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КАФЕДРА ІНОЗЕМНИХ МОВ
ЛІНГВІСТИЧНИЙ НАВЧАЛЬНО-МЕТОДИЧНИЙ ЦЕНТР

МАТЕРІАЛИ

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КАФЕДРИ ІНОЗЕМНИХ МОВ**

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FOREIGN LANGUAGES DEPARTMENT
FOREIGN LANGUAGE TEACHING CENTRE

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"TO MAKE THE WORLD SMARTER AND SAFER"

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2022**

To Make the World Smarter and Safer: Матеріали XVI всеукраїнської науково-практичної конференції студентів, аспірантів та викладачів Лінгвістичного навчально-методичного центру кафедри іноземних мов СумДУ (26-27 травня 2022 р.) / за заг. ред. професора Таценко Н.В. – Суми : СумДУ, 2022. – 123 с.

У матеріалах подані тези XVI Всеукраїнської науково-практичної конференції студентів, аспірантів та викладачів Лінгвістичного навчально-методичного центру кафедри іноземних мов СумДУ. До збірника ввійшли наукові дослідження, присвячені актуальним проблемам сучасних інноваційних технологій та процесів у науці, техніці та різних сферах людської діяльності.

Для молодих науковців, викладачів і студентів усіх факультетів.

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За зміст статей і правильність цитування відповідальність несе автор

SECTION 1 INFORMATION AND ENGINEERING TECHNOLOGIES

EFFICIENCY OF CYCLOIDAL MECHANICAL GEARS IN CLAMPING DEVICES

S.E. Avramenko – Sumy State University, group A-15/MT
N.V. Maliovana – E. L. Adviser

In mechanical engineering, clamping devices are a very important link in any technological process of mechanical or other parts' processing. At the same time, the main type of drive for them is still hydraulics or pneumatics, which requires some cumbersome associated equipment and frequent maintenance and has high energy costs. The solution to these problems is to replace the wire type with a compact electric one with a cycloidal gearbox, which requires less energy, has greater efficiency, and does not need any associated equipment.

Clamping machine fixtures provide a productive and accurate machining of different workpieces in a variety of shapes. When it comes to fixture design or arrangement of fixture elements, high static and dynamic rigidity plays a great role in the quality and speed of machining - and consequently affects time and cost.

Therefore, high static and dynamic rigidity of fixtures and sufficient clamping force are needed to ensure a certain position and orientation of workpieces under the influence of technological loads, e.g. cutting forces. It is the high clamping force, rigidity, and stability in a compact size, as well as the relatively equal cost that electric drives with cycloidal gearboxes provide.

The new generation of planetary gears has many different concepts. One of new types is the cycloidal gearbox. The mass emergence of cycloidal gearboxes dates back to the second half of the 20th century. Gearboxes of this type represent a very fascinating and attractive area of a mechanical gear research. The major reason for the research interest is that cycloidal gearboxes have a great potential in practical use, and its price is very close to that of conventional, planetary, and other types of gearboxes. For modern

technology the production of such gearboxes has become cheap and uncomplicated due to computer-aided design and manufacturing technologies on computer-controlled machines.

TOP INNOVATIONS BY ELON MUSK

Artem Borukha, student, SSU, group IN-02
O.R.Gladchenko, Academic Supervisor

I will not be mistaken if I say that today there is no person left who has not heard of Elon Musk and his inventions. Therefore he is called the generator of world ideas. So he is one of the richest people in the world (1 position in the list of the richest people in 2021 Forbes).

Some interesting facts from his biography.

Firstly, in 2002, the legendary company SpaceX was created. Inspired by the cycle of science fiction novels by Isaac Azimov, Musk decided to make his efforts to save humanity. He was determined to develop human life on other planets. By the way, according to his plans, this will happen in this century.

Secondly, Elon Musk has a phenomenal memory. He instantly remembers large amounts of information. He also developed a photographic memory, namely eideticism. This allows him to memorize and reproduce images or phenomena in detail.

Thirdly, Elon Musk supports Ukraine during Russian-Ukrainian war. He created a corresponding post on Twitter on March 5, 2022: "Hold Strong Ukraine".

SpaceX

It's the most famous work of Elon Musk. He has been managing this company for 20 years. The launch of Falcon 1, Falcon 9, Falcon Heavy missiles was watched by the whole world. Dragon spacecraft deserves special attention in particular, Crew Dragon and Dragon 2 designed by NASA, which can carry up to seven astronauts at a time.

Elon Musk and Mars are synonymous. The entrepreneur is improving Dragon so that it can fly to Mars.

Hyperloop

The Hyperloop high-speed pre-vacuum train is a single capsule that will travel through an overhead pipeline with the speed of 480-1102 kilometers per hour. The company predicts that the serial capsules will be able to accommodate up to 28 passengers.

So far, the hyperloop is under development and testing in the United States. And if all goes well, such high-speed trains will definitely change the world and save time for millions of people.

Tamed artificial intelligence GPT2

In 2015 Elon Musk founded the non-profit organization Open AI, which should study, tame and neutralize artificial intelligence, while producing all sorts of cute pranks based on it. The inventor is convinced that you should not be afraid of AI (artificial intelligence), you just need to be prepared for different scenarios of its superdevelopment. In 2019, the Open AI team presented a GPT2 project, information about which did not spread as widely as we are accustomed to in the context of Elon Musk innovations. GPT2 is an artificial intelligence system that generates text and it turns out very confidently and plausibly. So a change is planned, which should not expect inspiration.

To sum it up Elon Musk is the engine and generator of evolutionary solutions for Earthlings.

SOFTWARE SYSTEM FOR ANALYZING THE PERFORMANCE OF EMPLOYEES OF IT COMPANIES

Vladyslav Bozhenko— Sumy State University, group IT – 11
Svitlana Mikhno, Academic Supervisor

Performance Review is a method of evaluating performance over a period that identifies an employee's strengths and weaknesses, provides feedback for management, offers assistance in setting goals for future professional development, and assesses corporate and professional competencies. All these things can be described by special indicators that can be calculated as main characteristics that help understand how to assess competence - and get a measure of the same communicativeness or autonomy in numerical terms.

Capacity assessment is important to identify active and involved workers who can be brought up within the team and raised for senior positions. It's also needed to calculate the most productive staff and helps to determine which department does not have enough capacity to cope with the task. That's why one of the major purposes of this work is to develop a system for analyzing performance metrics and indicators for employees of IT companies.

The system should assess the employee's potential within the current opportunities in the position. How does it reveal itself, manifest itself, and can it claim promotion? This question can be answered by KPI calculation - a quantitative assessment of the work performed depending on the number of tasks and time spent on it. The result of the calculation reflects how well the norm is met. The result is a weighted average performance ratio, which shows the overall efficiency of the employee for a particular period. The tech part of the system should consist of integration with popular IT-sphere systems(JIRA, Confluence, Github) and extracting all useful data in order to create graphics, charts, metrics calculations, etc in order to calculate and visualize performance indicators of workers depending on the positions and responsibilities. Such kinds of systems are unique to the IT market, very often companies try to develop similar systems by themselves. That fact proves the importance and relevance of the current project

TECHNOLOGIES FRIENDLY TO PEOPLE

D. O. Chernukha – Sumy State University, group IT – 11

I. Zaitseva, Academic Supervisor

Space exploration with the help of Hubble NASA, in collaboration with the European Space Agency, began construction of Hubble in 1983 after funding was approved. The telescope was scheduled to be launched into orbit in 1986, but due to the Challenger crash, it was launched on April 24, 1990 on NASA's reusable space shuttle OV-103 Discovery.

The Hubble is an automatic observatory, which powered by the Sun. It is located in orbit around the Earth with movement speed

27,300 kph. It was named after Edwin Hubble who was an outstanding astronomer and cosmologist of the 20th century and who made a crucial contribution to understanding the structure of space. The telescope is equipped with 6 instruments for space exploration. These are the Wide Field Camera 3 (WFC3) which has expanded Hubble's range, giving the telescope greater access to ultraviolet, visible and infrared light. The Cosmic Origins Spectrograph (COS) which breaks ultraviolet radiation into components that can be studied in detail. COS is the best at studying points of light, like stars or quasars. It has also been used to study galaxy evolution, the formation of planets and the rise of the elements needed for life. Hubble's three Fine Guidance Sensors (FGS) are devices that lock onto guide stars and keep Hubble pointed in the correct direction. The Advanced Camera for Surveys (ACS) with its wide field of view, sharp image quality, and high sensitivity helps map the distribution of dark matter, detects the most distant objects in the universe, searches for massive planets and studies the evolution of clusters of galaxies. The Space Telescope Imaging Spectrograph (STIS) it combines a camera with a spectrograph, which provides a "fingerprint" of a celestial object's temperature, chemical composition, density and motion. STIS studies black holes, monster stars, and the intergalactic medium, and analyzes the atmospheres of worlds around other stars. The Near Infrared Camera and Multi-Object Spectrometer (NICMOS) are sensitive to infrared light, which reveals details about distant galaxies, planets and solar systems and star formation that are not available in visible light. It observes objects hidden by interstellar dust, such as site of stellar formation.

Hubble's main tasks were to study previously discovered objects by astronomers and to discover new ones, also to confirm or refute theories of scientists. After starting its work, he confirmed the existence of planets outside the Solar system in 1992. He also gave a powerful impulse in calculating the age of the Universe, which is currently 13,8 billion years. But despite its achievements, the beginning of his work was not very successful. Because of human negligence the first pictures showed a serious problem in the optical system. That is why in the end of 1993 we had to send one of the

most difficult expeditions into space. Fortunately, the problem was fixed. Moreover, a few months later, the telescope took a picture of the core of the galaxy M100 and confirmed existence of gravitationally collapsed objects predicted by Einstein. In 2006 Chandra Observatory, working with the Hubble and other telescopes, found that less than 20 percent of the matter in the Universe is normal matter: protons, neutrons, and electrons that make up stars, gas, dust, and other materials. The remaining 80% is dark matter which does not reflect or emit any type of light and can be detected based only on the gravitational influence it exerts on normal matter and on light. Hubble during mission Kepler, where continuously monitored a patch of space that contains 150,000 stars like the Sun for indications of Earth-sized planets from 2009 to 2013. Kepler determined the percentage of terrestrial and larger planets that are in or near the habitable zone of a variety of stars. The Kepler mission detected over 4,700 candidate exoplanets, with more than 2,300 confirmed. In 2015 it made a panoramic view of our closest galactic neighbor, Andromeda (M31). Hubble's imaging power allows us to resolve individual stars in a galaxy over 2 million light-years away from us. This picture is covering a swath of its disk 61,000 light-years long. In 2019 telescope made an image of a black hole in the galaxy M87.

Thanks to Hubble, humanity has learned a lot about the structure of the Universe and the processes within it. We also have made a huge step forward to colonize the planets.

COMPOSITE MATERIALS IN THE DESIGN OF MACHINE TOOL'S ELEMENTS

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N. V. Maliovana – E L Adviser

Development, manufacture and application of certain parts from composite materials, in general, are inherent in the aerospace and automotive industries. Reducing the weight of the machine using fuel economy is an efficient aim and reason for the use of materials such as polymers reinforced with carbon fiber (CFRP) or similar

compositions with other reinforcing fibers, which are successfully combined with sheet metal elements.

