ***had so much blood in him***". Lady Macbeth, [act 5, scene 1]

In the course of the study, we have come to the conclusion: the translator localizes the text of the novel, introducing quotes from the Shakespeare tragedy as already known to a Ukrainian reader. As the table shows, A. Michelson chooses the translation by Borys Ten.

Table 2

Boris Ten's translation [7]	**Lesya Ukrainka's** translation [5]	**Panteleimon Kulish'** translation [6]
Коли ще стрінемося ми Під зливу, блискавки й громи? [7, p. 346]	Коли ми стрінемось сестриці? Чи в грім, чи в дощ, чи в блискавиці?	Коли ж нам знов злетїтись всїм? У дощ, у блискавки, чи в грім?
- Коли ще стрінемося ми під зливу, блискавки й громи. Певний час панувала тиша. – Ну, мабуть наступного вівторка [4, p. 7]		
В мене ***пальці*** засвербіли -Щось недобре прилетіло. [7, p.389]		Щось сверблять ***пучки великі*** в мене: Сюди прямує щось до нас мерезенне.
- Ви визначили це за особливим відчуттям *великих* ***пальців?*** – нетерпляче спитала Маграт. [4, p.20]		
Слабодухий! Віддай мені кинджали. [7, p. 365]		***Легкодуху!*** Подай сюди кинджали.
– ***Слабодухий,*** віддай мені коробку! [4, p. 161]		
Але хто б міг подумати, що в старого стільки крові! [7, p. 404]		*Тілько-ж бо хто подумав би, що в старому стілько крові?*
Але хто б міг подумати, що в старого стільки крові?... [4, p.343]		

Thus, it is obvious that O. Michelson uses quotations from the translation of Macbeth by Borys Tenn when translating Pratchett. The reason for this choice is a high level of translatjr's skills, natural language, preservation of the original compositional and structural features. We study Shakespeare's works translated by B. Ten, and the reader easily recognizes the allusion to the classical work. That is why a professional translator uses the most common version of the translation of Macbeth to convey Pratchett's allusions and their essence to attentive readers. The choice of the translator is due to B. Ten's ability for Pratchett's word play, which has to be reproduced by the translator of the novel. The essence of O. Michelson's translation strategy is the localization of the work based on the most common source of allusion in our culture.

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FAIRY TALES AT THE LESSONS IN THE KINDERGARTEN

The fairy tale begins to get acquainted children with the world of literature and the arts, the world around them. Fairy tale is one of the main means of achieving educational development and educational goals of learning.

The use of fairy tales at English lessons has long been the subject of much attention of methodologists, teacher-practitioners, scientists. The use of fairy tales for creative storytelling was explored O. Fleurina, P. Vorobyov, O. Ushakova. Application of the fairy tale as a stage, a game during the formation students' foreign language competence was studied by V. Movsesian, V. Belousov, L. Poplar. Scientists came to the conclusion that fairy tales are a means of developing students' speech, their literary and creative abilities [1]. Although a lot has been said about the value of fairy tales for the development of a child's personality, a separate methodological or scientific study that would provide comprehensive performance information of using fairy tales at English lessons is not done. That is why, the importance of this topic is increasing.

The purpose of the article is to analyze the use of fairy tales at the English lessons in the kindergarten; to show that fairy tales are a good tool that fosters the creative imagination of children and is one of the keys to successful learning English. Recently in the kindergartens at the English classes fairy tales have begun to be used and this is what has led us to this study.

The familiarizing children with fairy tales has been around almost since their birth and in early childhood, the child begins to understand the content of the tale, which promotes the desire of the child to learn a foreign language.

First of all, the use of fairy tales at the English lessons in the kindergarten has a great influence on the formation of the phonetic side of the child's speech. It is recommended to use the phonetic warm-up at the beginning of the class which is available in different versions. For example, "Tale of the Tongue" [2, p. 21]:

<u>Ранок Язичка</u>

Вранці Mr. Tongue прокинувся, встав, відтулив шторки на вікні [w-w-w]. Погода стояла хороша, і він вигукнув [a:], [o:].

Mr. Tongue вирішив прибрати в кімнаті. Він вибив килими [p-b]. Трохи пропилососив [t-d], протер дзеркало [h-h]. Mr. Tongue поснідав і вирішив попити чаю, але він був дуже гарячим, і Mr. Tongue подув[f-v].

Після сніданку Mr. Tongue відправився погуляти. У дворі він побачив пташку з пташенятами. Вона звала їх [vi:-vi:-vi:].

Під деревом сиділа мама-свиня з поросятами і звала їх: [wi:-wi:-wi:]. Назустріч йому вибіг злий собака і загарчав: [r]-[r-r]. Mr. Tongue сказав у відповідь: [br], топнув ногою, і собака втік.

Але раптом підповзла змія і зашипіла: [ʃ-ʃ-ʃ]. Зуб у змії зламався, і вона зашипіла: [θ-θ-θ]. Mr. Tongue посміхнувся і пішов додому, де його чекали справи.

Furthermore, it is better to use visual material to develop the imagination. After reading the fairy tale, children can be offered to imagine how they imagine the fairy tale characters, some specific storylines and etc. This will help to activate the child's imagination. A fairy tale is better remembered by children.

Moreover, quite often fairy tales are recommended to be used for teaching children grammatical material. It is known the learning of this material is quite monotonous which quickly tires the child and, as a result, the child does not absorb the material. But with a fairy tale this process can be made more interesting and exciting. That is why, it leads to the better learning of the material.

To conclude, the paper examines the main ways of using and applying fairy tales at the English lessons in the kindergarten. The advantage of using fairy tales at the English classes is that they help to realize the educational, developmental and educational goals of learning in an interesting and accessible form for children, engaging them and giving rise to their desire to learn a foreign language. In the process of children’s acquaintance with a fairy tale, they enrich the vocabulary, develop and improve the skills of correct pronunciation, and improve the language culture.

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FOREIGN LANGUAGE BARRIERS AND WAYS TO OVERCOME THEM

A language barrier is a term that is used to describe the inability of passing information between two or more people due to linguistic differences. Language barriers are as difficulties in communication that occurs within a group of people or between individuals with different language background or dialects. In the presence of language barriers, it would mean that there will be less or no communication.

When talking about language barriers, we need to understand the different types of language barriers. Let’s explore the different kinds of language barriers in communication: travelling language barrier, language barrier in classrooms, language barrier in the workplace. In order to better understand how to overcome language barriers, let's evaluate the various types of language barriers first.

When traveling to another country or another location where the native language is different from the one you speak, you may tend to have difficulties in communicating with the people in that place. Variations in language are the most common barrier to communication since two people speaking different languages cannot understand each other.

Accents and dialects of people from diverse places may also differ even if they have the same language. Communication barrier due to dialect comes when you encounter people speaking the same language but having different dialects.

The language barrier in communication may occur in the classrooms when there are students with different levels of knowledge of the foreign language. According to Chugh (2017), the success of knowledge transfer in classrooms is often hampered by factors such as lack of resources, lack of peer trust, culture (personal and organizational), inadequate communication, lack of leadership and work overload.

Different accents with the teachers or facilitators may also create a communication barrier when talking to the students. When teachers fail to create engaging lessons with the students, it may make it hard for the students to interact with them. The role of the teacher is not only to transfer information, but also facilitate development of students' ability to apply basic knowledge and gain higher levels of understanding. To accomplish these goals, teachers must become facilitators who create a learning environment in which questioning, seeking, synthesizing, and discussing are encouraged (Fry, 2009).

The language barrier in the classroom may affect the students' performance negatively since the students are not getting the same opportunities as those who understand the language well. Variation in personality and peer pressure may also add to the whole language barrier effect. It makes some student feel like they don't belong and even make it difficult for them even to socialize.

Here are some few tips on how to overcome language barriers in the classroom (Celce-Murcia, 2014):

1. create equal education options for every student;

By creating the same educational options, the students will stop feeling left out and will engage in what fits them. It can be done by developing education plans for individual students deemed to have difficulties in communication.

2. create support systems which will motivate the students in and out of classrooms;

The teachers should dedicate themselves in ensuring that they create interesting topics and lessons that keep the students engaged and interested. It will help the students feel the urge to be involved in the classroom. Interesting activities outside the classroom also make students vibrant and involved in class work.

3. restructure the learning methods;

Another way is to set standardized tests. Avoid exams that may put some students at a disadvantage since they may have had unequal learning opportunities. Try to come up with a variable structure of tests to ensure that every kid gets equal opportunities.

4. use different kinds of non-verbal communication with different students.

Non-verbal cues complement verbal cues to make it easy for students to understand certain concepts. Some people may fail to understand audio well but may understand pictorial representations, gestures as well as any other non-verbal sign languages better.

With a combination of all these options, it is possible to overcome the challenge of the language barrier in classrooms.

The language barrier in the workplace can occur due to a difference in languages spoken or if speakers use different technical terms or jargons. For example, people from the same company but different departments or divisions may experience a language barrier in communication due to the technicalities of the languages they use. People from different industries or careers may also encounter a language barrier in communication for example when a pilot talks to a sailor or a mariner, the terms and language used may differ.

To overcome language barriers in the workplaces, people from different fields of specialization should ensure that they use the most common terms when talking to people outside their field or industry.

Here a few tips on how to overcome language barriers in the workplace. Use one primary language in the workplace and translate all the relevant documents into it. One can use the available translating websites and tools to convert the work records in one common language for the employees. It is one way to reduce the language barrier in the workplace.

Another way is to have an interpreter if you want to give feedback or communicate to your employees. An organization can hire an interpreter to translate and pass the required information to the employees.

The employer can also facilitate the employees to take language classes of the business language which will enable easy communication. The employer should provide access to learning the basic in the workplace to allow employees to understand language and phrases which can also enable the employees to thrive.

No matter who you are talking to in the workplace, whether they understand your language, always use the most understandable and straightforward language.

Include visual communication methods as another way to avoid language barrier in communication. Illustrations and demonstrations can go a long way when explaining what the words fail to convey. Visual cues are paramount when there is a language barrier and helps to bridge the gaps created by a language barrier.

Since a majority of people may not grasp the concept of something new the first time, repeat it for them a few times to increase their chances of understanding. Repetition gives the employees ample time to hear, internalize and understand.

The language barrier in communication can make people and businesses miss a lot of opportunities and thus it’s vital to understand how to overcome it. Working through a language barrier is an art rather than a science. I think that people can discuss and interact easily across the world. It doesn't matter if you are traveling, in a classroom or at the workplace. Find ways to communicate effectively with your peers and stay efficient.

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THE EVOLUTION OF TRADITIONS AND CUSTOMS IN GREAT BRITAIN

The customs and traditions of Great Britain differ markedly from other nations. The British are incredibly proud of this and try not to betray their principles. They still have left-hand movement and a very popular game of cricket. They reluctantly changed their adored inches to centimeters, pints to liters, moving to the decimal system of measures. But despite the fact that the whole of Europe measures the distance by miles, the British are reluctant to change their miles.

In recent years the researchers have become increasingly interested in studying English traditions and customs. This subject has been learnt by Yu. Vyshnutska, A. Pavlovsky, G. Orwell, and others.

Many resent studies have focused on studying traditions in general, but less attention is paid to some details of such English traditions as the tea tradition and Pancake Day. That is why, the aim of the article is to research the tea tradition and Pancake Day in detail as the topic of English traditions is very actual nowadays.

The most famous tradition of Great Britain are their breakfasts and tea parties. Firmness and love for tea at the genetic level is what makes an Englishman English. Here is just Portuguese tea taught to the inhabitants of Foggy Albion by a Portuguese woman. And it happened relatively recently – in the seventeenth century.

And although it is known that the western world should thank China for this drink, few know that the popularity of tea England owes the Portuguese. BBC Travel reports when Catherine Braganza, a Portuguese princess, daughter of King Juan IV of the Renewal, became the wife of Charles II, she brought her tea as part of a dowry [1].

Moreover, a historical anecdote states that on the chests of drawers that came with the princess was an inscription from the Portuguese Transporte de Ervas Aromaticas "transportation of aromatic herbs", abbreviated – T.E.A.

"When Catherine married Carl, she became the object of close attention – everything from her clothes to her furniture became an occasion for court gossip," the researcher Sarah-Beth Watkins says, author of Catherine of Braganza's book "Charles II's Restoration Queen". "Court ladies began to imitate the queen, hoping to enter her immediate environment," the researcher adds [1].

Is the Tea Party tradition preserved to this day? In one of the issues of "Breakfast 1 + 1" Lucy Barnabas spoke about the traditions of morning tea in Great Britain. She told that in England tea is drunk after a salty breakfast. These can be eggs, beans, bacon, sausages and so on. During the tea party, manners and communication are important. They always start talking in the weather. It is not customary to talk about money and politics.

Furthermore, the researcher Kate Fox says in her book "Watching the English", that the theme of the weather is to start a conversation with strangers. Lucy Barnabas also adds that morning tea is not strong. It is often called champagne tea. Tea is drunk with milk and biscuit [2].

Another interesting tradition is Pancake Day. The Pancake Day lasts only one day, while the observance of religious customs here is of particular importance. On the Pancake Day, which is held on Tuesday, the British attend church to spiritually cleanse themselves and repent of their sins before Easter. Therefore, the holiday is also called "Penitent".

It is believed that the small town of Olney became the founder of this humorous festival, which turned into an important event. Back in 1445, a certain housewife baking pancakes heard a bell ringing, notifying parishioners about coming to church. Without completing the cooking process, the woman grabbed a hot frying pan and ran to church. At the entrance she was met by the vicar, who appreciated the deed of the parishioner, and gave him a prayer book. From this moment on, the custom was forgotten more than once and revived again. However, since 1948, the traditional "pancake races" began to be held every year [3].

It takes place in spring on Tuesday and people not only eat pancakes everywhere but... run with them! These races are hold by housewives and distance is about 410 meters. While running they must toss the pancake three times and catch it back on the frying-pan. The members of the families watch the runners and cheer: "Run, Mum, run quickly!"

To conclude, the article deals with the English traditions which are the important part of people's life in Great Britain. The paper focuses on the historical aspects of some English traditions and customs. In this paper we demonstrate the importance of learning English traditions and customs for every person who study English as the English have many interesting traditions and customs that are worth learning.

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THE PROBLEM OF INVESTING IN THE TOURISM INDUSTRY IN THE KHMELNYTSKY REGION

The aim of this study was to investigate investments in tourism development in Khmelnytsky region. Various sources for this problem were tested.

Ukraine has abundant tourism and recreational resources that, if used properly, can contribute to the rapid and highly efficient development of the country's tourism industry. Despite the slight positive developments, the development of tourism is hampered by many factors, among which the most significant are the lack of tourism infrastructure the slow pace of growth of investment in the development of the material and technical base of the industry. Investment priorities of an industry are determined by the ability of enterprises to ensure high and rapid return on investment. From this point of view, Ukraine, with its significant recreational potential, favorable natural and climatic conditions, is essential for the infrastructure to serve the recreational sector and is a very promising region. In addition, as the world practice shows, the tourism industry is one of the most effective for investment [0, pp.351-358].

However, political and economic instability in the country, low environmental security and passive behavior of the state tourism policy are some of the reasons that have hindered the development of the tourism industry in Ukraine in recent years. Little is known about Ukraine and its tourism and recreational potential to foreign consumers, as there is insufficient financial support from the state and the lack of a comprehensive approach to the promotion of the domestic tour product in the world tourist services market [0, p.146].

Today the importance of a regional tourism policy is growing. Khmelnytsky is one of the regions of perspective tourism development in our country. This is explained by the favorable features of its geographical location, favorable climate, the wealth of natural resources, historical, cultural and tourist-recreational potential. The main tasks of tourism development in the Khmelnytsky region are the formation of a tourist and recreational complex that would satisfy the needs of the population in spa treatment, rest and tourism [0].

On the territory of the Khmelnytsky region there are a considerable number of nature monuments, state reserves, historical and cultural monuments, and a well-developed transport network [0].

Khmelnytsky region is the area, where the ancient cultures of Volyn and Podillya are harmoniously combined. It is embodied in the tourism sector of Ukraine as a centre of innovation kinds of tourism and is one of the most potentially attractive in terms of travelling.

The region hosts: 120 nature reserves, 158 natural monuments,35 monuments of landscape art, 17 reserved tracts, as well as Europe's largest National Park «Podil'ski Tovtry». The region takes the 3rd place in Ukraine in the number of monuments of national importance. The main kinds of tourism in Khmelnytsky region are: adventure-seeking, cultural and educational, therapeutic, green tourism, extreme.

A striking example of successful investment implementation is the project *The construction of resort complex LLC «ARDEN palace»* in the village Sataniv Horodok district. The uniqueness of the project is a combination of therapeutic resort with a ski base. Investors of the ski resort in Sataniv were representatives of Poland, Austria and Israel.

Khmelnytsky region is one of the most promising places for economic development in Ukraine. Investment attractiveness of the region is determined by favorable geographical location, powerful resources, dynamic development of economy, and social and humanitarian spheres. Developed energy complex, innovative multi-disciplinary industrial and agricultural production form the basis of the economy of the region. Due to its unique historical, cultural heritage, the leisure and wellness tourism industry is developing at a rapid pace, which today can satisfy the needs of even the most demanding tourist. Investment policy in the region is based on a well-defined partnership between the public and private sectors. Particular attention is paid to interregional and international cooperation. Business relations with business partners of many countries of the world are expanding, the volume of investments into perspective spheres of Khmelnytsky economy is growing, and the directions of their investments are expanding.

The introduction of new excursion routes and the search for effective forms of the combination of different types of tourism will contribute to the further development of tourism in Khmelnytsky. To form a positive perception of Khmelnytsky region as an attractive tourist region, considerable marketing efforts are needed, which should be directed to improving the information support system, deepening marketing research in the tourism sector, stimulating the development of tourism infrastructure by attracting domestic and foreign investments for reconstruction. Based on world experience, it can be argued that the development of the tourism industry in Khmelnytsky region is possible with the combination of recreational resources, rich historical, architectural and cultural heritage with well-developed tourist infrastructure and appropriate socio-economic conditions[0].

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SOCIAL MEDIA AND THEIR ROLE IN THE WORSENING OF THE ARABIC LANGUAGE

This study investigates the effect of social media on using the Arabic written language and the main features of applying hybrid bilingual colloquial language in modern social media. This research highlights the widespread phenomena of "Arabizi" in communication, as one of the leading factors of worsening written language. The study also indicates the most important and prominent mistakes that users make during communication in social media, especially in writing Arabic words by English letters or vice versa. It also describes reasons for grammatical mistakes, the appearance of abbreviations and “new” simplified Arabic, as well as analysed odds and disadvantages of it.

وسائل التواصل الاجتماعي ودورها في تدهور استخدام اللغة العربية

في عصر العولمة يشهد العالم المعاصر مجموعة من التحولات المتسارعة في مجال الاتصال وتقنية المعلومات؛ ما جعل العالم "قرية صغيرة"، تضمحل فيها المسافات والحدود، وتنتقل فيها المعلومات إلى سائر أنحاء المعمورة في لمح البصر .رغم أن للثورة التكنولوجية فوائد جمة، غير أن ذلك لا يخفي أضرارها، ولعل أهمها ما يتعلق بتهديد اللغة العربية، حيث بات تواصل معظم الشباب الناشئة عبر مواقع التواصل الاجتماعية ووسائل الاتصالات الحديثة يجري عبر لغة "هجينة" يطلق عليها "العربيزي"، وحتى مستخدمو اللغة العربية لا يكترثون لصحتها وقواعدها.

هدف الدراسة الحالية هو تحليل تأثير وسائل التواصل الاجتماعي في استخدام اللغة العربية.

وظائف الدراسة فيما يلي:

- تحليل تأثير وسائل التواصل الاجتماعي في استخدام اللغة العربية؛
- تحديد أهم سلبيات مواقع التواصل الاجتماعي على اللغة العربية؛
- تحليل أسباب استخدام ألفاظ العربيزي في كتابات الشباب.

تنتشر اليوم في مختلف مناطق العالم مواقع تعرف باسم وسائل التواصل الاجتماعيّ، أو الإعلام الجديد كما يحلو للبعض تسميتها، ونذكر منها: الفيسبوك، والتويتر، والواتس أب، واللينكدإن، والأنستغرام، والفايبر، والسكايب وغيرها، وهي في معظمها منظومة من الشبكات الإلكترونية التي تسمح للمشتركين بإنشاء مواقع خاصة بهم، ومن ثم ربطهم من خلال نظام اجتماعي إلكتروني بأعضاء آخرين لديهم الهوايات والاهتمامات نفسها.

وفي الوقت الحاضر يكتب مستخدمو الانترنت بـ"العربيزي" غالباً وهو كتابة الكلمات العربية بأحرف إنكليزية، أو العكس. لغة العربيزي تعتبر ظاهرة منتشرة منذ وقت طويل وأن الانترنت هو أهم الاسباب في انتشارها وأن اللغة العربية بدأت بالاختفاء وأن السبب الرئيسي لاستخدام هذه اللغة هو مواكبة التطور التي تشهده الهواتف الذكية والأدوات للكتابة ويرى أن هذه اللغة تسهل في عملية التواصل بين الشباب عبر وسائل الاتصال الاجتماعي وهي عبارة عن لغة ونمط جديد اخترعه الشباب بينهم ولا يعتقد أن هذه الطريقة في الكتابة تشوه اللغة العربية لأنها مازالت موجودة ويتم التواصل بها [1].

صارت بعض المصطلحات والعبارات الإنجليزية، مثل "بليز" please و"أوكي" ok و"هاي" Hi، ولول "Lol" متكررة بوتيرة كبيرة في جميع أشكال التخاطب الحديث بين الشباب العربي، ولم يعد مُستغربًا أن تجدها مكتوبة بحروف عربية، بل ربما هي وفرت للمتخاطبين سبيلاً سهلاً للتعبير عن معانٍ معينة بأسلوب قصير لا يتجاوز أحرفاً معدودة، عوض الاسترسال في تعابير عربية طويلة بعض الشيء.

و لا يمكن أن ننكر تأثير هذه المواقع في استخدام اللغة العربية، ومن تجليات ذلك– مثلا – ابتداعها كلمات تثير الاستغراب، عززت الهوة بين الجيل الجديد من مستخدمي هذه الوسائل ولغة الضاد . أهم وأبرز ما يقع فيه المستخدمون من أخطاء يكمن في الاختصارات غير المفيدة للكلمات، أو إدخال حروف الجر في الكلمات مع تكرار حروف المد في الكلمة دون فائدة، أو كتابة الكلمات والجمل دون مسافة بينها نظرا لقلة مساحة الأحرف المسموح بها في بعض التطبيقات، كذلك بعض أساليب الكتابة في وسائل التواصل مما يسمى "العربيزي"، وهذا الأسلوب يؤثر سلبا على مهارات اللغتين لدى المستخدم.

أن هذه الأخطاء كان لها عدد من المسببات، ومن أهمها استخدام عدة برامج أو صفحات تواصل اجتماعي في نفس الوقت، ما يجعل المستخدم يقوم بكتابة سريعة ومختصرة للإلمام بكل ما يعمل عليه من برامج دون الاكتراث بالإملاء أو الكتابة الصحيح [2] ، وكذلك عدم الاهتمام بالكتابة الصحيحة كون هذه الكتابة ليست رسمية أو ذات أهمية، كما أن من الأسباب عدم الحرص على تصحيح الخطأ في حال وقوعه، أو التصحيح للآخرين دون سخرية، وتكمن المشكلة في أن هذه الأخطاء أصبحت اعتيادية ومتداولة بشكل كبير بين المستخدمين .يذكر بأن العديد من الدراسات قد أشارت إلى الآثار السيئة لاستخدام لغة "العربيزي" بين الشباب والفتيات، ومدى تأثيرها على اللغة العربية الصحيحة، وتعد "العربيزي" لغة هجينة بين العربية والإنكليزية، وهي غير محددة القواعد، استحدثت منذ أعوام، على يد بعض الشباب العربي للتواصل عبر الدردشة على الإنترنت باللغة العربية أو بلهجاتها، وتنطق هذه اللغة بالعربية، إلا أن الحروف المستخدمة في الكتابة هي الحروف والأرقام اللاتينية بطريقة تشبه الشيفرة.

أما أهم سلبيات مواقع التواصل الاجتماعي على اللغة العربية ف من الممكن عرضها فيما يلي:

- عدم اكتراث المشتركين بهذه المواقع من وقوعهم في الأخطاء اللغوية سواء كانت نحوية أو إملائية. وليس مقصودنا تلك الأخطاء اللغوية التي قد لا يستطيع أن يتجنبها إلا المتخصص في اللغة، ولكن حديثنا عن الأخطاء التي تدل على عدم إلمام بأبجديات العربية كعلامات إعراب الفاعل والمفعول به أو المبتدأ والخبر (أخطاء نحوية)، وكذلك عدم التفريق في الاستعمال بين بعض الحروف التي قد تتشابه في الظاهر وتختلف في الوظيفة مثل عدم التمييز بين التاء المربوطة واله، وبين التاء المربوطة والتاء المفتوحة، وبين الألف الممدودة والألف المقصورة، وبين الضاد والظاء وهذه أمثلة على الأخطاء الإملائية[3]. ومما يدخل في عدم الاكتراث بالأخطاء اللغوية نطق الكلمات خطأ خصوصاً مع انتشار ظاهرة الكتب الصوتية وهي ظاهرة حسنة، ولكن الإشكال فيها هو قراءة الكثير من كلمات الكتاب بشكل خاطئ نظرا لأن الكلمات غير مشكولة في الكتاب المقروء، الأمر الذي يجعل القارئ لا يعرف الصواب في نطقها، فيجتهد في نطقها كيفما اتفق معه.
- التعريب والترجمة في مقاطع الفيديو المنتشرة على مواقع التواصل الاجتماعي، فالعديد من المقاطع غير العربية والتي قد يكون بعضها مفيدا، يتم ترجمتها للعربية ومن ثم نشرها على مستوى الناطقين بالعربية، ونظرا

لأن الترجمة تمت من غير المتخصصين وفضلا عن كون الترجمة غير دقيقة فإن الترجمة ذاتها يكتنفها الكثير من الأخطاء اللغوية.

- ظهورلغة جديدة لا تلتزم بقواعد العربية، وهذه لغة هجينة بين العربية والإنجليزية، وبين الحروف والأرقام "العربيزي" .

و في فيسبوك تقول عايشة عادل إن "لغة العربيزي لاتعجب الكثير من الشباب فيها مجرد لغة اخترعها بعض الشباب وانتشرت فيما بينهم ويتم التواصل بها للتباهي بين مستخدميها هذا ما تأثر به الجيل الجديد بالقنوات والفضائيات وما يتدوال في هذه التقنيات من مصطلحات اجنبية تشجع على تدوال اللغة الانجليزية أكثر من غيرها". وأضافت أيضا أن هذا الجيل من الشباب لا يركزون على اللغة العربية لانها ليست اللغة الاساسية في وقتنا الحالي واصبح التركيز أكثر على اللغة الانجليزية لأنها هي الأكثر انتشار في العالم وأيضا مطلوبة في كافة مجالات سوق العمل [4].

و قي تويتير علق محمد وليد حاجي أن" الغة العربيزي تعتبر ظاهرة منتشرة منذ وقت طويل وأن الانترنت هو أهم الاسباب في انتشارها وأن اللغة العربية بدأت بالاختفاء وأن السبب الرئيسي لإستخدام هذه اللغة هو مواكبة التطور التي تشهده الهواتف الذكية والأدوات للكتابة ويرى أن هذه اللغة تسهل في عملية التواصل بين الشباب عبر وسائل الاتصال الاجتماعي وهي عبارة عن لغة ونمط جديد اخترعه الشباب بينهم ولا يعتقد أن هذه الطريقة في الكتابة تشوه اللغة العربية لأنها مازالت موجودة ويتم التواصل بها" [4].

و كما يقول الكاتب المصري يحيى حقي في فيسبوق "الإنجليزية هي الإنجليزية بِمعناها ولفظها وكتابَتها والعربيةُ كذلك، فهل رأى أحدكم إنجليزيا يكتب لغتَه ولكن بأحرف عربية؟ أذكر عندما كنت في الابتدائية وبختني معلمة الإنجليزية لأنني قمت بكتابة لفظ الكلمات بجانب الورقة باللغة العربيةِ وقالت لي هذا تصرف غير صحيحٍ ومضحك وأنه لكل لغة خاصيّاتها ولا يمكن لفظها بأحرف لغة أُخرى بطريقة مماثلة. من المؤسف أنّ اللغة العربيةَ أَصبحت موجودة في المناسبات والخطابات الرسميّة فقط"[4].

الكثير من المستخدمين ما زالوا غير قادرين على قراءة الرسائل الواردة إليهم من أشخاص لا يكتبون سوى بلغة العربيزي، "إن صح تسمية لغة عليها"، ولكن إن جاز استخدام مصطلح لغة على "العربيزي"، فهي من اللغات التكنولوجية الحديثة، التي ساعدت الكثير من المستخدمين للتواصل فيما بينهم، ولكن المشكلة التي قد يواجهها الكثير من المستخدمين هي عدم قدرتهم على تميز هذه اللغة وفهم كلماتها وما ترمي إليه أحرفها، فتكون النتيجة إما بتجاهل الرسائل التي تصلهم بكلمات تعتمد على لغة العربيزي هذه، أو بذل الجهد الكبير لمحاولة فهمها واستيعاب معانيها وما ترمي إليه.

و في راي عدد العلماء بغض النظر عما جاءت به طريقة "العربيزي" في الكتابة والتواصل فيما بين المستخدمين، وبغض النظر عن جملة الاتهامات التي وجهت إليها، وإلى تأثيرها على اللغة العربية الأم، لدرجة ظهور العديد من المدونات والحسابات والصفحات الخاصة على الكثير من المواقع الاجتماعية التي تطالب بعدم الكتابة بلغة العربيزي، مثل صفحة "أكتب عربي" على موقع فيسبوك، إلا أن الكثير من الخبراء والمختصين في اللغة العربية، أكدوا ضعف تأثير الكتابة والمراسلة بمثل هذه اللغة، كما أشاروا إلى عدم تأثيرها المباشر على لغة القرآن الكريم، وإنما هي نتاج طبيعي للتطور التكنولوجي والتقني الذي يشهده العالم، وطريقة مبتكرة للتواصل فيما بين المستخدمين حول العالم، باللغة العربية التي تعد مهد اللغات حول العالم وأكثرها قدماً.