Composite parts manufacturing processes are still being researched and improved to reduce their cost for significant and wider implementation. Against the background of significant growth in the level of automation, the parts made of composite materials are becoming increasingly relevant in general engineering and especially in machine building. The use of elements made of composite materials reinforced with carbon fiber in the design of machines leads to an increase in the life cycle and quality of equipment. However, the introduction of composites in this sector of production is rather slow. In particular, this is influenced by the underestimation of the advantages of composite materials and the overestimation of their cost by design engineers who are unfamiliar with the properties of composites. Therefore, in most cases, preference is given to established methods of production to new, less studied.

However, the requirements for modern machines are growing accordingly, namely: a dramatical increase in the size of machines and its moving parts, operation at high speeds, precision level of accuracy, and so on. Based on this, the structural elements of the machines should have less weight, while providing sufficient strength and rigidity to withstand both static and dynamic loads, ie have good vibration damping properties.

One of the main components that affects the rigidity and damping properties of the machine is its frame. In most mass-produced machines, the body elements are made of cast iron and are relatively cheap, easy to cast and have good cushioning properties.

However, in the case of special and large machines made separately for a specific order, the use of cast iron for body elements is not economical due to unreasonably high cost of the mold and large dimensions of the casting itself. Therefore, the elements of the body of these machines are usually made by welding steel, which negatively affects the vibration resistance of structural elements precisely because of the presence of hollow beams with a large cross section and thin walls.

A hybrid design of body elements that combines the stiffness of steel or cast iron with damping characteristics of the composite filling can be a good alternative in the manufacture of structural elements for special machines. Thus, according to computer studies, rigid composite structures with CFRP can be effectively used in roughing to remove solid materials. Designs using AFS sandwich-panels are offered for high-speed finishing operations due to their good damping properties, which guarantees the quality of the workpiece and high productivity. Due to the knowledge of the properties of different structures of composite materials, it becomes possible to more effectively choose structural materials for appropriate purposes.

Composites are much more expensive as well as raw materials than traditional steel, cast iron and aluminum alloys. However, the possibilities of modern production for manufacturing of composite materials to minimize further processing can significantly reduce the cost of ready-made structural elements. In such cases, composites may be a cheaper option than their metal counterparts. In most cases the cost of composite elements is slightly higher than analogues, reducing the weight of the main components allows the designer to choose other bearings, motors and moving parts. Which in turn significantly affects the cost of equipment and in addition, weight reduction reduces energy costs throughout the life of the machine. Nevertheless, the greatest advantages of composite machine parts are due to the increase in processing speed and quality of the output parts.

MY CHOICE OF THE PROFESSION OF IT ENGINEER

Horyaystov E., SumDU, gr.EP-11
O.R. Gladchenko, Academic Supervisor

Every work must bring moral satisfaction. With age, people begin to understand that the material reward for it is no less important. Human labor must be valued, both society and the person who carries it out, must have a lot to gain from it.

The current level of scientific and technological development is characterized by the growing role of electronics in every area of society. From the early age, I loved to use various electrical devices, namely a computer to find useful information for self-development and learn something new. That's why I applied for "Electronics" specialty in Sumy State University.

The profession of electronic information systems engineer is very relevant today, because there are not enough specialists in this field now. According to statistics, up to 80% of the world's industry is electronics. Everywhere we come across electronic devices and systems, which include sensors for various functional purposes; microprocessor devices and object management systems; communication devices and telecommunication systems; general and special purpose computer systems. The objects of professional activity of specialists of the profession of a electronics engineer are sensor systems, Internet technologies, computer vision systems, local and global computer networks, information display devices and systems, fiber-optic communication lines, computer systems for processing experimental results, research and development of new materials of electronic technology in the form of granular or high-entropy film alloys, magnetically inhomogeneous structures and study of their properties.

The profession of electronics engineer requires great skills, diligence and patience. Knowing physics and understanding various devices is the smallest list of requirements for this profession. Ultimately my choice of the right specialty was based on my own preferences.

FUTURE INNOVATIONS

Inna Hovorukhina – Sumy State University, group ET_{M3-11c}

T.V. Pochatko – Academic Supervisor

Things seemed incredible to us a few decades ago are now regular and commonplace. However, there is no limit to perfection and today we keep on introduction of supernova technologies that

will make our life more comfortable, safe and interesting in the future.

Recently, the "Smart house" concept was something fantastic, but technologies have gone further and now the term "Smart city" is on hearing. Cities such as Dubai, Barcelona, Kuala Lumpur are currently actively introducing and widely using information and communication technologies to increase the level of residents' comfort and safety. Their quantity grows rapidly, and besides, in the nearest future there may appear unmanned cars and flying taxis, heated sidewalks in the winter time, bioluminescent trees that glow in the dark instead of street lamps, buildings with energy-saving materials that can store energy like a battery, fire fightings with sound using specially equipped drones, ubiquitous face recognition to reduce crime, contactless transmission of electricity. The full provision of "Smart cities" will be carried out exclusively through the renewable energy.

In addition, it should be noted that nowadays medicine is a huge area of amazing inventions and discoveries. Scientists are working hard on the technology for creating three-dimensional models on a cell basis using volumetric printing - 3D bioprinting, capable of completely duplicating a real human organ, while preserving all the functions and viability of cells, which will help solve many problems in the field of surgery and transplantation. Very soon, we will be presented with bionic lenses for supervision and night vision, subcutaneous microchips with which we'll be able to monitor vital body functions and receive important information in real time, brain implants that can treat various diseases and increase the capabilities of the brain itself. The issue of aging and eternal youth does not lose its relevance, so the work is actively underway on the therapy that kills old non-working cells, allowing healthy cells to multiply and divide more efficiently. Therefore, it's quite possible that in the future humanity will nevertheless find the elixir of immortality.

In addition, of course in the field of information technologies the most daring ideas are implementing now. Artificial intelligence, virtual and augmented reality in all areas of activity, global

robotization, space exploration from the mass space tourism to the colonization of Moon and Mars are rapidly developing.

Now we can't say for sure which part of these predictions will become a reality in the nearest future. Perhaps some of them will not come true, but it may also be that some technologies will exceed our wildest expectations.

GENERATION OF ADDITIONAL ELECTRIC FIELD IN THE
AMPLIFICATION SECTION OF A SUPERHETERODYNE FREE
ELECTRON LASER WITH AN ELECTROSTATIC
UNDULATOR

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N.V. Maliovana – E L Adviser

The dynamics of space charge waves (SCWs) in the amplification section of a superheterodyne free electrons laser (FEL) is actual nowadays. This device uses a longitudinal electrostatic field undulator as an additional wave amplification mechanism. In the FEL's amplification section, special conditions are created for the occurrence of a three-wave parametric resonance between the fast, slow SCWs and the longitudinal electrostatic field of the undulator for the laser pumping. Because of this interaction, parametric instability is realized, and SCWs are amplified. Further, in the terminal section, the energy of the amplified slow SCW is converted into a powerful electromagnetic wave.

In the amplification section, in addition to the processes described above, the relativistic electron beam is modulated by a periodic reversible undulator electrostatic field. This beam generates an additional electric field, which is superimposed on the laser pumping field. Using a hierarchical asymptotic approach to the theory of oscillations and waves, and the method of slowly varying amplitudes, we obtain the expression for the additional electric field in the linear approximation:

$$\mathbf{E}_2^d = \mathbf{E}_{20} / \left(\left(k_2^2 v_0^2 \gamma_0^3 / \omega_p^2 \right) - 1 \right).$$

The additional electric field cannot only strengthen the field of the undulator but weaken it in general. Furthermore, when $(k_2^2 v_0^2 \gamma_0^3 / \omega_p^2) - 1 = 0$, the electric field strength goes to infinity. This formally indicates its resonant nature. For achieving the three-wave parametric resonance in the amplification section we found specific values of parameters, at which the additional periodically reversible electrostatic field equals $E_2^d = E_{20}/3$. In other words, the resulting laser pumping field is increased by 33.33%.

INNOVATIVE STARLINK TECHNOLOGY

S. Khomenko – Sumy State University, group TC-11
O.I. Nefedchenko – E L Adviser

Starlink is a project of the American company SpaceX (Founder Elon Musk) to develop a high-performance satellite platform for the production of communications satellites and the launch of a large number of them into space. The company was the first to serve Canada and the United States (2020). The project began in 2015, and the first two satellites were launched into a test flight on February 22, 2018 with a Falcon 9 rocket.

Starlink provides access to broadband Internet anywhere in the world including as a result of hostilities or power outages. Or there is no coverage at all in the appropriate place. Users can expect to see download speeds between 100 Mb/s and 200 Mb/s and latency as low as 20ms in most locations. Starlink internet works by sending information through the vacuum of space, where it travels much faster than in fiber-optic cable and can reach far more people and places. Starlink is a constellation of multiple satellites that orbit the planet much closer to Earth, at about 550km, and cover the entire globe.

Because Starlink satellites are in a low orbit, the round-trip data time between the user and the satellite is much lower than with satellites in geostationary orbit. Starlink leads the industry in innovations to reduce satellite brightness, minimize the impact on astronomy, and protect the natural night sky for all to enjoy.

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USEFUL MODERN CAR SAFETY SYSTEMS

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T. Plokhuta – EL Adviser

The concept of car safety systems has been urgent for many years. These systems are developing and becoming better and safer.

The most important was the seat belt system, which was originally used only by racers in the 1920s. But due to the inconvenience of use, it was not spread in production cars. In 1957 Sweden became the first country to use seat belts mandatory in all kinds of cars.

Nowadays technology does not stand still, so we can see cars with many of the latest protection systems.

Currently, the most important are electronic systems. They allow the car to maneuver more clearly, brake effectively and feel at ease on the road. These technologies are not the newest, but they are definitely used even in new cars. They include: Anti-lock Braking System (ABS), Electronic Stability Program (ESP), Automatic Braking Differential (ABD) and others. All of them are already perfect, but nowadays it is the age of information technology and you can find much more safety security programs, which are controlled by the car on-board computer. Lately, even newer technologies can be found in most updated cars, that are considered to be standard car safety features. The most common are:

1. Backup cameras (this technology helps drivers to avoid collisions when parking or reversing).

2. Adaptive headlights (these are special sensors, which are located in the headlights of the car, they automatically turn off the high beam to avoid blinding the driver, who is moving towards).

3. Lane departure warning (this system automatically keeps the vehicle within the lane).

Some of the safest cars are Tesla model S, Tesla model Y, Volvo S60, Volkswagen Passat, Toyota Camry and others. These cars provide a great warranty of a driver safety.

Therefore, we should drive our cars safely and take care not only of our own health, but also the health of other road users.

USING INFORMATION COMMUNICATION TECHNOLOGY TO MOTIVATE ENGLISH LANGUAGE LEARNERS

Y. Kostenko – Sumy State University, group IN-11

T.M. Plokhuta – Academic Supervisor

Nowadays, there is a problem of low-level motivation of English language learners. Motivation depends on both internal and external factors.

Many distractions, such as fear, create negative motivation. Positive motivation is influenced by the feeling that language learning is successful, interesting teaching methods, encouragement from other people.

In everyday life we are constantly surrounded by the high-tech equipment. Therefore, Information Communication Technology (ICT) in the educational process has been actively developing. Firstly, there is a variety of online dictionaries that make it much easier to expand your vocabulary, primarily due to the quick access. Secondly, ICT provides an endless choice of multimedia, software, interesting programs, with which you can both work independently and make your studying more exciting. You can set any language learning goal to your liking and create your own word collections. Thirdly, a very useful feature in mobile applications is reminding about learning as well as tracking your personal progress, which is very important while learning a language. Furthermore, ICT opens the door to better distance learning. You can communicate via video

conferencing (zoom.us, meet.google.com) with teachers or native speakers, enroll in online courses and complete tasks at any time with a laptop or phone. Online platforms make their resources accessible to anyone, anywhere with Internet connection. For example, very useful and entertaining are pearson.com, mix.sumdu.edu.ua, englishdom.com.

In conclusion, ICT is an integral part of education in the XXI century and motivation is extremely important in the English language learning process. Easy access to studying materials and entertaining information, tracking the progress, and setting goals are very important factors for high-level motivation due to ICT.

PROS AND CONS OF TECHNOLOGICAL INVENTIONS

Ilya Kovalenko – Sumy State University, group MB3-11c
T.V. Pochatko – Academic Supervisor

We live in the era of high technologies, and we use modern inventions in our everyday life because they have brought us much comfort. New technologies have spread on every field over the past 15 years. Moreover, they are rapidly changing. For example, video-recorders, DVD-players or compact disks have already become obsolete and have been replaced by more up-to-date devices. Today we can hardly imagine our life without such modern mobile devices as cell phones or laptops. Our offices are fully equipped with computers, printers, scanners, air-conditioners, interactive whiteboards and wi-fi modems. Household appliances (vacuum-cleaners, coffee-machines, dish-washers, food processors and others) help us to save our time and energy.

However, we should realize that digital and electronic inventions have both negative and positive impact on our daily life.

We are absolutely sure that new technologies or gadgets are making things faster, easier, more comfortable and interesting. For instance, if you install a GPS (Global Positioning System) in your car you'll never get lost. And could we imagine just 15 years ago all the things we can do on the wireless Internet nowadays: connecting with friends from all over the world, online shopping and banking, distance online learning, finding virtual relationships and even working at home? Isn't that awesome?! Our parents used to go to

post-offices to send letters or pay bills, they went to libraries to find a good book and they used telephone-booths for phone-calls.

On the other hand, there are some people who are strongly against some modern inventions because they really miss those days when they talked to each other face to face in reality, but not virtually. We partially agree with that people are becoming anti-social and too dependent on their gadgets. Some of them also spend half of their time occupying their shiny gadgets (smart-phones or i-pads) even if they go out. Besides, people who use various social networks a lot (such as Facebook or Instagram) should worry more about their privacy.

So, summing up, we could say that there are serious arguments both for and against the newest technologies but anyway it's really difficult to imagine our life without them today.

PATTERN RECOGNITION USING THE METHOD OF INFORMATION-EXTREME MACHINE LEARNING

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When using unmanned aerial vehicles (UAVs), the current problem is to protect them from intruders who use external influences to steal or destroy devices. Modern drones have been mainly used as repeaters of ground images at control stations. One of the solutions for the problem is to provide UAVs with autonomy through machine learning.

The aim of the research is to develop an intelligent on-board recognition system (ORS) for terrestrial objects, which allows UAVs to transmit information via a crypto-protected communication channel instead of a video stream.

ORS machine learning is conducted with information-extreme intellectual technology (IEIT), which is based on maximizing the amount of information in the process. Learning of the ORS was carried out with the second level of depth, at which the geometric parameters of the recognition class containers and their control system are optimized. During the machine learning, the containers of recognition classes were restored in the radial basis of the Hemming space of recognition features. As a measure for

optimizing the parameters of machine learning, a modified Kullback criterion was chosen.

The digital brightness matrix reflected the characteristics of following objects: the highway, the bridge, the forest, the agricultural field. During the work of the recognition system, the set of geometric decision rules was built as a result of machine learning. The average probability of making correct decisions for given data was calculated. For improving the functional efficiency of information-extreme machine learning, it is necessary to increase its depth by optimizing additional parameters of the ORS, including the parameters of the input information description.

ARTIFICIAL INTELLIGENCE

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AI is the property of computer systems to perform creative functions characteristic of people.

AI is:

- The intelligence of technologies
- The ability to make a progress
- The ability to make life easier
- The ability to learn and to create new

The reason for creating artificial intelligence is to solve a universal computer intelligent system that is needed to solve many problems.

John McCarthy first used the idea of artificial intelligence at a conference at Dartmouth University in 1956.

The AI learning process is very similar to human learning: trial and error. First, AI collects information from all over the Internet then tries to complete the task hundreds of millions of times. For errors, it receives a fine, and for success - a bonus.

Also, based on artificial intelligence, the following services operate: email filters in Gmail, Siri (virtual assistant) LinkedIn (Selection of employees for work).

It is used in such areas as economics, trade, military affairs, special services, medical, education, music, and transport.

There is also a potential threat from AI. The famous scientist Steven Hawking said in 2017 that AI can cause the death of humanity. He highlighted the great danger of creating too powerful AI. A lesser problem is the possible unemployment and degradation of people due to the replacement of human labor by machine.

Problems that AI can solve: bullying and insults on the Internet, communication, epidemics, international relationships.

AI system is a complex mechanism that runs many difficult processes (deduction, thinking, counting, learning, solving problems).

METAVERSE

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The metaverse is a concept of a persistent, online, 3D universe that combines different virtual spaces. You can think of it as a future iteration of the internet as the metaverse will allow users to work, meet, game, and socialize together in these 3D spaces. It would connect multiple platforms, similar to the internet containing different websites accessible through a single browser.

And since the metaverse is a set of virtual spaces it means that you can cooperate with other people who aren't in the same physical space as you are. The point is, that the metaverse acts as a reflection of the real world because many activities that can be performed in real life now extend to the metaverse. Therefore it will combine economies, digital identity, decentralized governance, and other applications.

And all that leads us to the opportunities that we can have.

Firstly, communication. Now it is clear that with the internet, we can interact via a computer screen, smartphone, tablet or any other device without any time or space restrictions, but with the metaverse, the limit of that screen disappears, offering an immersive

experience. It looks like we are part of a video game, moving through an avatar that represents us, and that is capable of touching and moving objects, interacting with other people and making an impact on this environment. So our experience of communication is going to change significantly.

Secondly, work. The metaverse will combine all aspects of life in one place. While many people already work at home, in the metaverse, you will be able to enter a 3D office and interact with your colleagues' avatars. Furthermore, your job may also be metaverse related and provide you with income directly usable in the metaverse. In fact, these kinds of jobs already exist in a similar form. In addition since professions in the metaverses are not yet so well known, as programmers we have a unique opportunity to take the most interesting and highest paying job.

Thirdly, of course, we could not help mentioning education, which will move to a much new level in the metaverse, not only because we can share information with any number of people from around the world, we can use all digital opportunities for practical application. Just imagine that while studying at the average university you will be able to get to the presentation of a new Tesla from Ilona Mask and share with him your new ideas. Or take a biology lesson, where medical students can dissect a virtual frog. The knowledge is the same, frogs are safe.

So, you see that getting inside your own body, in the center of the physical reaction, or seeing what happens in the center of the ocean, all that is almost possible for us.

Another cool opportunity is events. The metaverse is already opening an immersive online experience that makes you feel like you're at the event, not just watching from your computer. You will be able to see an entirely different environment in high definition, 3D, 360 degrees while wearing VR goggles. Moreover, you can interact with other attendee avatars and your environment by using game controllers. We already can see how the video game Roblox hosts virtual events like concerts and meetups. Players don't just play

the game anymore, they also use it for other activities and parts of their lives in cyberspace. For example, in the multiplayer game Fortnite, 12.3 million players took part in Travis Scott's virtual in-game music tour. In a nutshell, just imagine that now we can be in a gallery or in a roc-concert, not just watching it but being there, in a virtual space where is now a limit to imagination.

All in all, the metaverse seems like a real future and it's no longer a science fiction concept. It will eventually be involved into different spheres, such as socialising, work, shopping, studying, government, travelling, entertaining, business, etc.

WHY SHOULD A PROGRAMMER KNOW ENGLISH?

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Nowadays English is very important in a programmer career. Foreign companies suggest open vacancies and sometimes you can be asked to pass an English Test, even if your specialty has nothing to do with philology.

Programmer may not work for a foreign company and may not require English working hours to communicate with business partners from the United States or United Kingdom, but basic language skills can certainly turn out to be useful because at least programming languages are written in English. We must highlight three important points:

- 1) general computer terms;
- 2) IT professional terminology;
- 3) ability to work with technical documentation in English.

IT also has certain terms that every programmer encounters in his daily work, which are desirable to know and not to confuse with others. For example: 1) backbone - a term that is often used to describe the main network connections that comprise the Internet or other major network; 2) hardware - the physical components of a computer including the keyboard, monitor, disk drive, and internal chips and wiring (hardware is the counterpart of software); 3) virtual hosting - the method for hosting multiple domain names on a

computer using a single IP address; 4) data center - a facility used to house computer systems and associated components, such as telecommunications and storage systems; 5) post - the act of sending a message to a particular network newsgroup. Many of these phrases are often used by programmers and some students sometimes even do not realize how important they are in the IT industry.

To sum up, every programmer should have a good level of English to be able to work with technical documentation, stay up to date with the latest news and information, communicate with foreign colleagues, attend conferences and webinars.

APPLICATION CONTAINERIZATION TOOLKIT

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Due to the widespread digitalization of production and business processes, there is an increasing need to develop, configure and support software on workstations. Considering the variety of applications depending on the scope and their external dependencies such as libraries, frameworks or separate products, there is a problem of irrational disk space usage on user workstations and excess of additional utilities or products that have no other practical value except the ensurance of workability for required software. That's when the application packaging service takes the stage.

There is a risk of losing shared files or registry keys while application repackaging that may be pre-installed on the packaging environment as work utility elements and will not be included in the software packages that may be created. It could lead to errors during repackaged applications' work.

The aim of the project is to develop an application containerization toolkit for further use on virtual machines in the work environment of the packaging company with minimal impact on the operating system to keep it as close as possible to its original state. The developed toolkit does not have a graphical user interface, as it runs in the background and supports the operation of containerized applications, which are represented by a set of

application binaries and configuration files. The toolkit uses the dll-hooking principle to intercept and process system calls to provide call forwarding functionality to the required file or registry key instead of the original one.

The result of the work was to containerize packaging tools in order to improve the quality of software packaging items. The toolkit was developed using the C # object-oriented language using the .NET Framework, as well as the NuGet packages EasyHook, CommandLineParser and Serilog in the Microsoft Visual Studio 2019 development environment.

LIVE STREAMING IS CHANGING THE WORD

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The spread of live streaming has led to irreversible changes in the modern world. Live streaming is changing the way people interact in their everyday lives. With the help of live stream software technology anyone can be the host and audiences are able to find live videos of things they are interested in.

The internet company RealNetworks developed the first media player capable of live streaming in 1995 – RealPlayer. Later that year, the company hosted the first public live stream. Since 2010, YouTube began to create its own technical infrastructure for live broadcasts, and in 2011 announced the YouTube Live service. You can watch live broadcasts from your phone, computer, TV, from different applications, and at the same time the viewing will always be in real time. Without doubt, every day millions of people spend time on broadcasts.

The advantages of live streaming include: automatically reaching your target audience, cheap, available for free in the world of digital streaming, easy to set up, offers you opportunities to monetize. It requires only an internet-enabled device with an active account on the chosen streaming platform.

In the entertainment industry, the popularity of live streaming as a format has been linked to the gaming world; in the events sector, the possibility to broadcast live concerts online represents an

opportunity for artists to keep performing during the ongoing global coronavirus pandemic. According to the 2019 CMO Survey, retail businesses typically spend around 20% of their total marketing expenditure advertising to customers on social media.