نتائج البحث هي التالية:

الظروف الاقتصادية والسياسية والثقافية التي شهدتها البلاد العربية تمخض عنها ضعفُ اللغة العربية، وهيمنة اللهجات العامية، و اصبحت اللغة العربية للكثيرين من الناس لغة الإعلام والصحافة اليومية واللغة العربية تواجه تحديات كثيرة لعل (العربيزي) أحدها، فانتشار اللغة الإنجليزية أصبح أمرا واقعا، ولها أفضلية في الجامعات والمؤسسات وسوق العمل، كما أنها لغة التواصل المفضلة في المجتمعات المتعددة اللغات والثقافات، إضافة إلى أن جميع التقنيات الحديثة تصمم حسب قواعد اللغة الإنجليزية وحروفها، وكل ذلك يشكل ضغطا على اللغة العربية. ويبدوا أن الحذر من خطر ظاهرة العربيزي لن يؤدي إلى حل هذه المشكلة أو غيرها من المشكلات اللغوية المرتبطة بانتشار اللغة العربية؛ فمن الضروري دراسة هذه الظاهرة وغيرها من الظواهر اللغوية الطارئة باستخدام منهجيات البحث اللغوي الاجتماعي الكمية والكيفية. وبهذا السبب، الموضوع ذو صلة ويحتاج إلى مزيد من التحقيق.

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COMPARISON OF THE EDUCATION SYSTEMS IN UKRAINE AND IN EUROPE ON THE EXAMPLE OF ITALY

There are many foreign studentsin Italy, most of them are from the Third World, but also more than 12000 Europeans (most of them Greeks) study there. The places for foreigners are reserved both in universities with free admission and with admission through competitive exams.

A “laurea” diploma requires four to six years of study (depending on the specialty). The next degree corresponding to the Master's degree is called “Diploma universitario”. The course lasts three years. After completion of the course at any level, students defend theirthesis. The basis for thesis assessment is the arithmetic average of the results of all passed exams. Depending on the defense, the commission may lower or increase the final score.

The academic year begins on October 1 and ends on May 31. There are three sessions throughout the year.As long as students are eligible for their individual curriculum, each student decides when and what exams to take (except for some required by each faculty). A very important difference if to compare with Ukrainian system is the absence of any examination papers.

Exams can be both written and oral. Each exam requires 99.9% self-study, since lectures provide only a small part of the material you need to know about the subject.

After three years of internship, a university graduate can enter a doctorate. This requires passing the entrance test. Those who successfully cope with it receive a scholarship to study in Italy. PhD students usually do research at various universities in Italy and abroad. Those who have defended their research work receive a doctorate.

Universities with educational and scientific programs are under the control of the Ministry of Universities and Scientific and Technological Research. The task of the Ministry is to: plan and implement the development of scientific research; draw up three-year university development plans; distribute funds between institutions in accordance with the law.

The positive trends of education in Italy are that it is a member of most international conventions on recognition of the Council of Europe and UNESCO, Italy recognizes and accepts International and European bachelors. Agreements with France, Belgium and Spain provide for automatic recognition of university admission certificates. Credit transfer process is already underway with France and Spain, as well as bilateral agreements on diploma recognition with universities in France, Germany and Spain, which greatly enhance students' ability to continue their studies and employment. Foreign students have also certain admission privileges. They are given 50 % of theavailablenumberfor studyacceptance. An important positive aspect of education in Italy is setting each university a tuition fee based on several criteria, such as family income and student's achievement.

Negative trends in Italian education system are the multistage hypertrophied level of education, and most institutions are state. Higher education in Italy is represented mainly by universities.

Foreign students can also get education in Italy. An applicant should start some procedures one year before the beginning of studies in Italy by contacting the nearest Italian Embassy.

The development of the education system in Italy is in many ways ahead of the development of education in Ukraine, but, first of all, it is related to the facilities and resources, as well as the level of the country development. For these reasons, some of the positive aspects of the educational process in Italy will not be able to be borrowed and implemented.

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MODERN ENGLISH ABBREVIATIONS AND SHORTENED TEXT MESSAGES

Actuality of theme. Nowadays, abbreviation is one of the main trends in the development of Modern English language, especially in its colloquial layer, which, in its turn, at high degree is supported by constant development of modern informational technologies and simplification of speech with no loss of its informative content. It should be mentioned that abbreviation itself is a shortened form of a word or phrase, which consists of a letter or group of letters taken from the word or phrase [2].

The problems of abbreviations as specific language phenomena in modern languages attract the attention of many researchers, and they have been considered in

numerous articles and separate researches of Ukrainian, Russian and foreign authors. Towards the most circumstantial works relating to the last ones we can outline such scientists as D. Alekseeva, O. Jespersen, V. Pavlova, T. Pilze, M. Segal, L. Shelyahovsky, E. Voloshina, R. Walse, and others. The philologists I. Stern, M. Schlauch, L. Shelyahovska and L. Sapogova studied the basic principles of modeling of shortened lexical units [2]

The research aim is to analyze and discuss modern English abbreviations and shortened text messages**.**

The results and discussion. Abbreviations are a common part of our lives, they save us time and space in our written communication. In other words, almost anything you want to do, from official documents to text messages, will require you to know an abbreviation.

Abbreviation of words consists in clipping a part of a word. As a result we get a new lexical unit where either the lexical meaning or the style is different form the full form of the word [1].

Abbreviation has a high degree of productivity in modern languages, especially in official-business, scientific and technical styles, because it is aimed at increasing regulation and orderliness [1].

We also believe that text messaging can be a fun and playful way to communicate in our modern society.

The most popular means of shortening of the words in the SMS-language are abbreviation and acronym [5].

The most popular abbreviations are such as: TTY (talk to you later), BTW (by the way), IMHO (in my humble opinion), FYI (for your information), HAND (have a nice day) and, finally, LOL (laugh out loud). The latter form is used more often as an word – acronym, we can hear it in the oral speech. Acronyms are abbreviations, which were formed "from the first letters of words or phrases", for example: NATO (North Atlantic Treaty Organization), DVD (Digital Videodisk), CD-ROM (Compact Disk Read-only Memory) or Web (World Wide Web) [3].

We also want to mention four main rules of forming sms-shortening:

1. One letter or number substitute the whole word, eg: be – b; ate – 8; see – c; for – 4; are – r; to / too – 2; you – u; why – y; your / you are – ur [4].

2. One letter or number substitute the syllable, for example: activate – activ8; great – gr8; mate – m8; later – l8r; before – b4; therefore – there4; today – 2day; wait – w8; hate – H8; no one – NO1; forever – 4eva [4].

3. Changing the value of symbols, for example: ss – $; oo – %; sorry – soz; tomorrow – tomoz (2moz, 2moro); tonight – 2NITE; thanks – TX; today – 2dA, address – addy; says – sez; because – cuz, bcuz, bcz, coz or bcoz; probably – probz [4].

4. Omitting of letters and punctuation marks when excluded vowels, the meaning of the word is determined by the sequence of consonants, for example: between – btw; because – bcs; your – YR; speak – SPK; people – PPL; please – PLS; friend – frnd; homework – hmwrk; message – msg; probably – prbly; text – txt [4].

In our opinion, it is necessary to say that the combination of means of text messages can significantly reduce the whole sentence.

This fact shows us that people try to find new ways of communication and the use of distorted version of the English language is acceptable in the society.

Conclusion. We live in a very quickly changing world. People's dream to save time has led to a change of communication. Most people use abbreviations when taking notes. The words that we abbreviate are either words that we use frequently when writing or long words. There are infinite amounts of abbreviations in the English language and people are now using them more and more in daily speech [1].

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BLOCKCHAIN TECHNOLOGY APPLICATION IN MILITARY LOGISTICS

The aim of this study is to investigate the effect of application of Blockchain technology in military logistics. On the basis of this research the data from different material have been received.

For solving many logistics problems, related to the information component of the logistics system, world companies are probably using one of the most discussed modern technologies, namely Blockchain. First of all, it should be noted that Blockchain is a publicly available and unchangable digital book, in which information is stored in interconnected blocks. Thus, when creating a new block of information the previous ones are also being involved. This fact determines the high reliability of this technology.

The technology is rapidly gaining popularity due to its significant advantages over conventional paper documents and other electronic registry systems. These advantages precisely include high reliability and the ability to monitor deliveries in real time throughout the logistics chain. The researchers have the results: significant reduction of the time for filling up the documentation, and increasing the efficiency. It is possible to create both open and closed systems.

The experience of using blockchain in civilian logistics prompts implementing this technology in military logistics. In the prospect it can solve a number of problems concerning the information component of science.

Today, the US Army is actively exploring the application of blockchain in the area of logistics. US Air Force Command is introducing the technology in the systems of providing elements for airplanes. It should reduce the cost of their maintenance, but for the present the blockchain is being used for small supplies.

In our opinion, the creation of a single electronic system, consisting of several private information chains, will give each officer of the Armed Forces the opportunity to monitor the performance of their orders and, at the same time, control them in real time that provides assurance in the immediate planning of the operations of the military unit. In military affairs, everything must be precise without uncertainty. He can also control the distribution of various types of supply within a large military unit. It will increase the response to the needs of troops that positively affects the army. This technology can complement existing control systems in the troops.

The Ukrainian Military Scientific Center in Kyiv is already considering certain decisions for establishing a new control system of supply based on the information chain. But they are not perfect. Several technical problems should be solved. A great performance of computer systems is required to create an electronic registry book. Another problem is the lack of well-trained specialists in this field.

In conclusion, we can say that military logistics, as a science, is developing simultaneously with technological progress in the world. Although there are currently problematic issues in this area, there are suggestions for their solutions. In the near future we expect to see a completely new logistics system, based on electronic registry books.

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LINGUOCULTURAL ASPECTS OF LEARNING A FOREIGN LANGUAGE

Linguoculturology is a complex field of scientific knowledge on the interconnection and interaction of language and culture. This direction investigates interconnection between culture and language, and researches the language as a phenomenon of culture. It shows the observation of the world in the certain view by the cultural prism and by a certain nation’s mind and culture, which made our investigation **up-to-date**.

Linguoculturology is closely connected with such disciplines as linguistics, ethnolinguistics, psycholinguistics, cognitivistics.

Linguocultural intelligence as a key concept of cross-cultual interaction is an important personal characteristic enabling an individual to work effectively in the modern multicultural society. The nature of the phenomenon is under active investigation of educational scientists and caused our **purpose** and great interest in the chosen topic.

According to the most general definition, linguocultural intelligence is the ability of an individual to act effectively in a broad cross-cultural context. A significant part of this personality formation is composed by knowledge of cultural differences and traditional behaviors in typical communicative situations. However, linguocultural intelligence approach in education goes beyond knowledge frames, and is aimed at the formation of general behavioral repertoire including understanding, motivation, and skills that ensure the individual’s ability to function in various cultural contexts. It deals with cultural, sociological and personal dynamics in the cross-cultural space.

Linguocultural intelligence goes beyond emotional intelligence, as far as emotional intelligence provides the ability to work effectively with others taking into account their individual emotional characteristics, while cultural intelligence allows cooperating efficiently in situations associated with different cultures, to which participants of the cooperation belong.

It should be noted that interacting with representatives of their own culture; people intuitively use a set of social signals, most of which are unconscious. In contrast, when one is faced with a new culture, signals and information that have worked before lose their significance. In new cultural situations, one gets a feeling that behavior of others is somewhat bizarre or unreasonable. Individuals with highly developed cultural intelligence are able to analyze such situations and make appropriate adjustments in their attitudes and behaviors in the context of different cultures. Such analysis and correcting of their own behavior contributes to a unified conscious complex of characteristics that make cultural intelligence.

When learning a foreign speech, students must proceed from understanding the nature of language as a sign system used in communication. This means that the mastery of formal language side (phonetics, vocabulary and grammar) and language system should be carried out in the course of communication. Thus, communicative and cognitive approach at the study of foreign languages becomes dominant in training. The main principles of the organization of training content of using the communicative method are:

– *Speech orientation.* This means lesson is practically oriented. First of all, it concerns the exercise: the exercise is more than like a real dialogue, it is the more effective one. The speech exercises area smooth and dosed with the rapid accumulation of a large amount of vocabulary and grammar with immediate implementation; there is not allowed a single sentence that cannot be used in a real dialogue.

– *Functionality.* Speech activity has three aspects: lexical, grammatical, and phonetic. They are inextricably linked in the process of speaking. It follows that the words cannot absorb in isolation from their forms of existence (use). The functionality assumes that the words and grammatical forms are assimilated directly into the activity: the student performs any voice problem — confirms the idea, doubt heard asking about something, encourage the interlocutor to action, during which acquires the necessary words or grammatical form.

– *Situational.* Its fundamental importance is the selection and organization of material based on situations and communication issues that get the interest of every students.

– *Novelty*. It manifests itself in different lesson components. First of all, the novelty of speech situations (change of communication of the subject, discussing the problems of the speech partner, communication conditions, etc.).

So, to sum it up it is necessary to state that linguocultural intelligence is a set of qualities and skills that ensure the individual's ability to perceive different cultures from inside. In addition, an important element of cultural intelligence is the ability to identify behaviors universal for representatives of different cultures, signs specific to this particular culture, and actions grounded by personal characteristics of a particular person in a particular situation. Acquiring and developing cultural intelligence as an integral personal characteristic is important for satisfying personal needs as well as for productive professional activity in any field. Conscious development of cultural intelligence is facilitated by comprehensive study of its nature and structure.

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DEVELOPING INTERCULTURAL COMMUNICATION COMPETENCE OF MILITARY PERSONNEL

Today, a key issue for the success of any type of international military cooperation is constant mastering the intercultural communication competence of military personnel. Associated with the cultural differences of soldiers from different armies, it plays a special role in the context of military communication.

Although this concept has different definitions, most researchers argue that "intercultural communication" takes place between people who are aware of their cultural differences. It is also defined as an interpersonal, direct, and unmediated form of communication, which is characterized by change, due to different impacts that constantly form the values, behaviors and beliefs defining it.

Nowadays, different contingents increasingly use English language as an official language to work and train together. A key component of effective intercultural communication of military personnel is linguistic interoperability, supported with NATO Standardization Agreement (STANAG 6001), which is a scale including descriptors with language proficiency skills broken down into six levels, coded 0 through 5.

At the same time, most military educators advocate for the adoption of a “culture and language strategy” involving the development of language proficiency, culture awareness and expertise [1]. Accordingly, in order to ensure effective communication in multicultural environment, the foreign language proficiency of military members must be sustained by the possession of intercultural communication skills.

Many researchers list the following effective guidelines for developing and improving intercultural communications skills:

- being aware of your own culture;
- being other-oriented;
- being curious in dealing with different cultures;
- tolerating ambiguity;
- being behaviorally flexible;
- being emphatic;
- getting into contact with people coming from different cultures [2].

These days, the increased interaction and integration of people all over the world has also intensified the opportunities for foreign language learning with respect to the development of intercultural communication competence.