All in all, live streaming has influenced many global industries, such as media, entertainment, education, and business, and its benefits are numerous. The potential is there to facilitate a major change in how we consume media and the methods we use to reach audiences. It comes with challenges, for sure, there are going to be issues that'll need to be addressed and resolved as we go. But ignoring it is equivalent to putting your head in the sand.

MODULAR POWER HEADS FOR MACHINING OF FLAT SURFACES, WHICH ARE MUTUALLY PERPENDICULAR

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Face milling of large flat surfaces is carried out in different ways, for example, with the help of special modular milling power heads (MMPH). Known MMPH may contain either one face mill, or several ones with intersecting trajectories of cutting edges.

However, there are many types of workpieces with wide mutually perpendicular flat surfaces. The machining of such surfaces is associated with certain difficulties, in particular with significant costs of primary or auxiliary time. This is due to the need of changing the direction of working relative movement of the workpiece and MMPH at an angle of 90 degrees. Besides, when using MMPH containing two mills with intersecting trajectories, the effect of machining a continuous-in-width surface is lost. This is because such MMPH are designed for machining of continuous-in-width surfaces only in one direction, but not perpendicular to it.

In order to overcome this shortcoming an improved design of MMPH was proposed, with the help of which it is possible to machine mutually perpendicular surfaces of workpieces. Designs that were developed can contain three or four face mills. The main difference of proposed mills from existing ones is that they have a mutually perpendicular emplacement of the face mills instead of the

arranging of the mills on straight line. Furthermore, each pair of adjacent cutters is installed in such a way as to ensure the intersection of the respective trajectories of the cutting edges.

Thus, the developed MMPH make it possible to machine flat mutually perpendicular surfaces with a milling width equal to twice the diameter of the face mill, with the exception of a slight overlap of cutting edges trajectories. In addition, due to the possibility of MMPH movements in mutually perpendicular directions, the auxiliary machining time is saved, which increases the productivity of face milling.

ADVANCES IN HIGH TECHNOLOGY

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Modern technology has become an integral part of life, not only for the individual but also for society. Now it isn't easy to imagine a company that would not use the achievements of modern technological progress.

The sphere of IT technology has acquired a remarkable trend of development. Modern inventions such as smartphones, computers, and smartwatches greatly simplify our lives. They have replaced theaters, movies, the library, and many other educational and not only educational services in one place. We can instantly access the resources we need without ever leaving home. All you need is a device and the Internet. Isn't it convenient? We can also track how many steps we took, how much water we drank, or how many calories we consumed. One of the most ambitious and valuable inventions, in my opinion, is Neuralink.

Neuralink is an essential project of inventor and billionaire Elon Musk. Its main goal is to create an efficient brain-computer interface. This chip will allow you to control your computer or smartphone using brain impulses directly. Back in 2020, Musk talked about a successful experiment to implant a chip in a pig's brain. It allowed scientists to monitor the activity of the touch centers of the animal's brain. Last year, the Neuralink chip was implanted into a

nine-year-old monkey, which learned to play Pong with its mind. The main task of Neuralink is to empower people, especially those who suffer from neurological diseases. According to Musk, the device will allow to control hormones, cope with anxiety, and even make the brain work more effectively. The chip will also allow music to be transmitted directly to the brain. People will be able to listen to music on frequencies that are usually inaccessible to our ears and even communicate telepathically. It is not a fantasy but the near future.

Without a doubt, I can confidently say that technology makes our lives comfortable and simplifies many processes, but we should not forget about our development.

MODELS, METHODS AND INFORMATION TECHNOLOGIES OF RISK MANAGEMENT IN LARGE-SCALE AGILE SOFTWARE DEVELOPMENT PROJECTS

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N.V. Maliovana – E L Advisor

Flexible software development technology focuses on continuous planning, development, testing, improvement, training, early feedback and early product delivery. Despite the growing use of a variety of flexible scaling frameworks, there is little empirical evidence of how effective this practice is in reducing risk. Risk management in flexible software development projects is a complex topic for most organizations. Risks cannot only affect the progress of the program increment, but can also pose a serious threat to a company's reputation if it is not possible to identify and mitigate it properly. Risk management is an integral part of planning, it is the least mature and developed area of knowledge in software development projects. It may be necessary to adopt hybrid approaches that combine the features of traditional and flexible practices. Some studies suggest integrating traditional methods to ensure effective risk management in flexible methods. Flexible methods do not use any specific approach to risk management,

however, they make it possible to reduce risks through multiple iterations or sprints. Flexibility is an significant asset. Most companies use flexible methods such as Scrum, Kanban or Extreme Programming to design software products.

Various Agile frameworks (including Disciplined Agile Delivery, Large-scale Scrum, or Scaled Agile Framework) allow large organizations to increase development speed and productivity, better manage uncertainty, and reduce the risk throughout the process. Many teams that use agile naturally include risk management techniques at different stages of product development. However, according to the widespread myth organizations do not need a formal agile risk management structure. For effective scaling and risk management and their combination, organizations need to use a scalable flexible risk management structure at each stage of the development cycle. Although flexible methods itself provide an iterative approach to risk management, software development teams should not assume that they cover all fundamentals without following structured risk management steps throughout the process. It is really true and approachable for large teams or organizations where multiple teams are working on the same product. At a high level, the key to effective implementation of risk management processes is quite simple. It is necessary to start with the identification, assessment and monitoring of risks both at the project level and at the iteration level.

As more and more organizations implement Agile on a large scale, it has become clear that they need a scalable way to integrate / implement risk management into projects. Risk management should be included at the beginning of the project, throughout the development process and at the end of each project. Flexible methods use empirical, specific and individual approaches that allow organizations to optimize the ability to anticipate and control the risks posed by iterative and incremental approaches.

COMPUTER SCIENCES

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Kurochkina V.S. – Academic Supervisor

Computer sciences are a set of theoretical and practical knowledge specialists in computing, programming, information systems, and technologies employed.

Computer sciences study how information technologies work from an empirical and scientific perspective, providing science as the basis for deployment integration or interactions with data.

Currently, in the field of computer sciences, the following main sections are usually distinguished: a) Algorithms and data structures; b) Programming languages; c) Computer architecture; d) Operating systems and computer networks; e) Software development; f) Databases and Search systems; g) Artificial Intelligence and Robotics; h) Human-Computer Interaction

When we compare different specialties in information technologies, they have similar subjects of study and mainly the same sections as Computer Sciences.

The main emphasis of Computer Sciences is on the integration and information interaction of the whole set of information technologies at the level of high scientific abstraction. It is essential to consider and provide an integrated approach to all information technologies at the level of high scientific abstraction.

As a result, the most crucial goal of studying computer sciences is to have in-depth knowledge about all the significant parts of information technologies and understand how applications work with computers. For the most part, it is possible to become an expert in modern computer sciences only by studying all the constituent parts of computer science research, considering them and their integration and interconnection.

Today, ensuring the integration of information technologies and interaction is considered in cloud technology, software-defined networks, and artificial intelligence systems. Interaction is not performed physically but with the help of software interfaces that provide an increased degree of systematicity and dynamism.

PERSPECTIVES OF ARTIFICIAL INTELLIGENCE

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Kurochkina V.S. – Academic Supervisor

Artificial intelligence is one of the most promising areas of computer science. It explores methods for solving problems for which there are no solutions. In 1959, researcher Arthur Samuel determined that machines learn from personal experience. Creating artificial intelligence aims to build a universal computer intelligence system.

There are three options for creating artificial intelligence systems: a) Human brain emulation. This option is to create an identical digital cast of the brain. b) The Imitation of the evolutionary process is reproducing the process of evolution by crossing the software of the most intelligent computers. c) The creation of a system that can develop personal intelligence is ahead.

Artificial intelligence is used in many areas of life. For example, face recognition, data processing, analysis, natural language processing, game theory, machine creativity, network security, and medicine.

The most impressive artificial intelligence systems are: Deep Blue - a chess computer built by IBM; Mycin - one of the early expert systems that could diagnose a small set of diseases, moreover; artificial intelligence, which analyzes questions and selects answers to them, is called Tahuti; "Cleverbot" - a web application that can converse with people in English.

Like any system, artificial intelligence has its advantages and disadvantages. They perform mathematical operations per second. They masterfully play board games. Neural networks learn on their own. But, unemployment may rise through artificial intelligence. Also, the relationships between humans and artificial intelligence are unknown.

So, we can say that automation is good, but no system can reproduce and give to those feelings and emotions like people. Maybe someday, robots will take over the world, and artificial intelligence will be able to replace humans. But this will happen if humanity wants just that.

REALITY IS THE ONLY THING THAT IS REAL

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I. Zaitseva, Academic Supervisor

A few years ago, people could not even imagine the existence of means of communication and the latest gadgets, without which modern existence is almost impossible. But since science evolves at the speed of light, we may not hesitate to create a meta universe. The metaverse is a virtual world that combines various digital technologies, including video conferencing, online games, cryptocurrencies, email, virtual reality, social media and live streaming. In fact, metaverse is quite difficult to describe, because it does not yet exist. The concept is to combine different digital products from many companies. The purpose of the universe is similar to the World Wide Web, where information and communication tools are compatible and immersive. Roughly speaking, this is a digital embodiment of the real physical world, which can be accessed through VR glasses. Hard to believe but the first work on virtual reality began in the 19th century. People could already come up with something incredible without modern devices and computers. The first study was carried out by Charles Wheatstone in 1838. It was a stereoscope that showed that our brain processes 2D images from each eye and assembles it into a single 3-dimensional object. This phenomenon is known as stereoscopic vision and it is the basic premise of what makes virtual reality look like the real world. This phenomenon is known as stereoscopic vision and it is the basic premise of what makes virtual reality look like the real world.

Facebook, one of the world's leading companies and whose head is Mark Zuckerberg, is working today on the project to create a metaverse. The main goals in the realization of digital reality is to create a universe called Meta, where users will be able to move to other virtual worlds, buy and sell goods, work, live and relax. The implementation of this project will have a number of both positive and negative consequences. But you will not escape from the future. Therefore, we will wait for new discoveries in virtual reality.

SECTION 2 ECOLOGY, LAW AND ECONOMICS

ENERGY OUT OF «NOWHERE»

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T. Plokhuta – EL Adviser

Renewable energy is energy from sources that are naturally replenishing but flow-limited, or in other words renewable resources are virtually inexhaustible in duration but limited within the amount of energy that is available per unit of time.

Like any human activity, all energy sources have an impact on our surroundings and climate. Renewable energy is not an exception to the rule, and every source has its own disadvantages. However, the benefits over the devastating impacts of fossil fuels are undeniable: from the reduction of water and land use, less air pollution, less wildlife, and habitat loss, to no or lower greenhouse gas emissions.

The usage of wind to generate energy has its advantages and is an efficient option for several distinct parts of the globe since it does not need direct sunlight exposure like alternative energy for example.

Since wind turbines themselves run strictly on the power they generated, there's no need for fuel. Once the turbine is complete and installed, it doesn't have to be fueled or connected to power to continue working. This also reduces the general cost of large-scale wind farms as compared to other kinds of alternative energy, which can require some energy investment.

Energy suppliers can build their generators on farmlands that already exist and pay the owners to set the machines on their property. This is often a good opportunity for farmers, and it doesn't disrupt their fam's production.

Although wind energy is told to be renewable, the greener option of energy, it still has its disadvantages and limitations.

Wind turbines may be quite noisy, which is why they're mostly located in very rural areas where the majority don't live. Depending on the location of the turbine, like offshore, noise isn't a problem. With advancements in technology, newer designs are shown to cut back the noise complaints and have a way quieter presence.

Wind energy suffers from what's called intermittency, which may be a disruption caused by the inconsistency of the wind itself. Since wind speed may vary, it's hard to predict the amount of energy it can collect at a given time. This implies that suppliers and cities must have energy accumulation facilities or alternative sources of power just in case the winds die down for hours or even longer.

Most old blades are reused. However, it's forecasted the number of blades out of use is going to be so high in 5 to 10 years that the present management system will need to change.

At this moment about 80 per cent of all the turbines dismantled are getting used as wind turbines someplace else. The other 20 per cent is being recycled. That's because it is not economically reasonable to use them again. Right now, only some of the facilities in Europe can recycle blades. The technology remains relatively new and drastically must be scaled up.

What are some potential future wind technologies apart from turbines? Engineers are within the early stages of making airborne wind turbines, within which the components are either floated by a gas like helium or use their own aerodynamics to remain high within the air, where the wind is stronger. These systems are being considered for offshore use, where it is expensive and difficult to place conventional wind turbines on tall towers.

Trees, which might withstand gale forces and yet move in response to breezes from any direction, are also inspiring new ideas for wind energy technology. Engineers speculate about making artificial wind-harvesting trees, that may require new materials and devices that would convert energy from trees complex movements into the steady rotation that traditional generators need. The reward is wind energy harvested closer to the ground with smaller, less obtrusive technologies and in places with complex airflow motions, like towns and cities.

In conclusion, considering all pros and cons of wind energy technology, it really does have great potential in freeing people from fossil fuel addiction without skyrocketing energy bills and economic slowdown. And yet it does not have the ability to achieve the great goal on its own, but in collaboration with other alternative energy sources such as solar, geothermal, hydro, and others to make our world a greener and safer place to live in.

PROBLEMS AND CHALLENGES IN THE ACTIVITIES OF NON-GOVERNMENTAL ORGANISATIONS IN UKRAINE

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S. Zolotova – E L Adviser

After Ukraine gained independence an active civil society has gained experience in democracy and the implementation of the rule of the law. Non-governmental organizations have become one of the main tools for the development of society. The constant growth of the number of non-governmental organizations during the period of the independence of Ukraine can be considered a marker of the search for forms and ways to implement democratic principles, and opportunities for Ukrainians to exercise civil rights and freedoms.

The role of local non-governmental organizations that actively work, interact with local authorities, influence local policy-making, and represent the interests of community residents is extremely important for the development of the country as a whole.

To understand the prospects for further development of civil society in Ukraine in the context of socio-political changes, it is necessary to be aware of a number of challenges facing civil society. Such challenges include:

- a) excessive politicization in the activities of non-governmental organizations;
- b) changes in legislation related to the activities of non-governmental organizations;
- c) reduction of public and social activity of citizens, in particular against the background of quarantine restrictions caused by the pandemic;
- d) financial and economic instability of non-governmental organizations;
- e) problems related to information support of non-governmental organizations necessary for the provision and development of non-formal education, etc.

Studying and detailed analysis of existing challenges will help to overcome them and contribute to the development of civil society in Ukraine in modern socio-political conditions.

ECO-ENZYMES PRODUCTION FROM ORGANIC WASTE

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N.V. Maliovana – E L Adviser

The issue of waste management is quite complex due to the increasing amount of waste, public awareness, and policies between areas in different waste management. The increase in waste occurs in one of them due to the increasing population and the onset of waste becomes a challenge in its management. The existing waste management technology and policies have not been able to keep up with the increase in waste production. The impact of waste dumped into landfills continues increasing and shortening the utilization landfills' life.

One source of waste is household waste, where 48% of household waste is organic and 33% inert materials where the inert material in household solid waste is mostly sand produced by household sweeping on unpaved surfaces especially in low-income areas. Family size and income can be important indicators in estimating the amount of waste produced. A small percentage of residents tend to throw their trash into nearby bushes. Practice can lead to the spread of disease, thus requiring intensive health counselling. Composting practice is one of the recommended ways because it is considered to be the most economical and efficient technique among other management options.

Processing household waste into eco-enzyme is one of the alternative methods of processing organic waste biologically. The manufacture of eco-enzyme through fermentation of waste of fruits and vegetables becomes a solution to minimize and reduce waste from the source. Continuous production in large quantities with short time and low cost is needed to meet the needs amid the growing amount of industrial waste. Dissolving non-dissolved organic compounds into dissolved organic compounds is one of the capabilities of eco-enzyme. The presence of enzyme protease, amylase, and lipase will be very useful to lower proteins, carbohydrates, and lipids in the decomposition process. The production of eco-enzyme in the future is expected to not only

contribute to the reduction of the amount of waste disposal to landfills but also an effort in establishing zero waste at the household level. The zero-waste framework covers the responsibility of producing waste materials to reduce waste, reuse, and recycle.

Eco-enzyme is an organic compound in the form of a complex solution resulting from the fermentation process of kitchen waste materials in the form of fruit peels and vegetable waste. It is also commonly used as fertilizer and biopesticide. The creation of eco-enzyme not only helps reduce waste disposal to landfills but also becomes an alternative to reducing the use of synthetic chemicals that are harmful to human health and the environment. Awareness of household waste processing into eco-enzyme is also a step in the effort to realize zero waste at the household level.

Eco-enzyme production is not only an effort to reduce the disposal of household waste in landfills but also to add value economically. The field of the environment has been commonly used in liquid waste treatment, lake water purification, improved air, and soil quality.

Processing household waste into eco-enzyme becomes the first step in the implementation of the concept of zero waste at the household level. Producing eco-enzyme means that waste producers are responsible in efforts to reduce waste, reuse, and recycle. Commitment to produce environmentally friendly waste enzymes will be an integrated effort in the reuse of waste materials so that the volume of wasted materials is smaller, even becoming non-existent or zero.

The utilization of household waste into waste enzymes will reduce the pile of waste in landfills because the garbage pile will produce methane gas that contributes to global warming. In the process of production of eco-enzyme is also produced ozone gas (O_3), where ozone has a role in reducing carbon dioxide (CO_2).

RENEWABLE ENERGY RESOURCES

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Ph.D. Nina Maliovana– E L Adviser

The modern world is impossible to imagine without energy resources, which are an integral part of each person's life. Mankind meets its material needs through the production of products based on natural resources.

Energy resources are classified according to exhaustibility in the following way: nuclear, renewable and non-renewable. Non-renewable resources include land and mineral resources (oil, gas, coal, iron ore, copper, uranium, nickel, platinum, diamonds). As an example, consider oil: according to scientists, this "black gold" could run out within the next 40 years. In this respect, renewable resources have a huge advantage over non-renewable resources.

Renewable energy resources are resources that one extracts from processes constantly occurring in the environment, which is why it is called regenerative or 'green'. Renewable energy is derived from natural sources. The main ones are sunlight, wind and water streams.

There is also technology based on biofuels, which is the production of fuel from organic industrial waste, animal or plant material. Approximately 60% of biofuels are wood and plant residues. Biofuels can be liquid, solid or gaseous.

Solid biofuels are firewood, straw, briquettes, fuel pellets, wood chips. Nowadays, special energy forests are grown for wood production. The advantage of solid biofuels is the use of cheap material - wood and plant waste, which is compressed into fuel pellets and briquettes.

The gaseous fuels are based on biogas, bio-hydrogen, synthesis gas. Different gas mixtures with carbon monoxide, hydrogen, methane are used for the production by decomposing at high temperatures of the source material in the presence of oxygen.

Equally important is the energy that is extracted from the wind. Wind has its own kinetic energy, which can be converted into almost any desired energy: mechanical, thermal or mechanical. For example, there are wind generators; onshore, offshore, coastal and mountain wind farms. The biggest in Ukraine is Botievo Wind Farm, which is located in the Zaporizhzhia region, and operates on wind turbines of the Danish company "Vestas".

The energy which is produced by the movement of water is called hydropower. The transformation of energy in the movement of water streams into electricity has been widely used in the world. Mankind started with the invention of the water wheel, which made it possible to convert the energy of falling water into the mechanical energy of a rotating shaft. In 1827, the Frenchman B. Fourneron invented the first jet-powered water turbine. Mankind has been producing electricity with the help of hydroelectric power plants. In our country, the best known is the hydropower plant Dniprovska, which is located in the Dnipro district of the city of Zaporozhye.

1, Renewable energy sources can be used as solar energy. On our planet solar energy is the main source of energy. For example, there are solar panels that can convert the energy of the sun into constant electrical current.

Consequently, renewable energy resources are very important and an integral part of our country's future.

KEY CHALLENGES FOR THE TRANSITION TO THE GREEN ECONOMY: A CASE OF UKRAINE

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In modern economic conditions, environmental and social factors are becoming increasingly important. The traditional economy is overly dependent on fossil fuels. It depletes resources and degrades the environment. The scale of the serious negative consequences of the current economic model is significant, so the

world is preparing for the transition to a new paradigm. The new model of economic development is called “the green economy”. The green economy ensures sustainable, carbon-neutral economic growth while comprehensively addressing social equity issues.

The United Nations Economic Commission for Europe states that the main goal of the green economy is to stimulate green investments in various economic and social sectors. Such investments should help to facilitate using natural capital and ecosystems more efficiently or to replace them with other assets. The green economy targets strengthening environmental protection, increasing resources efficiency, improving social inclusion and accelerating economic development [1].

In 2019, the United Nations General Assembly compiled the following list of measures to be taken at the national level to foster the development of green economy:

- changes in fiscal policy;
- reform and reduction of environmentally harmful subsidies;
- use of new market instruments;
- targeting public investments in key sectors of the green economy;
- transition to sustainable public procurement;
- improvement of environmental laws [2].

Though the importance of the transition to the green economy is understood by many scholars and policy-makers, there exist certain challenges to providing its sustainable development. In Ukraine, they include slow development of renewable energy, depreciation of fixed assets of state and private enterprises, negative social phenomena (e.g. corruption) and imperfection of the current legislation [3].

Besides, the transition to the green economy in Ukraine should involve significant technological changes with their impact on production structures as well as on consumption patterns. It is important for companies to introduce new technologies into their production facilities, including the Internet of Things (IoT), cloud computing, analytics, artificial intelligence and machine learning.

In order to ensure sustainable development and implement the concept of the green economy in Ukraine, it is also necessary to carry out further work on improving the legal, organizational and financial mechanisms that stimulate green investments in promising, environmentally friendly sectors of the economy, as well as to use the progressive world experience in this area. The development of the green economy in Ukraine can be facilitated by the introduction of effective financial instruments, such as green bonds, green loans, the creation of funds for financing green projects, and the optimization of feed-in tariffs.

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FISCAL EFFICIENCY OF SINGLE TAX IN UKRAINE

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The study of fiscal efficiency of single tax is receiving more and more attention, because it's one of the most progressive and fundamental local tax. The main feature is that it exempts taxpayers

from paying other taxes and fees while replacing them with a single tax and maintaining simplified accounting and reporting [2].

The single tax occupies a significant share in tax revenues of local budgets. The structure of this tax in terms of its payers is shown in Figure 1.