Additionally, improvements in technology and the fact that the Internet has become significantly more widespread in the world, have created opportunities for people to acquire knowledge and understanding of different cultures and languages through sharing information and becoming involved in bilateral projects, activities, discussions, etc.

Thus, through learning English language and acquiring the knowledge of other cultures (values, norms, beliefs, taboos, rituals, customs) all service members can gain the capacity for effective communication and easily adapt to specific intercultural situations.

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THE INFLUENCE OF GLOBALIZATION ON THE ARABIC LANGUAGE

The article highlights the influence of globalization processes on the Arabic language, as well as analyzes the positive and negative factors of the impact of globalization. In the modern world, the Arabic language is in constant change and transformation within which it faces many challenges. The relationship between globalization and language takes an important place in the process of modern society development. During scientific analysis, the article raises relevant topics like bilingualism in education and the social sphere of everyday life, the dominance of English in colloquial speech, the use of Arabicisms on the Internet, etc.

أثر العولمة في اللغة العربية

شاع استخدام مصطلح "العولمة" في بداية القرن العشرين وارتبط في البدء بمجال الاقتصاد حيث يشير إلى توحيد الأسواق المالية، ورفع الحواجز والقيود التجارية أمام تدفق الأموال وسلع والبضائع من مكان لأخر حول العالم، إلا أن مفهوم المصطلح لم يبق في حدود المال والاقتصاد بل تعداه إلى السياسة والاجتماع والثقافة وتربية والفكر والاتصالات وهو جزء لا يتجزأ من العالم الحديث.

إن اللغة هي عنصر مهم من عناصر الثقافة. فالعلاقة بين اللغة وبين العولمة، هي علاقة ذات صلة بمستقبل هذه اللغة من حيث تطورها وبقاؤها أو تراجعها واندثارها. وبقاء هذه اللغة مقترن بالتنمية الشاملة المتكاملة المتوازنة المستدامة في شتى المجالات سواء العلوم أم الآداب أم الفنون أم المعارف أم الصناعات والتقنيات التي يبدعها أهل هذه اللغة في المجالات كافة، فيرتقون في مضمار التقدم المادي والمعنوي.

هدف البحث هو دراسة تأثير عمليات العولمة على اللغة العربية

وظائف البحث فيما يلي:

- تحليل تأثير عمليات العولمة على اللغة العربية بشكل عام؛
- تعيين الاثار الإيجابية وسلبية على اللغة العربية لظاهرة العولمة؛
- بحث عن تحديات العولمة للغة العربية.

اللغة هي وعاء الثقافة، وأداة الاتصال بين الماضي والحاضر ولا يستطيع الإنسان مهما كان أن يقف على كنوز الفكر الإنساني من تاريخ وشعر ونثر بدون اللغة. فاللغة لها وظائف للفرد ووظائف للمجتمع. وهي جزء لا يتجزأ من السيادة، والحفاظ على اللغة هو حماية لهذه السيادة. وتواجه اللغة العربية اليوم، باعتبارها وعاء للثقافة العربية وللحضارة الإسلامية، أخطاراً تتفاقم باطراد، تأتي من هيمنة النظام العالمي الذي يرفض صياغة العالم الجديد متعدّد الأقطاب والمراكز والثقافات، والذي يسعى لفرض اللغة الأقوى، بحكم قوة الفعل السياسي والثقل العلمي والتقاني والاقتصادي، على المجتمعات الإنسانية .ومن أهم التحديات التي تواجه اللغة العربية ظاهرة العولمة.

تحدد الدكتورة زينب بيره جكلي، أستاذة بقسم اللغة العربية في جامعة الشارقة، في مقالها "أثر العولمة على اللغة العربية" المنشور بموقع "أدباء الشام"، بعض مظاهر العولمة اللغوية، وتأثيرها على اللغة العربية وتطورها في العالم العربي وعند الناطقين بها، فتذكرها في النقاط التالية:

- الثنائية اللغوية في التعليم العربي وسيطرة اللغة الأجنبية في المدارس الخاصة والجامعات؛
- استخدام ما أطلق عليه اسم العربيزي في وسائل الإعلام الحديث (الشبكة العالمية الإنترنيت)؛
- نشر الأبحاث العلمية بالإنجليزية والاعتراف (والفرنسية) بهما في الجامعات العربية؛
- ازدواجية اللغة في المجتمع لا في التعليم فحسب، بل في كل مجالات الحياة الاجتماعية العربية؛

- التعامل في السوق بالإنجليزية (والفرنسية)
- تهديد الأمة بالانقسام بناء على اختلاف اللهجات واللغات في البلد العربي الواح [1].

اللغة الإنجليزية لها تأثير كبير على اللغة العربية، خاصة بسبب التطور المستمر لعملية العولمة، وهي اللغة الأكثر انتشارًا في العالم. تُستخدم اللغة الإنجليزية في الحياة اليومية، على سبيل المثال: تقول: (hello)، لا مرحبًا، (ok) أو (bye) بدلاً من ذلك: نعم، مع سلامة. يتطلب انتشار المصطلحات الجديدة في الملابس أو المواد الغذائية أو السلع الاستهلاكية والتعليم والعلوم من المتحدثين التوصل إلى مصطلحات ومفاهيم جديدة كل يوم.

أمثلة على العولمة باللغة العربية: التداول بالإنجليزية في الحياة اليومية، وكتابة لافتات المحال التجارية بالإنجليزية، والتراسل عبر الإنترنت والهواتف النقالة بالإنجليزية، واشتراط إتقان الإنجليزية للتوظيف، وكتابة الإعلانات التجارية بالإنجليزية، وكتابة قوائم الطعام في المطاعم بالإنجليزية، وكثرة الأسماء الإنجليزية والمفردات في حياة المتكلم العربي [2].

وقد تركت العولمة آثارا على اللغة العربية وتوجد الآثار الإيجابية والسلبية للعولمة على اللغة العربية. اما الآثار السلبية للعولمة فانتشرت في هذا العصر ثقافة العولمة في كلِّ شيءٍ؛ حيث عُممت الأنماط الفكرية والثقافية والسياسية والاجتماعية والاقتصادية واللغوية، وتبني النموذج الغربي وبخاصة النموذج الأمريكي؛ فقد خسرت العربية كثيرا؛ حيث سيطرت اللغة الإنجليزية وسادت في التعليم والوظائف ووسائل التقنية الحديثة والاتصال الدولي عبر الهاتف والأفلام التلفزيونية والسينمائية ووسائل الإعلام المرئي والمسموع والمقروء. وقد أدى ذلك إلى افتخار العرب واعتزازهم باللغة الإنجليزية والعكس صحيح؛ مما أدى إلى ضياع الهوية اللغوية.

توجد هناك تشجيع الدعوة إلى العاميات، استخدام ما يطلق عليه اسم " الدردشة" أو "العربيزية" وإقصاء الفصحى عن وسائل الإعلام. بالرغم من الأثر الايجابي والميزة البناءة لوسائل الإعلام على اللغة العربية الفصحى، فإن وسائل الإعلام المقروءة والمسموعة والمرئية قد تشكل خطرا على العربية الفصحى؛ نتيجة زحف للهجات العامية في الفضائيات التي انتشرت فيها العاميات [3]. يعتبر الوسائل الاعلام المصري الأكثر انتشارا في العالم مقارنة بالدول العربية الأخرى. وتوجد في مصر العديد من الصحف اليومية والمجلات، ولدى بعض تلك الصحف والمجلات مواقع على الإنترنت باللغة العربية العامية. كما أن التلفزيون وصناعة السينما في مصر تزود معظم السوق العربية بالأعمال الفنية التي تنتج في مدينة الإنتاج الإعلامي في القاهرة. على هذا الأساس، يمكن ملاحظة أن اللهجة المصرية أصبحت شائعة بشكل تدريجي ليس فقط في مصر ولكن أيضًا في الدول العربية الأخرى.

أما الآثار الإيجابية للعولمة على اللغة العربية فهناك مكتسبات يمكن أن تكتسبها العربية في عصر العولمة وتكون سبيلاً للنهوض بها، ومن ذلك الإفادة من المواقع على الشبكة العنكبوتية، واستغلال المدونات وغرف الدردشة والشبكات الاجتماعية على الفيس بوك والتويتر وغيرهما، وكذلك الإفادة من الموسوعات الإلكترونية والكتب الرقمية والبرامج الحاسوبية وغيرها.

تتمثل الوجهة النيرة للعولمة في إيجاد أرضية مشتركة بين شعوب الكوكبة الأرضية بقيام علاقات بينها تسمح بوجود قوانين عالمية تنظمها لخير الجميع. وللعولمة الثقافية واللغوية ووسائلها آثار إيجابية يحسن استغلالها في نشر اللغة العربية وتطويرها. تعطي شبكة الاتصالات العالمية (الإنترنت) فرصة واسعة اللغة العربية، وتعميم المفاهيم والممارسات الثقافية العربية الإسلامية، والمبادئ الإنسانية التي يدعو إليها الإسلام في كل أرجاء المعمورة. فالإنترنت في كل مكان يوفر فرصة للمدرسة الإلكترونية في تعليم اللغات الأجنبية، وتوفير المعلومات اللغوية الثقافية، والتخصصية، والعامة. ويحتاج أصحاب اللغة العربية إلى استغلال هذه المدرسة الإلكترونية في نشر لغتهم وتقريبها لمن يرغب في معرفتها في كل مكان. من الآثار الإيجابية أيضاً تقديم خدمات الترجمة العربية الآلية على الإنترنت، وتتطلب تلك الخدمات أن يتابع القائمون عليها عن كثب التطورات المستجدة في مختلف الميادين العلمية. تتيح العولمة فرصة الإسهام في اختراع الألفاظ العالمية وتعميم الاقتراض من اللغة العربية إلى لغات المسلمين، ولغات أخرى كثيرة. [4]

نتائج البحث هي التالية:

العلاقة بين اللغة وبين العولمة، هي علاقة ذات صلة بمستقبل هذه اللغة من حيث تطورها وبقاؤها أو تراجعها واندثارها. تتشابك الحالة الحالية للغة العربية مع العديد من العوامل، وتعقيدها يرجع إلى عناصر وأسباب مختلفة مرتبطة ببعضها البعض. في العالم الحديث، تمر اللغة العربية بتغيرات ومقدمات كبيرة، وفي عملية العولمة تكتسب مفاهيم ومصطلحات جديدة. إن اللغة الإنجليزية لها تأثير كبير على اللغة العربية بسبب

التطور المستمر لعملية العولمة وهي اللغة الأكثر انتشارًا في العالم. ويستخدمها العرب في التداول في الحياة اليومية ومجالات كثيرة.

ونحن نسلّم بأن العولمة ليست سلبيات كلُّها، وليست ايجابيات كلها، أنها تحمل من هذا وذاك. فإذا أحسنت الدول النامية التعامل مع العولمة واستطاعت أن تتكيف معها وتواكبها وتتجنب سلبياتها، فإنها ستصبح بلا شك إيجابيات تعود بالنفع والفائدة على شعوب هذه الدول.

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MULTIPLE MEANING OF WORDS IN THE ENGLISH LANGUAGE

The article deals with the multiply meaning of words in the English language. Multiple meaning is the presence of several related meanings in the same word.

The word appears in a language with one meaning, it is called the primary, the direct one. Later, as a result of the rethinking of the direct meaning, the word has secondary, figurative meanings. And ambiguous words arise. The transfer of a name from one object to another may occur in contiguity, that is based on certain relationships between objects – spatial, temporal cause and effect [1].

Many recent studies have focused on words with multiply meaning. N. N. Amosova researched broad-meaning, whether heresy is a linguistic phenomenon of lexical-semantic level characterized by the extension of the semantic volume of the word to indicate a variety of denotations. S. N. Dimov considers the significance as characterization of one of the lexico-semantic variants of the ambiguous word. T. V. Zhukov considers ambiguity as a separate independent category [2].

However, little research has been undertaken to study the problem of multiply meaning of words in the English language. The purpose of our study is to study ambiguity as a problem for translating and understanding words of a foreign language.

This paper focused on the ambiguity of English words. The ambiguity causes a language ambiguity, prevents transparent perception the meaning of the utterance. As a rule, some difficulties arise in the understanding foreign languages, the difficulties faced by foreigners and children.

Moreover, we consider polysemy as a category of lexical-semantic level: it is expressed systematic linguistic unit has a regular character. Accordingly, we are analyzing this phenomenon where the word takes into account. It should be noted that ambiguity has a rather negative effect on the understanding of the text and its translation. There are particular difficulties in learning foreign languages, because the ambiguity of words makes it impossible to study the language perfectly and to understand others.

There are a lot of English words which have some meanings. That is why, everyone who read or speak English should be very attentive to the word surrounding to understand the content correctly. For example:

reservation – an agreement to have something held for you;
– a feeling of doubt or uncertainty.
duck – a type of swimming bird with webbed feet and a short neck;
– to lower the head quickly in order to avoid being seen or hit.
drop – a small amount of liquid with a rounded shape;
– to let something fall often suddenly.

To conclude, this paper analyzed the problem of multiply meaning of words in the English language. Having examined this problem, we consider that the ambiguity phenomenon is quite popular and needs further investigation.

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Session work № 6

CURRENT RESEARCH IN THE FIELD OF MEDICINE

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MONITORING AFFECTING SUBSTANCE USE AMONG STUDENTS

Admission: The students' attitude towards narcotic drugs is among the most current enduring problems in Ukraine. According to the data from the State Statistics Service of Ukraine, the morbidity due to the use of narcotic drugs or any other narcotic substances by people ranging from 15-35-year-olds indicates 20.29 per 100,000 general population and the prevalence of drug use demonstrates 261.62 per 100,000 general population in 2018.

Aim of the study: to identify the peculiarities of the socio and psychological status of students with different types of addiction (tobacco smoking, drinking alcohol, drug abuse).

The research methods and material: Turning to the details, 230 students were studied between 17-24-year-olds (149 women and 81 men) in this research. The survey was conducted using a specifically well-designed questionnaire, consisting of a series of 28 questions for the purpose of gathering information and collecting data from respondents. The survey was completed by the students of the general educational establishments of Zhytomyr city (Ukraine). Among the participants were students of Zhytomyr Medical Institute (ZMI), Zhytomyr National Agroecological University (ZNAU), Zhytomyr Ivan Franko State University (ZSU). In general, the questionnaire of drug use included 50 respondents (12 men and 38 women) of Zhytomyr Medical Institute, 100 respondents (in particular, 49 men and 51 women) of Zhytomyr National Agroecological University, and finally, 80 respondents (20 people and 60 women) were interviewed in Zhytomyr Ivan Franko State University.

Outcomes: The table data clearly shows that 95 of the respondents (41%) will not take drugs in their lifetime if somebody knows this and having no drug addiction (occasional drug use). However, 90 respondents (39%) agreed they had ever tried narcotic substances, while 46 (20%) respondents hesitated with an answer about the use of narcotic drugs or any other narcotic substances.

The presented survey findings clearly reveal the amount of the students who have consumed specific substances via vaping or tobacco smoking, according to the data 37 (37,0%) of respondents of National Agroecological University (ZNAU) reported that they had tried smoking or just flavoring. On the other hand, 16 (32,0%) of students of Zhytomyr Medical Institute (ZMI) and 20 (25,0%) of students of Zhytomyr Ivan Franko State University (ZSU) admitted to having smoked specific substances, including tobacco.