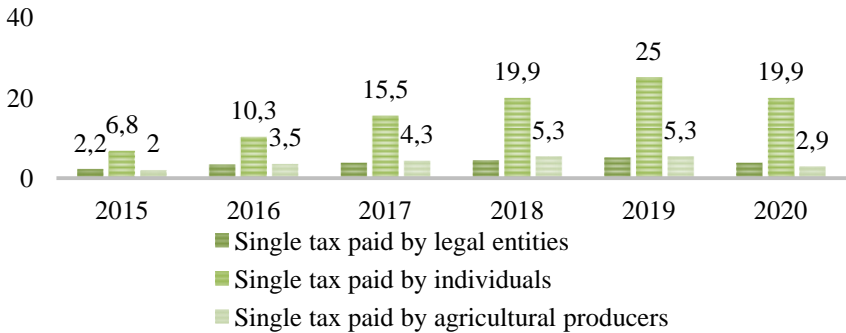


Figure 1 - Structure of revenues from the single tax in terms of its payers in Ukraine during 2015 - 2020, UAH billion
Source: [1]

According to Figure 1, the largest part of local budget revenues from the single tax is paid by individuals. The amount of these revenues during the analyzed period increased by UAH 13.1 billion or by 192%. The amounts of tax paid by legal entities and agricultural producers are almost the same and stable over the years under study. In 2020, tax revenues amounted to UAH 3.7 and 2.9 billion, respectively, compared to UAH 2.2 and 2 billion in 2015.

Forecasting tax revenues is one of the main prerequisites for the dynamic development of economies. According to the results of the forecast of future tax revenues, it is possible to establish the relationship between the projected indicators and strategic goals of each territorial unit. Therefore, in order to increase the content of the revenue side of local budgets, it is necessary to study the trends of revenues from the single tax to local budgets of Ukraine (Figure 2).

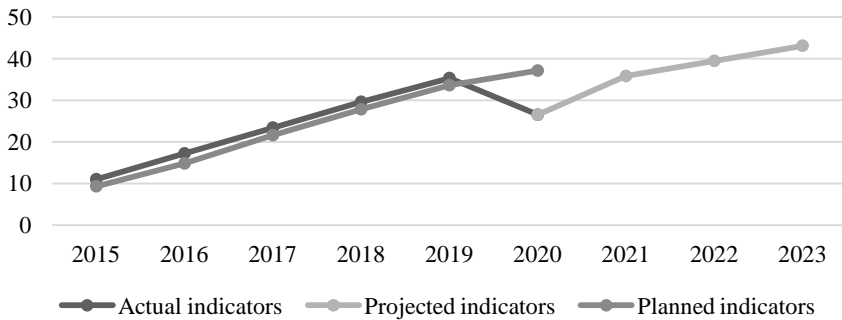


Figure 2 - Dynamics of planned, actual and projected indicators of the single tax in Ukraine during 2015-2023, UAH billion

Source: [1]

The data shown in Figure 2 confirm that the actual revenues to the local budget from the single tax exceed the planned ones. Only in 2020, due to the epidemiological situation in the country and quarantine measures, the actual amounts of the single tax received by the budget are lower than planned by UAH 10.6 billion. Analysis of forecast data, shown in the graph, allows us to establish that over the next three years, tax revenues from the single tax will increase and in 2023 will reach 43, 07 billion UAH, which as a percentage indicates an increase in income by 63% compared to 2020.

So, the single tax occupies a significant share in the structure of local taxes. The analysis allowed to establish the excess of actual tax revenues over planned to local budgets during the study period.

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SUSTAINABLE BUSINESS MODELS IN ORGANIZATIONS IN THE ENERGY SECTOR

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Nowadays, energy is an essential part of human life, be it communications, food production, household chores or heat. Moreover, it has the greatest impact on the environment. Most environmental problems result from energy production and transportation, the biggest threat being the use of traditional sources in the energy sector. Research shows that energy production emissions into the atmosphere account for 30% of particulate matter, 63% of sulfur dioxide and more than 53% of ozone oxides. All these emissions cause an increase in the concentration of carbon monoxide and thus threaten the existence of the world itself, since this leads to the “greenhouse effect”, which in turn contributes to the melting of glaciers and global warming [1]. These threats have brought about a transformation in organizations in the energy sector. Traditional models have started to convert into sustainable business models which are more environmentally friendly.

An organization`s sustainable business model is understood as the model that describes, analyzes, manages and links a company`s sustainable value proposition to stakeholders, how the organization creates and delivers that value, and how the organization gains economic value by maintaining or restoring natural, social, and economic capital within its organizational boundaries. The implementation of sustainable business models in the company brings the following benefits:

1. Saving money.
2. Lowering energy needs due to eco-building.
3. Creating new workplaces.
4. Attracting new customers.
5. Increasing productivity.
6. Decreasing costs.

7. Reducing waste [2].

Sustainable business models are represented by four major types:

1. Social enterprises (creating social business solutions).
2. Circular business models (formulating the logic of how the company creates, provides and receives value for a wide range of stakeholders, minimizing environmental and social costs).
3. Lower pyramid businesses (promising both poverty reduction and growth, profit for multinational companies).
4. Product service systems (recycling and possibly producing replacements that meet customer needs on a competitive basis and produce less environmental impact during the life cycle) [3].

Sustainable business models, like any business model, have drivers which stimulate the implementation of business models and barriers that stop this process in the organization in the energy sector. Both drivers and barriers exist at three levels listed below.

Institutional drivers, i.e. balanced emphasis on values for shareholders and stakeholders; acceptance of ambiguity; appreciation of business sustainability.

Strategic drivers, i.e. joint innovation; strategic focus on sustainable business models; patient investment.

Operational drivers, i.e. development of people's abilities; capable innovation structure; limited resources for the development of sustainable business models; sustainability incentive scheme; efficiency indicators for sustainability.

Institutional barriers, i.e. focus on maximizing shareholder value; avoiding uncertainty in the short-term perspective.

Strategic barriers, i.e. functional strategies; focus on operations; priority of short-term growth.

Operational barriers, i.e. functional excellence; standardized innovation processes and procedures; fixed planning and resource allocation; short-term incentive system; financial efficiency indicators [4].

The process of moving to sustainable business model is quite complex and is considered to be a long-term one. But it is seen as an alternative solution to avoiding global collapse due to energy shortages, climate change, biodiversity loss with alarming demographic imbalances, and radicalization of social and economic inequality.

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CYBERSECURITY SYSTEM AS A RELIABLE PROTECTION INSTRUMENT OF THE FINANCIAL SECTOR.

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L. Hnapovska – EL Adviser

One of the main factors in the development of a socio-political system is production and use of information. In modern conditions, it plays a key role in the functioning of not only public and state institutions, but the life of every person. That is why, cyber-attacks have become a serious problem in today's world. This problem is even more relevant today, after numerous cyber-attacks committed by the aggressor country against Ukrainian information systems and databases.

An attack on an information system is traditionally defined as a set of deliberate actions taken by an attacker who aims at violating one of the three properties of information - availability, integrity, or confidentiality, and cyberterrorism presents a serious threat to humanity nowadays. The current experience of the world community is insufficient to fully counter this threat and means a guaranteed vulnerability of any state. This is directly related to the fact that cyberterrorism is a transnational phenomenon, the participants of which have the opportunity to threaten information systems from anywhere in the world. After all, using the global Internet, terrorists can gather detailed information about the targets of attacks, their location and the collection of money to support terrorist acts.

In the conditions of digitalization and development of technologies, the number of cybercrimes is increasing along with the growing number of financial frauds. The level and quality of cybercrime are constantly developing, and therefore financial crime is also a type of cyber fraud. Achieving a certain level of security can be fully achieved through the interaction of such areas as the analysis of the fight against financial fraud and cybersecurity. This process is crucial in the field of finance, as it concerns both personal accounts of the citizens who are at risk of becoming victims of cybercrime, and public resources that are also under threat. The process of converging the cybersecurity system and financial crimes will ensure reliability and security in the financial sphere of the country.

To determine the relationship between the cybersecurity system and the fight against financial crime, a canonical analysis of

the indicators that characterize these two systems, respectively, was conducted. Canonical data analysis was performed using the STATISTICA program. The results of the research are provided in Fig. 1.

The left set was formed from cybersecurity indexes, and the total value of the index is 58.7705%, which indicates the extent to which the factors of counteraction to financial crimes explain the variability of the factors of the cybersecurity system. The right set was

Canonical Analysis Summary (Convergensy.sta)		
Canonical R: .96635		
Chi²(35)=297.75 p=0.0000		
N=76	Left Set	Right Set
No. of variables	5	7
Variance extracted	100.000%	85.9457%
Total redundancy	58.7705%	58.7748%
Variables:		
1	GCI	PSI
2	ICTDI	GEI
3	NRI	EDB
4	NCSI	CI
5	DDL	CPI
6		GTI
7		FCI

Figure 1 – The results of canonical analysis formed from the indices of counteraction to financial crimes, with the value of the index standing at 58.7748%. Accordingly, this figure explains the variability of factors in combating financial crime. In general, the canonical analysis shows that the system of counteracting financial crimes to some extent depends on the level of cybersecurity system development in the country.

To sum it all up, today humanity is facing the problem of the impact of technology development and digitalization of the economy on the growth of the number of cyber frauds in the field of finance around the world. The pace of technology development and the quality of cyber systems is increasing, and, of course, the number of frauds is growing in various fields, especially in the field of finance. At present, financial systems do not have sufficient cybersecurity and are vulnerable to information technology.

SECTION 3 ADVANCEMENTS IN MEDICINE

CD163 OVEREXPRESSION IN SEROUS OVARIAN CARCINOMA WITH CALCIFICATION

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CD163 is expressed by M2 macrophages in malignant neoplasms. M2 macrophages are tumor-associated macrophages of the immunosuppressive phenotype. They contribute to the progression of the tumor process. Furthermore, they are predictors of unfavorable prognosis.

Thirty samples of serous ovarian carcinoma with calcification were examined and assigned to group 1. At the same time, 30 samples without signs of calcification were assigned to group 2 and used as a control group. A histological method was performed to verify the material and form groups. An immunohistochemical method was performed using CD163 Monoclonal Antibody (clone 10D6, ThermoFisher Scientific, USA) with dilution 1:50, UltraVision Quanto Detection System HRP and the DAB Quanto Detection System (Thermo Scientific, Waltham, MA, USA) for immunostaining and visualization. Nuclei were counterstained with Mayers hematoxylin. The immunohistochemical study was evaluated by counting CD163+ M2 macrophages in 6 fields of view (1 mm^2) of each slice. Following this, statistical data processing was performed using Microsoft Excel 2016 with the AtteStat 12.0.5 add-in program. Consequently, CD163 expression in group 1 (with calcification) was higher (192.47 ± 14.80 cells per 1 mm^2) compared to group 2 (without calcification) (150.67 ± 9.56 cells per 1 mm^2 , $p < 0.05$, Student's t-test). CD163+ M2 macrophages were mostly localized in the tumor stroma, tumor cells, and around calcifications.

Thus, overexpression of CD163 is detected in serous ovarian carcinoma with calcification. The mean value of CD163 expression is 192.47 ± 14.80 cells per 1 mm^2 , which is significantly higher than the control group and is visualized around calcifications, tumor cells, and tumor stroma. It indicates the involvement of M2 macrophages in the formation of tumor calcification.

BIOMINERALIZATION OF THE MENINGIOMAS

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Meningiomas are a group of tumours of the central nervous system. Researchers describe them based on the skull, along the falx cerebri and the tentorium cerebelli and around the brain's hemispheres. These neoplasms originate from arachnoid cells and are usually attached on a broad basis to the dura mater.

Many risk factors for the development of primary central nervous system tumours have been studied. Among them, ionizing radiation and the presence of cancer in a close family member were reliable for meningiomas.

The phenomenon of pathological biomineralization is one of the features of meningiomas. At intracranial localization, calcification is observed in 20-25% of cases and 1-5% at the spinal level.

There is no unambiguous opinion about the origin and biological significance of calcification of meningiomas. Probably it is associated with dystrophic calcification in tumour cell degeneration and serves as a barrier against other tumour spread. Therefore, it is a favourable prognostic marker.

There are three types of calcification: total, lamellar and psammomatic. The latter is observed most often and is manifested by the formation of psammoma bodies. According to the World Health Organization classification, calcified (psammomatous) meningiomas are benign; their growth is usually slow and asymptomatic. And the manifestation takes place in large sizes.

Psammoma bodies can be observed during the staining of meningioma tissue with hematoxylin-eosin inside concentric structures. They are often associated with cell fragments and foci of necrosis and collagen fibres.

Obviously, despite the prevalence of meningioma calcification, there is currently no fundamental idea of the etiology and pathogenesis of this process. Studying the morphological features of meningiomas with calcification can help improve the diagnosis and treatment of central nervous system tumours.

MYOCARDIAL PERFORMANCE INDEX AS A GOOD TOOL FOR ASSESSMENT OF RIGHT AND LEFT VENTRICULAR FUNCTION IN PATIENTS WITH THYROID DISORDERS

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Cardiac dysfunction is the leading cause of morbidity and mortality all over the world. Many important studies suggest that thyroid dysfunction is one of the most common endocrinological disorders associated with clinically significant cardiovascular abnormalities.

Hypothyroidism is a commonly encountered clinical condition, which affects up to 5% of the population, another approximately 5% are undiagnosed. Hypothyroidism can be associated with decreased cardiac output and arterial compliance, increased systemic vascular resistance, and accelerated atherosclerosis and coronary artery disease.

Hyperthyroidism is the second most common thyroid dysfunction after hypothyroidism. Clinical symptoms associated with cardiovascular disorders vary between persons and can consist of sinus tachycardia, atrial arrhythmias, and atrial fibrillation. Excess thyroid hormone causes high cardiac output and left ventricular hypertrophy in the early stage. In the late stage, thyrotoxicosis causes biventricular dilatation and congestive heart failure.

Therefore, many people have both thyroid disorders and cardiovascular diseases. Physiologic alterations from both hypo- and hyperthyroidism have varied cardiovascular effects, but the treatment of such disorders may reverse some, if not all, of the effects. Thus, it is important to timely and qualitatively diagnose the root causes of cardiovascular pathologies and treat them effectively.

Echocardiography is an easy, repeatable, noninvasive, and reliable method to identify subclinical heart failure in patients with thyroid diseases. It is a good tool for studying the structure and physiological function of the heart. One of the most important application of echocardiography is an assessment of ventricular

function, particularly the systolic and diastolic functions of the left ventricle.

As thyroid disorders have a significant effect on left ventricular systolic and diastolic functions, Myocardial Performance Index (MPI/Tei index) may be useful for the prediction of cardiovascular diseases.

MPI/Tei index is a conceptually new, simple, reproducible, inexpensive, and easily performable Doppler parameter for detection of early left and right ventricular systolic and diastolic functional abnormalities. It was first used by Tei and his co-workers in 1995 to assess global cardiac dysfunction in patients with amyloidosis, dilated cardiomyopathy, ischemic heart disease, and congestive heart failure.

Myocardial Performance Index can easily be measured by Doppler traces obtained from mitral and aortic flows, which are not affected by arterial pressure, heart rate, ventricular structure, afterload, and preload. MPI is calculated by the ratio of total isovolumetric contraction time (ICT) and isovolumetric relaxation time (IRT) to ejection time.

It has been revealed that the Tei index was significantly higher in patients with thyroid disorders. It showed that these patients had a great regression in global left ventricular functions, which is a very important echocardiographic finding. Increased rates of MPI are powerful predictors of cardiovascular morbidity and mortality independently of conventional cardiovascular risk factors. That's why, echocardiography should be a part of the screening in patients with thyroid dysfunction.

The reduction of the MPI may be an early marker of improved left and right ventricular function. That's why early purposeful diagnostic, using evaluation of Tei index in patients with thyroid dysfunctions, is very important for the avoidance of cardiac complications that might affect these patients.

Obviously, my further research and studies with a higher sample size are needed to determine a more detailed relationship between the Tei Index and the long-term prognosis of cardiac risks in patients with thyroid disorders.

EATING DISORDERS

Kardashova Valeria, SumDU, group PL-11
O.R.Gladchenko, A.E.Siryk, Academic Supervisors

With the development of manufactory and food industries, eating disorders are becoming more common among people of all categories. Pleasant and affordable food has become one of the main resources of happiness and good mood.

And all would be well, if not for the modern standards of beauty that dictate people how they should look like. So let's find out what consequences of these current realities can be.

An eating disorder is a mental disease which negatively affects both mental and physical part of a person's life. It appears in abnormal eating habits. There are many types of eating disorders but some of them are more prevalent and they will be covered in this thesis. It is a binge eating disorder, anorexia nervosa, bulimia nervosa and a quite new eating problem - orthorexia. It is necessary to point out obesity that is not an eating disorder.

A binge eating disorder is characterized by eating a large amount of food in a short amount of time until a person feels uncomfortably filled with foodstuffs especially forbidden ones.

An anorexia nervosa is a type of eating disorder when a person has a strong fear of gaining weight, restricts eating and exercises too much to punish his body for eaten calories.

Bulimia nervosa is quite common with a binge eating disorder taking into consideration the fact of inducing vomiting that a person with bulimia does.

Orthorexia is another eating disorder which appeared with popularity of proper nutrition. Orthorexia is characterized by deviding food into healthy and not with the obsessive idea of eating only healthy products.

Eating disorders are a complex problem that combines both psychological and physiological factors.

Physiological factors are problems associated with poor nutrition: metabolic disorders, increased stress, exhaustion, etc.

The psychological factors include, on the one hand, difficult emotional experiences of a patient, and on the other hand, problems with socialization and behavior control.

To sum up it is important to say that eating disorders should be treated not only by changing eating habits but also with a psychic practice and sometimes with the help of medicines.

THE ROLE OF IMMUNO-ENDOCRINE INTERACTIONS IN BRONCHITIS IN SCHOOL-AGE CHILDREN AND THE POSSIBILITY OF THEIR CORRECTION

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The incidence of non-specific respiratory infections among children is high and it continues to grow. Many different factors play a role in the development of these processes according to the characteristics of a disease. The way to prevent and effectively treat a certain infectious process is by learning it and understanding the mechanism of the disease.

It is essential to identify important disorders of the immune and endocrine systems in the development of acute bronchitis among children. Moreover, it is necessary to improve the early diagnosis of development and severity of acute bronchitis on the base of the study of the activity of endogenous peptides in the serum blood of school-age children and determine the factors that affect them.

The immune system and factors of nonspecific resistance, which are often considered the complementary elements of the same functional system, play important role in the pathogenesis of any infection. Their activity normally determines anti-infective resistance, and when the person is infected by pathogenic microorganisms and they make an adequate course of the disease with the elimination of the pathogen and the formation of stable immunity. It is impossible to get a normal immune response when the immune system cannot work well. It leads to a complicated course of the disease, formation of persistence of etiological factors, and unstable immune defense which is often unable to implement the immune response to the pathogen in a proper way.

It is noticed the inhibition of the endocrine function of the thymus among sick children. Some scientists find a reduction in numbers and suppression

functional activity of T-lymphocytes, phagocytic cells, some certain disorders in the content of serum, secretory immunoglobulins, and circulating immune complexes.

It is particularly necessary to emphasize the practical importance of the issue because it is connected with the increasing effectiveness of treatment of sick children.

Taking everything into account, we can prove the relevance of the chosen topic and it determines the need for this work.

SECONDARY OSTEOPOROSIS IN PATIENTS WITH RHEUMATOID ARTHRITIS: CLINICAL AND GENETIC ASPECTS AND TREATMENT

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Rheumatoid arthritis (RA) is an autoimmune disease of unknown etiology characterized by erosive arthritis (synovitis) and a wide range of extra-articular (systemic) manifestations. The disease is quite common and occurs in an average of 1% of the population. In Ukraine in 2018, the incidence rate among the working population was 14.4 cases per 100 thousand population. According to statistics, women get sick 2-5 times more often than men.

According to the level of disability, rheumatic diseases take the 2nd place, and the costs of treatment for these patients are constantly increasing.

One of the most serious complications of RA is osteoporosis (OP), which significantly affects the course and prognosis of the disease.

OP is a common systemic metabolic disease of the skeleton, accompanied by a decrease in bone mass, violation of the microarchitectonics of bone tissue with a further increase in its fragility, and increased risk of fractures.

Bisphosphonates (BF) are most commonly used to treat patients with OP. For some patients, such treatment is ineffective due

to individual resilience. It is possible to assess the level of bone mineral density (BMD) based on the results of BF therapy not earlier than in a year. Identification of genetic factors responsible for resistance to BF treatment will allow to optimize and increase the effectiveness of treatment in advance.

One of the ways to develop a predisposition to osteoporosis is farnesyl-diphosphate synthase (FDPS) polymorphism. Nitrogen-containing diphosphates are inhibitors of the enzyme FDPS, which plays a significant role in cholesterol synthesis and provokes osteoblast apoptosis. Genetic differences in the FDPS gene cause a decrease in bone mass and a decrease in bone density. The minor allele C is associated with decreased FDPS expression. The presence of the CC genotype leads to the higher activity of osteoblasts during bone growth.

Farnesyl diphosphate synthase is a key enzyme of the mevalonic pathway, a target for bisphosphonates. In pharmacology, they are a class of drugs that prevent bone loss and are used to treat osteoporosis.

It is important to investigate the effect of farnesyl - diphosphate synthase genetic polymorphism on the clinical course of secondary osteoporosis in patients with rheumatoid arthritis in order to improve the diagnosis and treatment.

To achieve the necessary results we need to improve the forecasting of the effectiveness of the development of rational approaches to the treatment of patients with RA and a high risk of osteoporosis; assessment of signs of the systemic response to treatment tactics of patients using bisphosphonates.

MODELS AND PRINCIPLES OF MEDICAL ETHICS

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Hippocrates can be considered a founder of Medical Ethics, because he systematized the rules of Medical Ethics that existed at that time based on his experience in medicine. His works "The Oath", "On the Doctor", "On Decent Behaviour" introduce a number of moral norms that are mandatory for those who have decided to treat people.

The important thing is that Medical Ethics is an ideal that is changing. Nothing remains the same; everything tends to change. We have learned from history such models of moral medicine:

1. Hippocratic model: "Do No Harm". In his oath, Hippocrates (460-377 BC) formulated the duties of a doctor. The oath has lost its relevance, but it is a standard for writing many ethical works.
2. Paracelsus model: "Do Good". According to the Paracelsus model (1493-1541), the main meaning of "Paternalism" is the emotional contact of a doctor with a patient. The whole essence of the relationship between them is determined by the charity of the doctor.
3. Deontological model: "Fulfillment of a Debt". This model is based on the principle of performing official duties, strict compliance with a number of rules established by the medical community, society, and the doctor's own mind and will.
4. Bioethics has the following principles: "Respect for Human Rights and Dignity", "Informed Consent". Modern medicine, biology, genetics and related biomedical technologies have approached the problem of predicting and managing heredity, the problem of life and death of the body, and controlling the functions of the human body in tissues, cells, etc. There are two main elements of informed consent – providing information and getting consent. The doctor is obliged to inform the patient: about the nature and purpose of treatment, about the risk, as well as about possible alternatives to this treatment.

As a result of centuries of research and renormalization, today we have four fundamental principles of Medical Ethics that underlie the doctor's oath.