Finally, the next stage was to investigate and to determine the drinking alcohol habits and to find out the reality of alcohol consumption among high school students in Zhytomyr. The report shows 63 (63,0%) of respondents of National Agroecological University (ZNAU), 58 (72,5%) of students of Zhytomyr Medical Institute (ZMI) and 22 (44,0%) of students of Zhytomyr Ivan Franko State University (ZSU) have had some alcohol drinks within the past year or frequently used alcohol.

Conclusions: Our study shows that abusive drinking increased with the period attending high school establishments in Zhytomyr. Overall more than 50% of students showed frequent and intensive drinking behavior, consumed alcohol. The study indicates and represents an unacceptably high level of alcohol abuse and addiction. According to the results of the survey, we notice that almost every fourth student uses narcotic drugs and every third student smokes tobacco. It is up to both governments and educational authorities to encourage, recommend and formulate effective healthy habits or policies that minimize the harm caused by taking narcotic drugs or specific substances, having alcohol or smoking. Moreover, local educational authorities face a problem to acknowledge universities' and institutes' responsibility in relation to their students' healthy behavior and to support healthy habits among the students.

Keywords: narcotic drugs, consumption, addiction, tobacco smoking, alcohol use, specific substances.

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PERSÖNLICHE HYGIENE DES MENSCHEN

Regelmäßige und richtige Korperhigiene dient der Erhaltung und Festigung der Gesundheit.

Eine der wesentlichsten Forderungen ist die Plege der Haut. Hautabsonderungen (Schweiß, abgestorbene Hautzellen) und Schmutz verschlimmer nicht nur die natürlichen Hautfunktionen (Schutz, Wärmeregulation, Stoffastausch, sondern sind zugleich ein gutter Nährboden für Krankheitserregen. Die Krankheitserregen können durch Hautverletzungen oder durch die Körper gelangen.

Das alltägliche Reinigungsmittel ist das Wasser. Es beseitig den Schmutz und die abgestoßene Hornhaut. Gleichzeitig warden die Funktionen der Haut tpainiert, vor allem die Fähigkeit zur Wärmeregulation durch den Blutkreislauf und Produktion von Tagl, der als Schutzschicht wirkt.

Abends soll man Körper mit warmem Wasser und Seife waschen. Man soll zwei Schwämme, einen für den Unterkörper, sowie je ein Handtuch für Gesicht, Oberkörper und einen für Unterkörper benutzen. Zur morgendlichen Ganzwachung soll man nach Möglichkeit kaltes Wasser ohne Seife benutzen.

Eine wichtige Forderung der täglichen Körperpflege ist das Bürsten des Haares. Es fördert durch seine massierende Wirkung die Durchblutung und damit die Ernährung der Kopfhaut. Die Haare soll man so oft waschen, wie es die Sauberkait erfordert. Verschmutsten Haar und verschmutzte Kopfhaut sind ein gutter Nährboden für Bakterien wie die verschmutzte Haut anderer Körperstellen. Zum Waschen soll man alkalsftreie(allesogenannter Haarwaschmittel) verwenden. Man soll mehrmals gründlich spülen und das Haar mit einem Handtuch abreiben. Man soll das Haar nach Möglichkeit bei Zimmertemperatur trocknen lassen.

Die Nägel muß man täglich mit warmem Wasser, Saife und Handbürste säubern. Unter schlecht gepflegten Nägeln können schmerzhafte Entündungen entstehen. Die Fingelnägeln sollman rund halten. Die Zehennägeln soll man gerade schneiden.

Die Hände muß man häufig reinigen, auf jeden Fall nach Benutzung der Toilette und vor dem Essen. Man soll zum Säubern warmes Wasser, Saife und eine Handbürste verwenden. Nach dem Waschen soll man die Hände gut abtrockenen. Stark verschmutzte Hände soll man mit einem Lappen oder Papier vorreitigen.

Die Füße verlanden die gleiche Pflege wie die Hände. Man soll sie täglich mit warmem Wasser, Saife und einer Bürste reinigen.

Der Mensch muß durch regelmäßige Anwendung von Kälte- und Wärmereizen, Nervensystem und Blutgefäße trainieren. Er muß sich abhälten. Alle Körperübungen härten ab besonders wenn sie an frischer Luft getriben warden. Körperübungen müssen überlegt getrieben warden,um gesundheitlichen Wert zu haben.

Fehlerhafte Fußbekedbng kann zu Schäden am Stützapparat führen. Die Absatzhöhe soll etwa vier Zentimeter beim Erwachsenen, nicht mehr als zwei Zentimeter bei Kindernbetragen.

Die Kleidung muß dem Wetter entsprechen. Die Unterkleidung muß gut waschbar, die gesamte Bekleidung bequem sein und darf die natürlichen Hautfunktionen nicht behindern.

Zum erholsamer Schlaft gehört ein richtiges Bett: Die Matratze muß fest, die Kopfkissen normalerweise flech sein. Man soll den Schlafraum stets gut lüften. Die günstigste Schlaftemperatur beträgt 18 C.

Zahnfaule kann zu allgemeinen Körperschäden führen. Krankheitserregen warmer in den defekten Zahn ein, siedeln sich in der Pulpa und an der Wurzelspitze an und bilden einen Herd. Von ihm aus können Bakterien oder deren deren giftige Zerfallsprodukte in die Blutbahn eindringen und oft an weit entfernt liegenden Organe Entzündungen hervorrbfen. Besonders gefährdet sind Herz, gefäße, Muskeln, Gelenke und Nieren.

Durch regelmäßige Zahnpflege kann man Zahnschäden vorbeugen. Vor allem abends ist das Putzen der Zähne wichtig. Man muß die Speisereste aus den Zahnzwischenräumen entfernen. Zum Zähneputzen soll man eine mittelharte Zahnbürste und Zahnpaste benutzen. Die bürstbewegung soll beim Reinigen der Zähne des Oberkiefers von unter nach oben nach unten,bei der Reinigung der Unterkieferzähne von unter nach oben erfolgen.

Man muß den Zahnarzt mindestens zweimal im Jahr zu einer Kontroluntersuchung aufsuchen.

Fazit: Persönliche Hygiene muß in Interesse sowohl jedes einzelnen Menschen als auch der Volksgesundheit zu einer Selbstverständlichkeitwerden.

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SMOKING AND ITS EFFECTS ON THE HUMAN BODY

The aim of study was to investigate the causes of smoking, its harmful effects on human health and well-being and to determine the ways of its treatment and prevention.

Everyone knows that smoking is extremely dangerous for health. Nevertheless, the number of smokers throughout the world is constantly growing. Just imagine:

over a billion people on our planet including kids and teenagers are regular smokers. Every year smoking causes more deaths than flight and automobile accidents together. It is the most widespread bad habit, as well as one of the most hazardous ones.

Most people are by now aware of harmful and dangerous effects of smoking.

Despite this, the trend of smoking is seen on an increase in, especially teenagers.

There are many different reasons why people choose to smoke cigarettes. Many people start smoking when they are teenagers because they think it will make them cool and get them accepted into a certain group. Some people start to smoke because they have a lot of stress in their life and they think by smoking they will be more relaxed. Others smoke because they think everyone else is doing it, they see ads in magazines and on bill-boards, and some smoke because their parents do it. . [1, p. 327]

Tobacco smoke contains than 7,000 chemicals that are harmful to both smokers and nonsmokers. About 70 of them are known to cause cancer. The most damaging components of tobacco smoke are: tar – this is the collective term for the various particles suspended in tobacco smoke, contain chemicals, including several cancer-causing substances (carcinogens); carbon monoxide – this odourless gas is fatal in large doses because it takes the place of oxygen in the blood; hydrogen cyanide, which stops this lung clearance system from working properly and it means that the poisonous chemicals in tobacco smoke can build up inside the lungs; oxidizing chemicals – these highly reactive chemicals (which include free radicals) can damage the heart muscles and blood vessels; metals – tobacco smoke contains dangerous metals including arsenic, cadmium and lead, and nicotine, which forms a strong physical and psychological addiction. It is as addictive as heroin or cocaine.

Smoking has been found to harm nearly every bodily organ and organ system in the body and diminishes a person's overall health.

Smoking cigarettes is the number-one risk factor for lung cancer. It is known to cause cancer in the: esophagus, larynx, mouth, throat, kidney, bladder, liver, pancreas, stomach, cervix, colon, and rectum, as well as acute myeloid leukemia. [6,p.310].

There are many negative risks associated with smoking cigarettes.

Smoking damages your heart and your blood circulation. When you smoke, the toxins from cigarette smoke enter your blood. The toxins in your blood make your blood thicker, and increase chances of clot formation; They increase your blood pressure and heart rate, making your heart work harder than normal; narrow your arteries, reducing the amount of oxygen rich blood circulating to your organs. All this can cause a heart attack or stroke.

Smoking can harm all parts of the digestive system Smokers have an increased chance of getting stomach cancer or ulcers. Smoking can weaken the muscle that controls the lower end of your gullet (oesophagus) and allow acid from the stomach to travel in the wrong direction back up your gullet, a process known as reflux.

Smoking is a significant risk factor for developing kidney cancer, and the more you smoke the greater the risk. For example, research has shown that if you regularly smoke 10 cigarettes a day, you are one and a half times more likely to develop kidney cancer compared with a non-smoker. This is increased to twice as likely if you smoke 20 or more cigarettes a day. [4, p.340].

Some of the more obvious signs of smoking involve the skin. The substances in tobacco smoke actually change the structure of your skin. Smoking causes skin discoloration, wrinkles, and premature aging. Your fingernails and the skin on your fingers may have yellow staining from holding cigarettes. Smokers usually develop yellow or brown stains on their teeth. Hair holds on to the smell of tobacco long after you put your cigarette out. It even clings to nonsmokers. The toxins in your body also cause cellulite.

Your lungs can be very badly affected by smoking. Coughs, colds, wheezing and asthma are just the start. Smoking can cause fatal diseases such as pneumonia, emphysema and lung cancer. Smoking causes 84% of deaths from lung cancer and 83% of deaths from chronic obstructive lung disease, including bronchitis.

Smoking has a deadly impact on the oral cavity. It causes unattractive problems such as bad breath and stained teeth, tooth loss, damage your sense of taste, and can also cause gum disease and in more severe cases mouth cancer.

The most serious damage smoking causes in your mouth and throat is an increased risk of cancer in your lips, tongue, throat, voice box and gullet (oesophagus). More than 93% of oropharangeal cancers (cancer in part of the throat) are caused by smoking. [2,p.95].

Smoking can cause your bones to become weak and brittle. Women need to be especially careful as they are more likely to suffer from brittle bones (osteoporosis) than non-smokers.

If you smoke, you are more likely to have a stroke than someone who doesn't smoke. In fact, smoking increases your risk of having a stroke by at least 50%, which can cause brain damage and death. And, by smoking, you double your risk of dying from a stroke. One way that smoking can increase your risk of a stroke is by increasing your chances of developing a brain aneurysm. This is a bulge in a blood vessel caused by a weakness in the blood vessel wall. This can rupture or burst which will lead to an extremely serious condition known as a subarachnoid haemorrhage, which is a type of stroke, and can cause extensive brain damage and death.

Smoking among women leads to infertility and problems during childbirth because of changes in reproductive systems. Smoking makes it harder for a woman to get pregnant. A pregnant smoker is at higher risk of miscarriage, having an ectopic pregnancy, having her baby born too early and with an abnormally low birth weight, and having her baby born with a cleft lip and/or cleft palate. [5, p.125].

Infants and children exposed to Environmental Tobacco Smoke (ETS) are at increased risk for death and disease. In breastfeeding women who smoke, there is a decrease in maternal milk production and less weight gain in the exposed infant. In addition, infants whose mothers smoke have an increased risk of Sudden Infant Death syndrome (SIDS), and their overall perinatal mortality rate is 25 to 56 percent higher than those infants of mothers who choose not to smoke. Children exposed to ETS are at increased risk of many infections, most commonly middle ear and respiratory infections, and thus require more doctor visits and hospital stays..

In addition there are great health risks from environmental tobacco smoke. It exposes non-smokers to most of the same toxic gases, chemicals and fine particles that smokers inhale directly with tobacco smoke. The particles in the unfiltered smoke that drifts from burning cigarette tips can be finer and more concentrated, meaning that they can be inhaled deeper into the lungs and stay longer in the body of the passive smoker than in the person who is smoking. Secondhand smoke causes numerous health problems in infants and children, including more frequent and severe asthma attacks, respiratory infections, ear infections, and sudden infant death syndrome. Some of the health conditions caused by secondhand smoke in adults include coronary heart disease, stroke, and lung cancer. The degree of risk depends on the extent and duration of exposure. Particularly there is a high risk among workers in the hospitality industries (bar staff, casino workers and other employees in workplaces where smoking is routine). [3].

Nowadays some measures have been taken to reduce smoking. There has been a growing awareness of the dangers of smoking throughout the world. The anti-smoking campaigns launched in a number of countries have brought about extensive public censure of this harmful habit and a decrease in the number of smokers among some groups of the population.

In our country the campaign to beat the cigarette habit has acquired a purposeful nature. Special legislative, medical and educational measures are being worked out. Instructions forbid smoking among schoolchildren. Lessons on the harm of smoking have been included in courses of the anatomy, physiology and hygiene, the sale of cigarettes to minors is prohibited. Warnings against the harm of smoking are printed on packets of cigarette brands. The ministries of railways, civil aviation, merchant marine and culture have worked out and now implement measures for regulating, limiting and restricting smoking in long-distance and suburban trains, planes, on sea vessels, in theatres, clubs, etc.

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PARTICIPATION IN RESOLVING FAMILY CONFLICTS AS A PROFESSIONAL SPHERE OF A FAMILY NURSE

The aim of the article is to reveal the main causes of family conflicts and ways to resolve them.

Family is the oldest institution of human interaction. It's a community where several people closely interact throughout life. Family is a small social group based on marriage and kinship. The members of the same family are tied emotionally. They are linked by a common life, moral responsibility, mutual assistance. Unfortunately, according to the statistics the most common forms of conflicts are family quarrels. Experts estimate that 80% of families have conflicts. [1]

Family quarrels are bitter things. They don't go according to any rules. They're not like aches or wounds, they're more like splits in the skin that won't heal because there's not enough material. [4]

The reason for most offences, disagreements and quarrels in a family is that we expect too much of those who are close to us. And when we do not get what we expected from those loved ones we think that we have the right to be offended, the right to start quarrels and disagreements. [5]

Usually when there is a quarrel in a family, aggrieved parties try to solve it themselves.

Nowadays the reasons of family quarrels are studied all over the world. Many researchers pay great attention to the role of the family doctor and his assistant - family nurse - in discovering a solution of this problem.

Special attention is paid to background of family quarrels and to their prevention due to involving family nurses.

As for Ukraine the best situation is in Western Ukraine. In Ternopil and Volyn regions this ratio is 1 divorce per 2.7 marriages and in Zakarpattia, Lviv, Rivne - 1 divorce per 3.7 marriages. The worst situation is registered in Mykolaiv and Dnipropetrovsk where every divorce accounts for less than 2 marriages.

In comparison with other parts of the country there are not significant regional diversities in Zhytomyr region - 435 divorces per 1000 marriages. In Ukraine - 457 divorces per 1000 marriages. So, in Zhitomyr 43.5% of marriages are annuled.

The global financial crisis of 2008-2010 did not affect to the number of marriages and divorces in our region. It testifies against material poverty as the main reason for the collapse of marriages in Ukraine. Thus, both material poverty and the parental status as well as years of family life don`t affect to the marriage duration. Therefore, it`s so important to study psychological factors of family quarrels which lead to divorces.

Divorce is an official or legal process to end to a marriage.[3] Divorce is an unfavorable, destructive type of dealing with family problems, but not the worst in comparison with murder or suicide. It is preceded by a number of psychological conditions in the family life such as:

- dissatisfaction with family relationships;
- too demanding partner in marriage;
- propensity to conflict;
- desire to dominate in the family instead of partnership. [1]

It is very important to pay special attention to these conditions.

Compromise, cooperation, concession are the best ways and methods to solve family quarrels. But the most appropriate form of psychological aid is a friendly conversation involving a family nurse.

To work effectively the nurse must have professional competence and confidence in at least two things:

- she must be able to analyze, solve and prevent her personal conflicts;
- she must be a very skillful, experienced and diplomatic companion, a real master of communication. [2]

For that purpose, every family nurse must constantly improve herself, scrutinize Conflict management, develop her own or borrowed existing approaches and principles of solution to family conflicts.

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ASSESSMENT OF THE AVAILABILITY AND QUALITY OF MEDICAL SERVICES FOR ELDERLY PEOPLE (ON THE EXAMPLE OF ZHYTOMYR CITY)

Over the last five years, namely from 2014 to 2019, Ukraine's core population has decreased by 3.3 million[3]. The share of people aged 60+ has increased markedly as of 01.01.2019, thus, it currently stands for 23.4% of the total population and is one of the highest in the world. In particular, within Zhytomyr region elderly people formed about 22.8% of local population [4].The healthcare sector with its initial purpose of improving the health status of the population, as well as reducing disability and number of premature deaths, has played a major role in this process (the state of human health by 10% depends on the level of development of medicine, a component of which is the quality of healthcare). [7, c. 305]. In addition, economical issues have intensified lately all over the territory of Ukraine, as well as the migration rates and negative population growth have increased.

In this regard, it is important to improve the health status and prolong the active employment and life of the elderly people in general, because their involvement in the country's economy improves the situation, reducing morbidity, saving resources of the healthcare sector, decreasing disability rates, and eases the burden on the pension fund, etc. [2].

The aim of our research is to determine the level of accessibility and quality of medical services from the perspective of elderly individuals in order to identify opportunities to improve the process of providing medical services in Zhytomyr healthcare facilities.

Quality of medical services is defined as "the set of properties and characteristics of a service or product that ensure its ability to meet the identified needs of the consumer", thus, the patient is identified as the consumer of this product, so his/her opinion on quality is essential [1]. Accordingly, for the right promotion strategy it is important to know which characteristics consumers consider the most important, for the availability of healthcare services is influenced by many factors. Even if the quality of the particular service provided meets the requirements, the total quality of the healthcare process may vary [6, c. 405]. An important role in providing quality medical care plays the reputation of the healthcare facility and properties of healthcare providers themselves (appearance, attitude to the patient and his/her relatives, trust etc.)[5, c.17].

The research hypothesized that for older patients, the primary criterion for quality of healthcare is attention and trust, moreover, the criterion for quality of healthcare services is the positive tendency of treatment and quick recovery.

Thus, in order to achieve this goal, a marketing (field) survey of 750 people aged 60+, according to the World Health Organization classification, was carried out during the year. The obtained data was processed by mathematical and statistical researchmethods.

We have identified that older men and women alike seek medical assistance with the following rate: 62% do itoften; 34% - rarely; and only 4% do not seek treatment at all for various reasons, but mostly due to lack of funds. When assessing the quality and accessibility of healthcare services, patients consider many factors such as: location of the facility, safety and security (avoidance of contamination or disease spread among the patients), lack of queues and large crowds, professional up-to-date equipment, skilled medical staff, courteous and friendly attitude, ability to easily enroll for admission and availability of infrastructure (presence of pharmacies, canteens, restrooms, apparels for handicapped people etc.). A considerable number of respondents (38%) are satisfied with the level of medical services provided, as evidenced by the survey results shown in (Fig. 1).

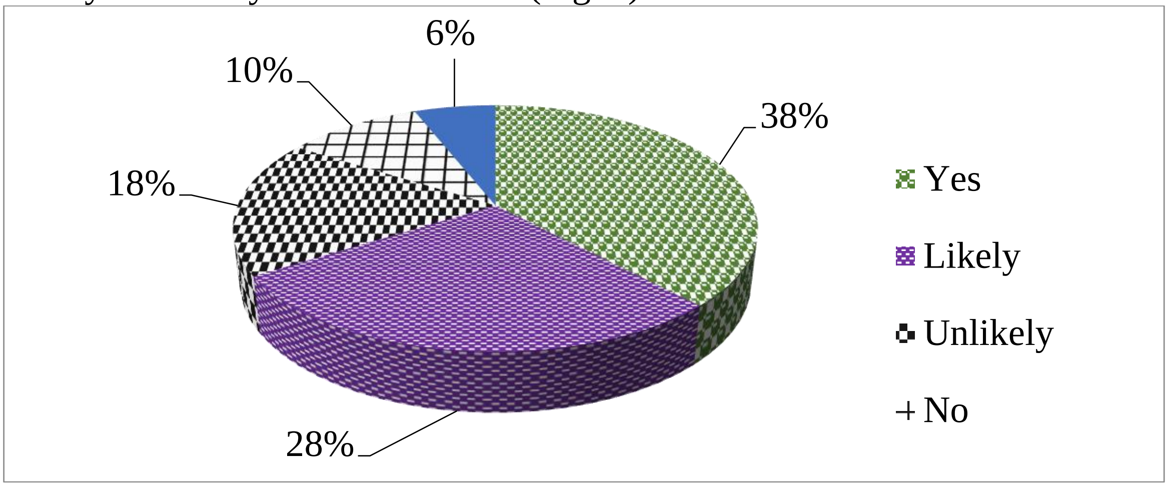

Figure 1. The level of satisfaction of consumers with medical services in private and public health care establishments in Zhytomyr city

Most elderly people rated the level of quality of medical services as “Good” (46%), and only 2% of respondents marked it as “Unsatisfactory” (Fig. 2).

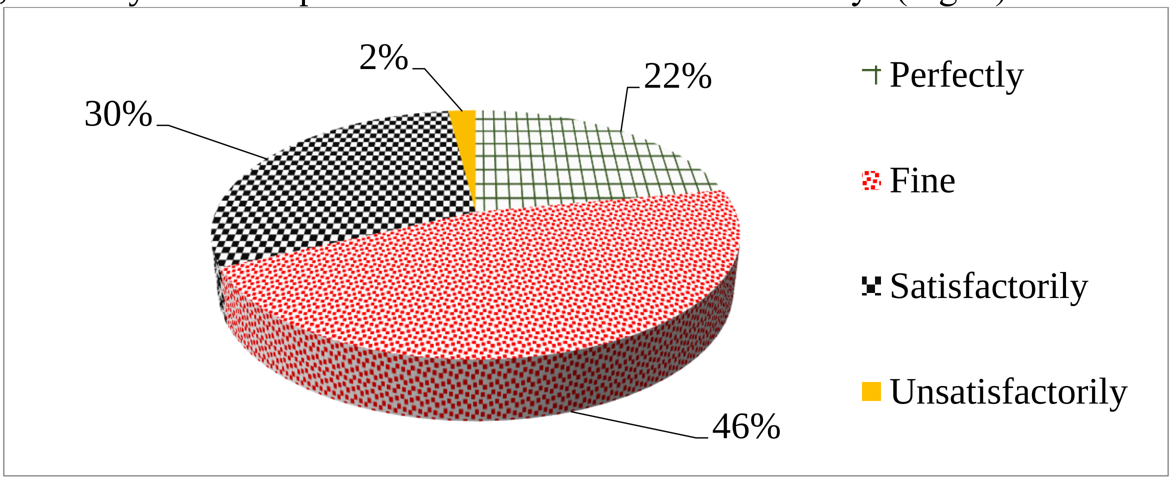

Figure 2. Level of quality of medical services in private and public health care facilities in Zhytomyr city

Most consumers of medical services (48%) think that paid medical services are better than free and meet the price-quality characteristic. The majority (60%) seek paid medical services, 73.3% of which use them frequently. The reasons for seeking paid medical services are different (Fig. 3).

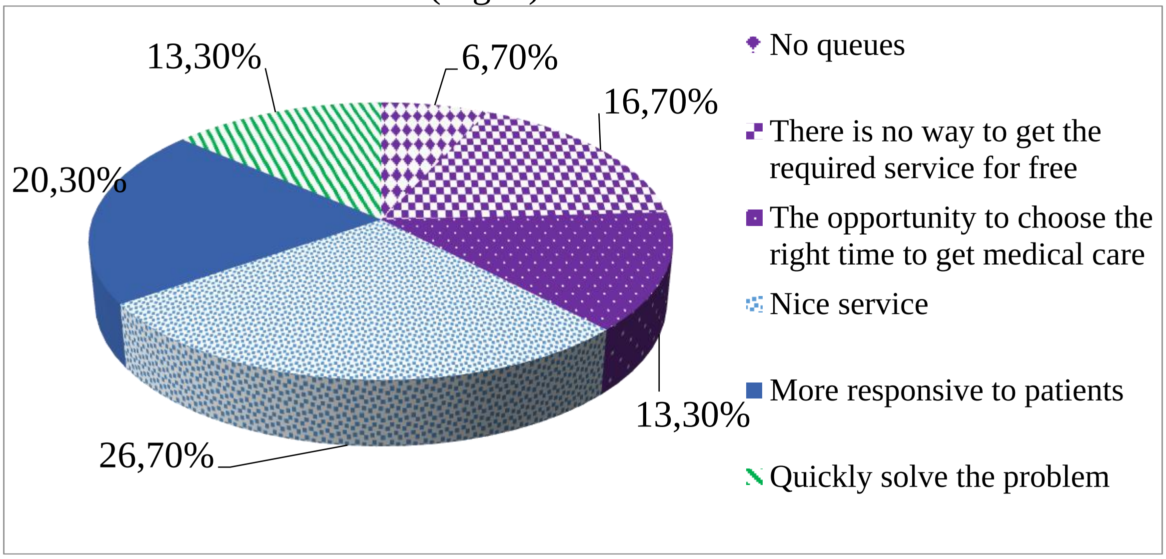

Fig. 3. Reasons to apply for paid medicine services

The main reasons for accessing paid healthcare services for elderly people are the difference in the care process compared to budgetary healthcare facilities. 26.7% of respondents noted the need for comfort of the internal environment of the institution, responsive attitude to patients - 20.3%, while the inability to get the required service for free - 16.7% of the respondents.

Conclusions. According to the definition of the World Health Organization, the quality of medical services is an indicator of how the services provided to individuals and citizens improve their health. In these circumstances, there is a potential imbalance between supply and demand, the number of patients and the quality of healthcare in the public and private healthcare sectors of Zhytomyr region. The conducted marketing research allowed to confirm the hypothesis stated. Today, it is necessary to improve not only the quality of the medical services, but also the conditions of service for the patients (the elderly clients in particular), for which different marketing measures are applied. It must be noted that human resources of the city and the whole country are of the most significant importance.

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THE IMPORTANCE OF SLEEP FOR MEDICAL STUDENTS

Admission: Most of us know that all people need around 7-8 hours of sleep per night, but it is especially important for students. Consistently getting quality sleep will improve your student's mental, emotional, and physical performance. It improves their immune system, balances hormones, boosts metabolism, and improves brain function. The main reason sleep is so important for a student's success in school is because this is the time when their brain is "cleaning" itself. Our brain cells eat, reproduce, and make waste products every day. When we are awake, our brain is super active with learning, thinking, and controlling our entire body. As a result, during sleep, our body uses this time to remove all that waste and allows us to repeat the learning processes day after day. If a student is not getting enough quality sleep then brain reduces cognitive performance and learning potential. [1]

Aim of the study: to identify the importance of sleep for students and to explore the connection between sleep, exercise and the learning potential.

The research methods and material: The scientific literature and other sources relevant to a particular problem were examined and compared.

Sleep deprivation can impact various aspects of the mind and body, such as mood, energy, memory, efficiency, and importantly the ability to learn. That's why it's vital for those in the student accommodation sector to highlight and help educate students on the importance of a good night's sleep. Ideally students should aim for at least nine hours of sleep per night in order to perform and flourish, both physically and mentally. In fact, even simply increasing sleep by just one hour a night is better for long-term wellbeing, mental and physical health, and will enable students to perform better in their studies. [2]

The brain is better than a smartphone, so it's important to recharge it regularly for optimal performance and to allow students' academic talent to shine. Rest and recovery are just as important as sleep – if students haven't had a good night's sleep, finding time in their day, whether its 10 minutes during lunch or between classes, to ignore technology and just relax, will help the body feel rested even without actually sleeping. [2]

Conclusions: Sleep is a vital, often neglected, component of every person's overall health and well-being. Sleep is important because it enables the body to repair and be fit and ready for another day. Getting adequate rest may also help prevent excess weight gain, heart disease, and increased illness duration. [3]

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PANIC DISORDER

The aim of study was to investigate the causes of panic disorder, its impact on human health and to determine the ways of its treatment and prevention.

Panic disorder is an anxiety disorder where you regularly have sudden attacks of panic or fear. Everyone experiences feelings of anxiety and panic at certain times. It's a natural response to stressful or dangerous situations. But for someone with panic disorder, feelings of anxiety, stress and panic occur regularly and at any time, often for no apparent reason. People with panic disorder have sudden and repeated attacks of fear that last for several minutes. Sometimes symptoms may last longer. [5, p. 475]

These are called panic attacks. Panics attacks are characterized by a fear of disaster or of losing control even when there is no real danger. A person may also have a strong physical reaction during a panic attack. It may feel like having a heart attack. Panic attacks may occur at any time, and many people with panic disorder worry about and dread possibility of having another attack. [6, p.3]

A person with panic attack may become discouraged and feel ashamed because he or she cannot carry out normal routines like going to the grocery store or driving. Having panic disorder can also interfere with school or work.

Panic disorder often begins in late teens or early adulthood. More women then men have panic disorders. But not everyone who experiences panic attacks will develop panic disorder. [4, p.123]

The causes of panic disorder are not clearly understood. Research has shown that panic disorder may be genetically linked. Panic disorder is also associated with significant transitions that occur in life. Leaving for college, getting married, or having your first child, the death of a loved one, divorce or job loss are all major life transitions that may create stress and lead to the development of panic disorder.

Although the causes of panic disorder are not clearly understood, information about the disease does indicate that certain groups are more likely to develop the disorder.

Common symptoms associated with a panic attack include:

- racing heartbeat or palpitations
- shortness of breath
- feeling like you are choking
- dizziness (vertigo)
- lightheadedness
- nausea or upset stomach
- sweating or chills
- shaking or trembling
- changes in mental state, including a feeling of derealization (feeling of unreality) or depersonalization (being detached from oneself)
- numbness or tingling in your hands or feet
- chest pain or tightness
- fear that you might die

Panic attacks can also be caused by medical conditions and other physical causes. If you're suffering from symptoms of panic, it's important to see a doctor to rule out the following possibilities:

1. Mitral valve prolapse, a minor cardiac problem that occurs when one of the heart's valves doesn't close correctly
2. Hyperthyroidism (overactive thyroid gland)
3. Hypoglycemia (low blood sugar)
4. Stimulant use (amphetamines, cocaine, caffeine)
5. Medication withdrawal

Treatment for panic disorder focuses on reducing or eliminating your symptoms. This is achieved through therapy with a qualified professional and in some cases, medication. Therapy typically involves cognitive-behavioral therapy (CBT). This therapy teaches the patient to change his thoughts and actions so that he can understand the attacks and manage his fear. [1, p.97]

The most commonly prescribed medications for panic disorder are anti-anxiety medications and antidepressants. Anti-anxiety medications are powerful and many types of them begin working right away but they generally should not be taken for long periods.

Antidepressants are used to treat depression but they are also be helpful for panic disorder. It’s important to know that although antidepressants can be safe and effective for many people, they may be risky for some , especially children, teens and young adults. [2]

Some type of medications called beta-blockers can help control some of the physical symptoms of panic disorder such as excessive sweating, a pounding heart or dizziness. Although beta blockers are not commonly prescribed, they may be helpful in certain situations that bring on a panic attack.

In addition to these treatments, there are a number of steps that you can take at home to reduce the symptoms. Examples include:

- maintaining a regular schedule
- exercising on a regular basis
- getting enough sleep
- avoiding the use of stimulants such as caffeine

Panic disorder is often a chronic (long-term) condition that can be difficult to treat.

Some people with this disorder do not respond well to treatment. Others may have periods when they have no symptoms and periods when their symptoms are quite intense. Most people with panic disorder will experience some symptom relief through treatment. [3]

There's no sure way to prevent panic attacks or panic disorder. However, these recommendations may help get treatment for panic attacks as soon as possible to help stop them from getting worse or becoming more frequent; stick with your treatment plan to help prevent relapses or worsening of panic attack symptoms; get regular physical activity, which may play a role in protecting against anxiety.

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UNDRESTANDING SKIN PRODCUT INGREDIENTS

Admission: There are millions of different skin care products on the Ukrainian market, all with different combination of ingredients. The key ingredients present in most cosmetics include water (aqua), emulsifiers, preservatives, thickeners, moiturisers, colours and frangrances. All cosmetic ingredients can be either naturally occurring or artificial, but any potential impact on our health depends mainly on the chemical compounds they are made of. Ukrainian consumers increasingly care about the validity, safety and stability of personal care products.

Aim of the study: to identify and analyze the latest ingredients in skin care products that may benefit our skin and health.

The research methods and material: Ingredients in today's skin care products are an excellent example of how discoveries in chemistry are part of our day-to-day lives. The scientific literature and personal care market in Ukraine and other sources relevant to a particular problem were examined and compared. On the basis of this research the ingredients of the Ukrainian brands' skin care products (Biokon, Farmak, Irenen Bukur, Elfa Pharm) were analyzed.

In our research cosmetics is defined as "anything intended to be applied to the human body for cleansing, beautifying, promoting attractiveness, or altering the appearance without affecting the body's structure or functions." The word "cosmetics" derives from the Greek word meaning "technique of dress and ornament". In fact, just reading the composition of any common cosmetic can become a chemistry class: water, emulsifiers, preservatives, thickeners, pH stabilizers, dyes and fragrances, combined in different ratios, for different purposes.

Many cosmetics that are marketed nowadays often contain antioxidants as the active ingredients. It is known that oxidation reactions could produce free radicals, which can start chain reactions that will damage skin cells. Increasing the amount of free radicals could initiate the wrinkling, photoaging, elastosis, drying, and pigmentation of the skin. Topical antioxidants could terminate the chain reactions by removing the free radical intermediates and inhibit other oxidation reactions by being oxidized themselves; this could defend the skin against the environmental stress caused by free radicals.

Skin care products containing alpha-hydroxy acids (glycolic, lactic, tartaric, and citric acids) have become increasingly popular in recent years. Creams and lotions with alpha-hydroxy acids may help with fine lines, irregular pigmentation and age spots, and may help shrink enlarged pores. To help avoid skin irritation, start with a product with a maximum concentration of 10% to 15% AHA.

Salicylic acid removes dead skin and can improve the texture and color of sun-damaged skin. It penetrates oil-laden hair follicle openings and, as a result, also helps with acne. There are many skin care products available that contain salicylic acid.

Retinol is derived from vitamin A and is found in many over-the-counter “anti-aging” skin care products.

Here's why skin responds to skin care products with retinol: vitamin A has a molecular structure that's tiny enough to get into the lower layers of skin, where it finds collagen and elastin. Retinol is proven to improve mottled pigmentation, fine lines and wrinkles, skin texture, skin tone and color, and your skin's hydration levels.

Besides, many skin care products on the Ukrainian market today boast vitamin C derivatives as an ingredient (magnesium ascorbyl phosphate or ascorbyl palmitate, for example), but L-ascorbic acid is the only useful form of vitamin C in skin care products. With age and sun exposure, collagen synthesis in the skin decreases, leading to wrinkles. Vitamin C is the only antioxidant proven to stimulate the synthesis of collagen, minimizing fine lines, scars, and wrinkles.

Hyaluronic acid is often touted for its ability to "reverse" or stop aging. This substance occurs naturally in humans and animals, and is found in young skin, other tissues, and joint fluid. Hyaluronic acid is a component of the body's connective tissues, and is known to cushion and lubricate. Diet and smoking affect your body's level of hyaluronic acid over time. Skin care products with hyaluronic acid are most frequently used to treat wrinkled skin.

Also, copper peptide is often referred to as the most effective skin regeneration product. Studies have shown that copper peptide promotes collagen and elastin production, acts as an antioxidant, and promotes production of hyaluronic acid. Studies have also shown that copper-dependent enzymes increase the benefits of the body's natural tissue-building processes. The substance helps to firm, smooth, and soften skin, doing it in less time than most other anti-aging skin care products.

Parabens are commonly used as preservatives in cosmetics. The parabens used most commonly in cosmetics are methylparaben, propylparaben, butylparaben, and ethylparaben. Scientists continue to review published studies on the safety of parabens.

Conclusions: The cosmetics and personal care market in Ukraine witnessed strong growth for a considerable amount of time. However, in 2014-2019 sales suffered from high inflation rates resulting in sharp decline in USD value and moderate growth in local currency. Price becomes the most influential factor in purchasing decisions for many consumers, as well as the main platform for competition in all market categories. Brand owners must convey the value of new ingredients, formulas and products through clear language, with explanations of benefits based on scientific studies or other trials. Consumers and producers are becoming more open to the usage of natural cosmetics. At this time, scientists do not have information showing that parabens as they are used in cosmetics have an effect on human health. The results suggest that on the market of cosmetic products, health and environmental awareness will be a significant trend for both producer and consumer behavior, even in the future.

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DO YOU SLEEP ENOUGH?

Getting enough sleep is important for people of all ages to stay in good health.

Outline:

1. **How much sleep do you need?**
2. **Risks from sleep deprivation**
3. Important habits that can improve your sleep health
4. Sleep quality

People often sleep less because of work, family, or even to watch a good show on television. But if you don’t sleep enough, you may be at an increased risk for obesity, diabetes, high blood pressure, coronary heart disease and stroke, poor mental health, and even early death. Even one night of short sleep can affect you the next day. You may feel sleepy, be in a bad mood, be less productive at work, and be involved in a motor vehicle crash [2].

How much sleep you need changes as you age. The American Academy of Sleep Medicine and the Sleep Research Society recommend:

Age Group	Recommended Hours of Sleep Per Day
Infant - 4-12 months	12-16 hours per 24 hours (including naps)
Toddler - 1-2 years	11-14 hours per 24 hours (including naps)
Pre-school - 3-5 years	10-13 hours per 24 hours (including naps)
School Age - 6-12 years	9-12 hours per 24 hours
Teen - 13-18 years	8-10 hours per 24 hours
Adult - 18-60 years	7 or more hours per night

The amount of sleep you need changes as you age. Children need more sleep than adults [2].

Risks from sleep deprivation

Sleepiness causes accidents: Sleep Problems are associated with human error and accidents. Nearly 10 -15% of the accidents in the world happens due to sleepiness. Lack of sleep doubles the risk of fatal accidents at work and on roads [4].

Sleep disorders harms your thinking and learning: Lack of sleep affects your cognitive processes: you are less attentive, concentrated, reasonable and able to solve problems. Also, it makes the process of memorizing and recollecting more difficult [4].

Continuous sleep loss leads to serious health problems, such as heart diseases, heart attack, heart failure, irregular heartbeat, high blood pressure, diabetes, and stroke[3, 4].

There are some important habits that can improve your sleep health:

- Be consistent. Go to bed at the same time each night and get up at the same time each morning, including the weekends;
- Do not take any caffeine drink later than early evening;
- Avoid tobacco/nicotine;
- Avoid eating and drinking heavily at least 3 hours before your bedtime;
- Make sure your bedroom is quiet, dark, relaxing, and at a comfortable temperature;
- Remove electronic devices, such as TVs, computers, and smart phones, from the bedroom;
- Get some exercise but not during 4 hours before bed;
- Limit daytime naps to less than 30 minutes;
- Try and keep all worries out and feel relaxed before sleeping;
- give time to rest and relaxation before sleeping;
- read a book at bedtime [5].

What about sleep quality?

Getting enough sleep is important, but good sleep quality is also essential. Signs of poor sleep quality include feeling sleepy or tired even after getting enough sleep, repeatedly waking up during the night, and having symptoms of sleep disorders (such as snoring or gasping for air). Better sleep habits may improve the quality of your sleep. If you have symptoms of a sleep disorder, such as snoring or being very sleepy during the day after a full night’s sleep, make sure to tell your doctor [1, 2].

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UNDERSTANDING OF HEALTHY NUTRITION FOR SCHOOLS

Admission: Healthy eating plays an important role for school children. It is a guarantee not only of the absence of illnesses but also of cheerfulness harmonious growth of children. School nutrition services provide access to a variety of nutritious foods that promote students' health and their capacity to attend to academic tasks. Unfortunately, gastrointestinal diseases are very common among school children.

To enhance the impact of school nutrition programs on children's health, more information is needed on the associations between healthy and unhealthy food offerings during school lunch periods and children's eating behavior.

Aim of the study: describe health consequences of childhood obesity and gastrointestinal diseases; to identify healthy eating and physical activity practices that can be implemented in schools.

The research methods and material: an observational study was conducted in which 80 school children, in elementary and middle schools 65 per cent of reported did not eat breakfast at all, 25 per cent had a sandwich with tea, and only 10 per cent of students had a proper healthy breakfast. On the basis of this research we summarized students' eating behavior and the frequencies with which they purchased meals in the school cafeteria.

We have more influence on what children eat than you think. Most parents expect their kids to do things, like exercise, that they themselves don't do. As a result, improper eating habits inculcated by parents, poorly organized eating at school, unwillingness of children to eat useful meals cause severe problems in children's health.

We need to admit that younger children are provided with complete nutrition, and most high school students have lunch including snacks and buns, which has a negative impact on children's health [3].

The Ministry of Health of Ukraine proposes to encourage children to eat healthy in the following way:

1) to teach children to taste differently
2) eat meals with the whole family and without the TV on.
3) set a regular diet
4) not to use food as a reward or punishment

5) to organize the drinking regime properly

6) limit food with lots of calories, fat, sugar, salt. Substitute sweets for fruits, nuts, cheese, sour yoghurts.

7) be an example for children [2].

Groups of products that should become the basis of proper nutrition are cereals, meat, fish and seafood, vegetables, fruits, nuts, berries, dairy products.

Besides, breakfast and lunch should be more nutritious than afternoon snack and dinner. Every day in the diet of a teenager there should be one part of protein, one part of fats, four parts of carbohydrates engaging physical activity -1: 1: 6.

Feeding children in summer and winter is different. In winter (low temperatures) the children's body consumes more energy. Therefore, children's food during this period should be of greater energy value. In summer (high temperatures) it is recommended to have food that contains easily digestible nutrients needed for the body, since the digestive glands in children in the heat is sharply reduced, the amount of digestive juices is insufficient. Easily digestible is, for example, dairy-vegetable food [1].

Conclusions: Studies show that when parents make the effort be a model for their children, it really does work. Preschoolers who watch two or more hours of TV daily are nearly three times more likely to be overweight than children who watch less, research shows. Kids who eat breakfast daily get more nutrients overall. Currently, high fat/calorie and low nutrient foods remain abundantly available in many schools in the cafeteria, school stores, and vending machines. Future research should explicate the effects of school nutrition program characteristics and student participation on the eating behavior. Schools can positively impact children’s eating behavior by increasing the availability of healthy foods such as fruits, vegetables, whole grains, and low-fat dairy products.

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UNDERSTANDING DANGEROUS SIDE EFFECTS OF THE ANTIBIOTICS

Admission: Antibiotics are powerful medicines that fight certain infections and can save lives when used properly. They either stop bacteria from reproducing or destroy them. Before bacteria can multiply and cause symptoms the immune system can typically kill them. White blood cells (WBCs) attack harmful bacteria and even if symptoms do occur, the immune system can usually cope and fight off them. Sometimes, however the number of harmful bacteria is excessive, and the immune system cannot fight them all. Antibiotics are useful in this scenario.

Aim of the study: to learn and analyze the harmful effects of the antibiotics and give advices of its smart use.

The research methods and material: Modern antibiotics are a good example. The scientific literature and internet references in Ukraine and Britain relevant to a particular problem were examined.

The first antibiotic was penicillin. Penicillin-based antibiotics, such as ampicillin, amoxicillin, and penicillin G, are still available to treat a variety of infections and have been around for a long time.

Some medical professionals have concerns that people are overusing antibiotics. They also believe that this overuse contributes toward the growing number of bacterial infections that are becoming resistant to antibacterial medications.

According to the Centers for Disease Control (CDC), outpatient antibiotic overuse is a particular problem. Like any other medication, antibiotics can have a determinal effect on a human body.

There are such types of harmful antibiotic action as side effects, allergic reaction and resistance.

The most common side effects of antibiotics affect the digestive system. These occur in around 1 in 10 people. Side effects of antibiotics that affect the digestive system include: vomiting, nausea (feeling like you may vomit), abdominal pain, bloating and indigestion, lost of appetite. These side effects are usually mild and should pass once you finish your course of treatment.

Around 1 in 15 people have an allergic reaction to antibiotics, especially penicillin and cephalosporins. In most cases, the allergic reaction is mild to moderate and can take the form of: a raised, itchy skin rash, coughing, wheezing and tightness of the throat, which can cause breathing difficulties. These mild to moderate allergic reactions can usually be successfully treated by taking antihistamines. In rare cases, an antibiotic can cause a severe and potentially life-threatening allergic reaction known as anaphylaxis. The main symptoms of this condition are: a rapid heartbeat, increasing difficulty breathing caused by swelling and tightening of the neck, a sudden intense feeling of apprehension and fear, sharp and sudden drop in your blood pressure, which can make you feel light-headed and confused.

Other problem is antibiotic resistance. Both the NHS and health organizations across the world are trying to reduce the use of antibiotics, especially for conditions that aren't serious.

The overuse of antibiotics in recent years means they're becoming less effective and has led to the emergence of "superbugs". These are strains of bacteria that have developed resistance to many different types of antibiotics, including: methicillin-resistant Staphyllococus areus (MRSA), Clostridium difficile (Cl. Difficile), the bacteria that cause multi- drug- resistant tuberculosis (MDR- TB) and carbapenemase- producing Enterobacteriaceae (CPE). These types of infections can be serious and challenging to treat, and are becoming an increasing cause of disability and death across the world.

Using knowledge of the side effects of antibacterials, I can give following tips about their use:

1. Follow the course of antibiotics.
2. Do not increase or decrease antibiotics' dose of yourself.
3. If side effects occur taking antibiotics seek medical advice immediately.

Conclusions: So, harmful effect of antibiotics is great problem of modern medicine and pharmacy. When it comes to antibiotics, take your doctor's advice on whether you need them or not.

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COCA-COLA INFLUENCE ON HUMAN HEALTH

The iconic carbonated soft drink is the most famous, popular and widely distributed American product on Earth! But just because it’s popular, doesn’t mean that we know everything there is to know about it.

Coca-Cola history

Coca-Cola history began in 1886 when the curiosity of an Atlanta pharmacist, Dr. John S. Pemberton, led him to create a distinctive tasting soft drink that could be sold at soda fountains. He created a flavored syrup, took it to his neighborhood pharmacy, where it was mixed with carbonated water.

Here's the list of ingredients in modern Coca-Cola:

- **Carbonated water** – Approximately 90% of Coca-Cola is water.
- **Sugar**
- **Caramel colour** – A very specific caramel is made especially for Coca-Cola, to give the drink its characteristic colour.
- **Phosphoric Acid** – The tartness of Coca-Cola comes from the use of phosphoric acid.
- **Caffeine** – The slight bitterness in the taste of Coca-Cola comes from caffeine.
- **Natural flavours** – The essence of the secret formula of Coca-Cola is its blend of natural flavours. This is the most protected and secret part of the formulas mixed with carbonated water.

Sugary drinks are considered a major contributor to health conditions such as *obesity, type 2 diabetes and tooth decay*. But have you ever wondered exactly what these beverages do to your body after consumption?

One researcher has created an infographic that explains what happens to the body within an hour of drinking a can of Coca-Cola.

What happens one hour after drinking a can of coke?

20 minutes: Your blood sugar spikes, causing an insulin burst. Your liver responds to this by turning any sugar it can get its hands on into fat.(There`s plenty of that at this particular moment).

30minutes: Caffeine absorption is complete. Your pupils dilate, your blood pressure rises, as a response your livers dumps more sugar into your bloodstream. The adenosine receptors in your brain are now blocked preventing drowsiness.

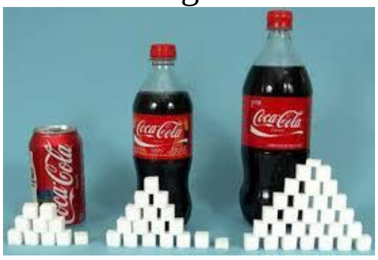
40 minutes: your body ups dopamine production stimulating the pleasure centers of your brain. This is physically the same way heroin works, by the way.

50 minutes: The phosphoric acid binds calcium, magnesium and zinc in your lower intestine. Providing a further boost in metabolism. This is compounded by high doses of sugar and artificial sweeteners also increasing the urinary exection of calcium.

60minutes: The caffeine`s diuretic properties come into play. It is now assured that you`ll evacuate the bonded calcium, magnesium and zinc that was headed to your bones as well as sodium, electrolyte and water.

>60 minutes: As the rave inside of you dies down you`ll start to have a sugar crash/ You may become irritable and/or sluggish. You`ve also now, literally, pissed away all the water that was I the Coke. But not before infusing it with valuable nutrients your body could have used for things like even having the ability to hydrate your system or build strong bones and teeth.

Do you know that :There are approximately 10 teaspoons of added sugar in a single can of cola. The World Health Organization (WHO) recommend consuming no more than 6 teaspoons of added sugar daily, meaning drinking just one serving of cola a day could take us well above these guidelines.



Based on research by health writer Wade Meredith, it explains that a 330ml can of Coca Cola contains so much sugar, your body should vomit - but the phosphoric acid "cuts the flavor", helping you keep the liquid down.As such, it is no surprise that sugary drink consumption is associated with an array of health conditions.

But A Coca-Cola spokesperson said: “People have enjoyed drinking a Coca-Cola for more than 129 years. Like all soft drinks, it is perfectly safe to drink and can be enjoyed as part of a balanced diet and lifestyle. We provide a choice of colas to meet the needs of different consumers, including options that are lower sugar, sugar free and caffeine free.”

According to the Harvard School of Public Health, people who drink 1-2 cans of sugary beverages daily are 26% more likely to develop type 2 diabetes, and last month, Medical News Today reported on a study claiming 184,000 global deaths each year are down to sugary drink consumption.

The body starts to produce more dopamine, a neurotransmitter that controls the brain's pleasure centres - "physically the same way heroin works ".

By the time the hour is up, you will want to urinate, making you drowsy and irritable.

But not before infusing it with valuable nutrients your body could have used for things like hydrating your system, or building strong bones and teeth," .

Surprising facts about coca-cola:

1. More than 1.9 billion servings of Coca-Cola are consumed all over the world every single day.
2. There are only 2 countries where Coca-Cola is not sold – Cuba and North Korea.
3. Coca-Cola once contained cocaine. One of the drink´s main ingredients is coca leaves which the drug is made from. It was not until 1929 when the substance was eliminated from the drink.

4. Coca Cola contains very strong acid, which is why it can be used to clean things. Its effectiveness can actually be compared to that of chemical household cleaners.

5. The Coca-Cola company has an incredible product portfolio of almost 3,900 different beverages.

6. The word “Coca-Cola” is the second-most understood word in the world, behind “OK”.

7. Due to the enormous amounts of water it needs for production, Coca-Cola has caused water shortages in some regions where supplies are scarce, such as India, Latin America and Africa.

8. The first servings of Coca-Cola were sold for 5 cents per glass.

9. Diet Coke was introduced in 1982. It soon became the world´s most popular diet drink.

10. All the Coca-Cola ever produced would fill a giant reservoir measuring 30 km (18.6 mi) long, 15 km (9.3 mi) wide and 200 m (656 ft) deep. Half a billion people could swim in it.

11. Hidden inside a vault in the World of Coca-Cola Museum in Atlanta, the legendary recipe for Coca-Cola is one of the most-closely guarded and best-kept secrets in the world.

12. On July 12, 1985, Coca-Cola became the first soft drink to ever be consumed in outer space as astronauts tested the “Coca-Cola Space Can” aboard the Space Shuttle Challenger.

13. The famous Coca-Cola logo was created and hand-written by Frank Robinson, a bookkeeper of Coca Cola´s inventor J. S. Pemberton.

14. The unique design of Coca-Cola bottles was created by glass plant workers from Indiana. The design is based on the shape of a cocoa seed, an ingredient they wrongly believed to be in the beverage. The unique contour design is still used today.

15. To make 1 liter (33.8 ounces) of product, Coca-Cola uses 2.7 liter (91.3 ounces) of water.

16. Never missing any advertising opportunity, Coca-Cola was the first-ever Olympic sponsor as the company sponsored the 1928 Summer Olympics in Amsterdam

17. Coca-Cola currently has over 105 million fans on Facebook, making it one of the most popular brands on social media.

In conclusion I`d like to say "If you care about your heart, health and mind then please remember this article next time you reach for that bottle."

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CURRENT SITUATION AND CHALLEMGES OF TUBERCULOSIS EPIDEMIC IN UKRAINE

Admission: The Ukrainian government, policy-makers and nongovernmental organizations have committed to support country progress towards achieving the goals of the Tuberculosis Action Plan for the WHO European Region 2016–2020. In 2018, Ukraine started implementing a new approach to TB control aimed at improving detection, treatment and financing of tuberculosis (TB) health-care services.

The aim of the study is to discover and investigate tuberculosis epidemic situation in Ukraine.

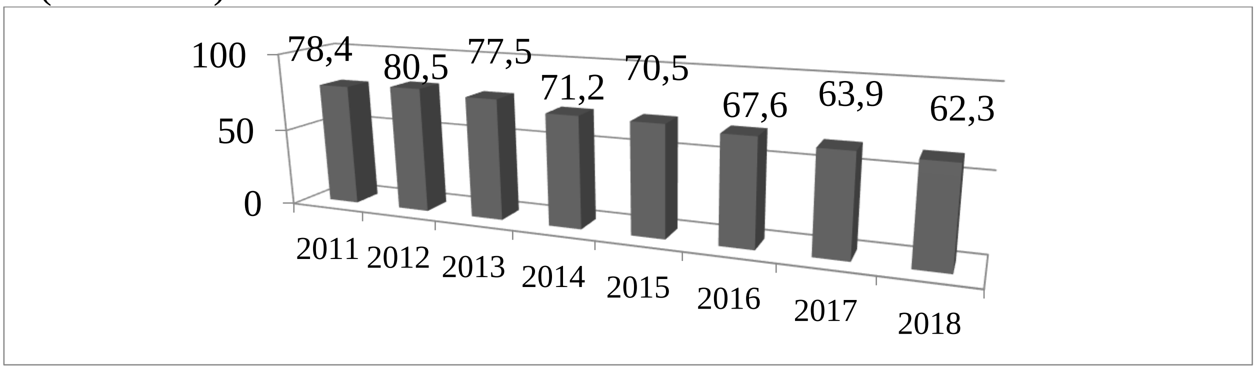
The research methods and material: to start with, tuberculosis (TB) an infectious disease that usually affects the lungs and is caused by acid-resistant mycobacteria from the Mycobacterium tuberculosis complex group - M. tuberculosis, M. bovis and M. africanum. Mycobacterium tuberculosis most often affects the respiratory system. It is characterized by inflammatory processes in the affected organs and systems and expressed by general intoxication of the organism.

High-risk groups for mycobacterium tuberculosis: HIV-infected; people who have recently been in contact with patients undergoing MBT, as confirmed by smear microscopy; persons with "minimal" changes in the lungs; patients with alcoholism; drug addicts; homeless; immigrants from regions with high TB incidence; persons with immunodeficiency; smokers (a slight increase in the risk of getting sick).

According to the WHO, 10% of latently infected people on average develop active TB, which means that the bacteria form isolated, nodular inflammation points, which the immune system can no longer control. As a weakened immune system is the prerequisite, an active infection often occurs in people, who suffer from serious, chronic illnesses such as HIV infection, drug addicts, or even in children. In about 90% of patients the TB bacteria affect the lungs. For these patients, there are two types of tuberculosis: the “open” or pulmonary-positive and “closed” or pulmonary-negative tuberculosis. In the case of open tuberculosis an inflammation developed inside the lungs that the immune system is not able to isolate, i.e., bring under control. This enables TB bacteria to be released through the respiratory tract (e.g., through coughing) and means that this type of tuberculosis infection is contagious. In fact, only a few droplets are already enough to spread the infection – for example, by being in the immediate vicinity of an infected person who had just coughed, sneezed or spat (even if only while speaking). In the case of closed tuberculosis, the opposite is the case, and there is no risk of infection as the inflammation is on the lungs’ periphery and not inside.

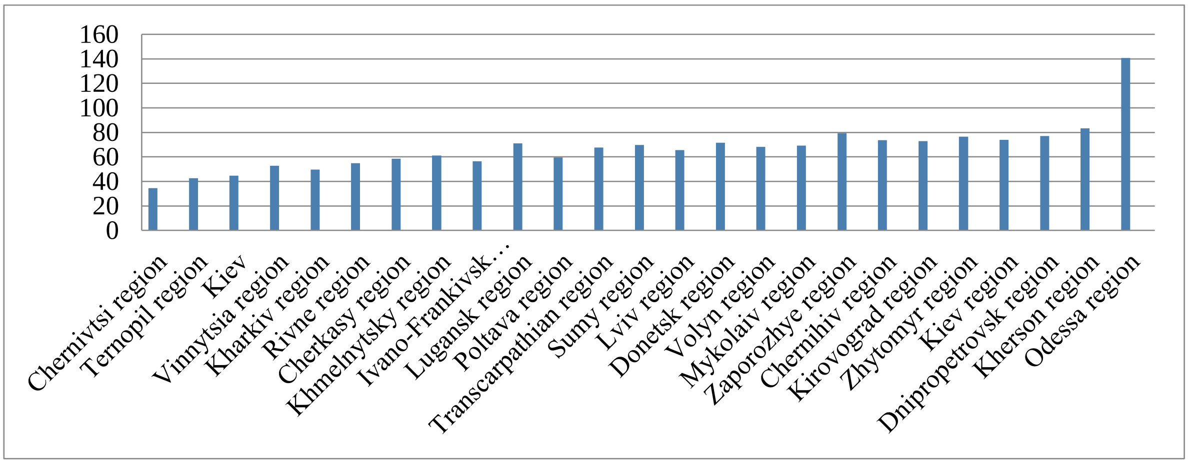
In Ukraine there is a disappointing epidemic situation with tuberculosis. Our country in the ranking of WHO ranks second in Europe in the priority of the fight against tuberculosis.

Figure 1. Dynamics of pulmonary tuberculosis incidence among the population of Ukraine (2011-2018)



* according to the Center for Public Health of Ukraine

Figure 2. Dynamics of tuberculosis disease, including new cases and relapses in regions of Ukraine (2018, per 100 thousand populations)



* according to the Center for Public Health of Ukraine

Particular attention is paid to the increase in cases of chemical resistant tuberculosis.

Chemical resistant tuberculosis (HRTB) is a form of tuberculosis in which the patient secretes mycobacterium tuberculosis resistant to one or more anti-tuberculosis drugs, which is confirmed by a laboratory method in a drug sensitivity test.

In 2014, Ukraine was ranked among the five countries with the highest number of death tolls, unfortunately this situation continues to this day. Of the features of the HRTB are: it is easier to pass from the patient to the healthy person, the period of treatment and hospitalization is longer, it is difficult to be cured and often ends lethal.

In May 2014, the World Health Assembly (Geneva, Switzerland) endorsed the Global Strategy to End TB for the period 2016-2035, which aims to overcome obstacles in the fight against tuberculosis, multidrug-resistant tuberculosis and co-infection HIV / TB, summarize the implementation of the Global Stop TB Plan, developed by the WHO Strategic Working Group on TB and agreed by all WHO Member States and implemented in 2005–2015.

The main objective of WHO's new Global TB Strategy by 2035 is to rid TB of the world with zero rates of morbidity, mortality and suffering from this disease.

Therefore, analyzing the state of lung tuberculosis, it should be noted that the disease is quite widespread in Ukraine and requires measures to overcome the epidemic.

Conclusions: It is necessary to increase the social and living standards of people. It is important to diagnose and do yearly check-ups. The isolation of patients with pulmonary tuberculosis with bacterial excretion should be done and the proper quality treatment of patients with tuberculosis should be conduct. Every person with tuberculosis has the right to be treated for his or her disease.

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