1. Autonomy. When making decisions about their treatment, the patient should have the independence of thoughts, intentions and actions. Therefore, the decision – making process should not be forced. In order for a patient to make a fully informed decision, they must understand all the risks and benefits of the procedure. The principle of autonomy also contains: confidentiality in a particular issue, respect for the culture, religion, political and other beliefs of the patient, informed consent to medical intervention and joint planning, as well as the implementation of the care plan.

2. Justice. The principle is that the burden and benefits of new or experimental treatments should be shared equally among all groups of society. It also implies equal treatment of medical professionals and equal care for all patients, regardless of age, gender, status, profession or any other external signs. One of the main aspects is that no matter what kind of care a healthcare professional provides to a patient, these actions should not have a negative effect. When faced with a conflict situation between a patient, their relatives or another medical professional, based on this principle, we must stand on the side of the patient.

3. Mercy. It involves creating the necessary conditions and attitudes towards the patient that do not harm him. Mercy is also manifested in a sensitive and attentive attitude to the patient, paying special attention to the choice of treatment method, the severity of the patient's condition, his/her readiness and ability to cope with the proposed methods of medical intervention. Therefore, it should be remembered that any actions of a medical professional should be aimed only at the benefit of the patient, as well as at the constant development and support of already acquired skills, taking into account the individual characteristics of all patients.

4. The principle of completeness of medical care explains exactly how to use the entire available arsenal of medical care to provide it to patients. It should be professional and high-quality in matters of diagnosis and care, as well as contain palliative care. This principle requires absolute compliance with health-related legislation, as well as all provisions of the code of ethics. It is important that medical manipulation does not harm the patient or other people.

EXPEDIENCY AND HARMFULNESS OF BIOLOGICALLY ACTIVE ADDITIVES

Olkhovik Anna – Sumy State University, group I-11/2пк
Kurochkina V.S. – Academic Supervisor

I would like to give you a short presentation about the expediency and harmfulness of biologically active additives. Let us find out what dietary supplements are. Biologically active additives, or nutritional supplements, are popular treatments, mostly self-medication, that are not formally drugs and whose use has become prevalent in the world. Food, its component, nutrient, or compound that needs to be consumed with food for a particular health benefit can be sold as a dietary supplement. For example, it can be multivitamins with minerals, echinacea extract, omega three, or immunomodulators.

Now I want to talk about their types. There are three groups of dietary supplements: nutraceuticals, para pharmaceuticals, and eubiotics. In turn, nutraceuticals by purpose are divided into:

- nutraceuticals for functional nutrition (individual, medical);
- nutraceuticals used to supplement the deficiency of essential nutrients;
- nutraceuticals, whose action aims at changing the metabolism associated with the excretion of xenobiotics.

Let's move on to para pharmaceuticals. They are dietary supplements used to regulate within the physiological limits of the functional activity of organs and systems. And they are:

- of vegetable origin;
- of animal origin;
- beekeeping;
- synthetic.

I also want to say about eubiotics. These are bacterial drugs that regulate the intestine, vagina, and oral cavity microflora. They are produced in special productions of the microbiological industry. Here they are.

Now let's move on to the feasibility and harmfulness of dietary supplements.

Although dietary supplements are top-rated in countries such as the United States, Japan, Germany, Ukraine, and others, there is limited scientific evidence for their health benefits. Any clinical studies have not even confirmed the effectiveness of most supplements, and there is even evidence of their harm.

For example, the same vitamins, which contain many different components, do not mean that they improve our health. Such vitamins are not recommended.

I want to quote the former Minister of Health, Dr. Ulyana Suprun. She said: "If you are taking supplements (hopefully only after a doctor's recommendation), it is critical to follow the dosages and not take them randomly. After all, some studies confirm the harm of supplements in overdoses."

In conclusion, I would like to say that despite the advice of friends or acquaintances, do not take organic supplements without your doctor's advice because it can be very harmful to your body.

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MOCK-UP IS A GUIDANCE FOR MINIMAL INVASIVE PREPARATION IN INDIRECT RESTORATION

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S. Zolotova – E L Adviser

With the implementation of minimal invasive preparation, a question arises to improve the precision of grinding down the edges of tooth tissues to tens of a millimeter which will enable us to get uniform thickness, color, and durability of the construction. The search for new preparation methods remains relevant as well as a comparison of the existing methods of ultra-thin construction preparation and methods of their control. Mock-ups can be used not only as aesthetic forecasts but also as preparation guidance. It is essential to improve the accuracy of minimal invasive preparation for indirect dental restoration by using a mock-up and a silicone key.

The necessary step is to measure the thickness of indirect restoration (classic veneers, 360° veneers, crowns) by using different preparation methods. The restorations were divided into two groups of 10 each. The first group – ceramic crowns and veneers made by classic preparation, and the second one – indirect preparations made by controlled minimal invasive preparation using a mock-up and a silicone key.

It was proved that the thickness of constructions made by classic preparation is different in the average of 0,85 mm at various points of measurement. Thus, such constructions do not meet the aesthetic requirements, they are counter-indicated for tooth discoloration, less durable, and have lower internal stress. It has been also established that the restoration using a mock-up and a silicone key is extremely precise. The average difference in the construction thickness is 0,01 mm.

It was proved that the classic invasive preparation made without mock-up control and silicone key does not ensure a sustainable result for producing up-to-date constructions. The mock-up usage minimizes the chance of inaccuracy and is recommended for producing up-to-date constructions.

CARIES IN CHILDREN AND ADULTS AND THE WAYS OF ITS PREVENTION

Anastasia Tkachenko, student; SumDU, gr. SM-905
O.R.Gladchenko, Academic Supervisor

Tooth enamel lesions are diagnosed not only in adults but also in children. The two main reasons for its appearance are bacteria such as *Streptococcus mutans*, as well as weak, sharpened enamel. By the way, caries is also found in 1 year old children. It would seem that newborns eat only healthy food and do not eat sweets, so the disease could not appear. However, this is not the case, the so called "bottle" caries can develop. Its appearance is the fault of parents who systematically feed babies through the nipple and lick the nipple, eat from baby utensils, kiss their baby hard on the lips.

Other causes of caries on baby teeth are: poor oral care, abuse of sweets, the lack of solid healthy food in the diet, the lack of calcium and fluoride, poor sanitation and poor care of personal belongings and cutlery. All these reasons can lead to the irreversible tooth loss if you do not solve the problem in time.

Caries of temporary teeth is treated differently. It all depends on the stage of the disease.

The initial caries is manifested in the form of a white spot on the teeth. All that is needed to cure this type of caries is the remineralization of the enamel. A doctor cleans the tooth from plaque and makes an application with a remineralizing agent.

Medium caries already affects dentin. The dentist separates the affected tissues from the healthy ones and puts a filling in the place of the carious cavity.

Deep caries gets to the pulp. In this case, in addition to filling the carious cavity, cleaning and sealing of the canals may be required.

To protect teeth from caries, there are the following methods of modern prevention:

1) Cabinet cleaning. The hygienist removes stones and plaque in hard-to-reach places. Cleaning will destroy the "abode" of bacteria and prevent them from multiplying.

2) Sealing of fissures. Fissures are depressions that are present in almost every molar. The method involves sealing them with a special sealant. This prevents plaque from accumulating in the recesses, and therefore prevents the reproduction of *Streptococcus mutans*.

3) Fluoridation. Coating teeth with fluoride varnish to strengthen enamel. The substance fills microcracks, making the enamel stronger and more resistant to destruction.

Caries is a serious disease, but it is better to prevent it than to treat it.

FEATURES OF DIAGNOSIS OF RESPIRATORY LESIONS IN HIV-INFECTED PEOPLE

S. Yanchuk – Sumy State University, Ph.D. student, group 5
S. Zolotova – E L Adviser

Diagnostic lesions of the respiratory system are part of a comprehensive medical examination of patients with HIV-positive status and are carried out at all stages of specialized care, which corresponds to the capabilities and profile of various medical institutions.

Opportunistic infections affecting the respiratory system include pneumocystis pneumonia; pulmonary tuberculosis; bacterial pneumonia (streptococcal, staphylococcal, pseudomonad, caused by *Haemophilus influenza*, legionellosis, chlamydia, mycoplasma etiology).

Thus, the most common lesions of the respiratory system are pulmonary tuberculosis (TB), which can often be detected before HIV-positive status is determined and is a condition for mandatory (with patient consent and prior pre-test counseling) HIV testing. - infections. Conversely, if a patient is diagnosed with HIV, he or she must be tested for TB.

To diagnose latent tuberculosis infection they use tuberculin skin test ("+" is the size of the papule ≥ 5 mm through 48-72 hours); quantiferon test (detection of in vitro production of gamma-interferon sensitized T-lymphocytes of the patient stimulated in vitro specific proteins M. tbs). To diagnose pulmonary TB they use: a

general blood test – if the results show a decrease in CD4 to 200 cells/mkl and less there can be anemia (less than $3 \cdot 10^{12}/l$), leukopenia (less than 4000 cells/mkl), thrombocytopenia and lymphopenia (below 1000 cells/mkl). An increase in ESR (more than 40 mm /h) is possible. In this case there is hypo- and hyperglycemia. Biochemical analysis of blood indicates an increase in total bilirubin, increase in liver enzymes, increase in total protein, and development of protein imbalance. These changes are not specific to this infection and can occur in many other conditions, so patients should be further examined.

The specific diagnosis of pulmonary TB in HIV-infected people includes Xpert MTB/RIF method (initial study); the technology of nucleic acid amplification (for rapid diagnosis of TB, determination of drug resistance to drugs). LF-LAM method is used as an adjunct in the diagnosis of active tuberculosis in hospitalized adult PLHIV (people living with HIV) with signs and symptoms of TB.

Among the instrumental methods, the most common are computed tomography (scattered eclipses of the "frosted glass" type) and radiography of the lungs (infiltrates in the lower and middle lobes are often observed, interstitial infiltration and miliary infiltrates, cavernous formation is rare).

To diagnose bacterial pneumonia (BP) it is essential to prescribe: a general blood test: leukocytosis or normocytosis, elevated ESR; general analysis of urine: traces of protein, increased number of leukocytes, erythrocytes, increase in the proportion of urine; biochemical analysis of blood: the presence of C-reactive protein, increased levels of sialic acid, hypergammaglobulinemia; microbiological examination of sputum or bronchial lavage water, aspiration masses to verify the pathogen; determination of the sensitivity of isolated pathogens to antimicrobial drugs. These changes that occur in the presence of an infectious process in the body of a patient need to be interpreted by a doctor, after a preliminary appointment of research and determine the further tactics for the patient.

GENETIC CARDIOLOGY OF METHYLENETETRAHYDROFOLATE REDUCTASE GENE MUTATIONS

A.A. Yarkova – Sumy State University, group 7
N.V. Maliovana – E L Adviser

Cardiovascular diseases are the most common causes of premature mortality in patients. Most of these patients do not have a long medical history that is why screening for heart disease is an important goal.

Rapid progress in the diagnosis and treatment of cardiovascular disease, is based on the personalized approach to the certain clinical case. In recent years, a new field of medicine has appeared: genetic cardiology, which integrates the concepts and technologies of molecular genetics to understand the etiology and pathogenesis of clinical polymorphisms. Potential genes as triggers of cardiovascular disease, particularly arterial hypertension are ULK4, SH2B3, CSK, ATP2B1, PRMMD8/FGF5, MTHFR.

Comprehensive genetic testing can identify predisposition to cardiovascular failure and assess the overall risk of cardiovascular disease related to oxidative stress. One of the current issues of research of modern medicine is to elucidate the molecular and genetic basis of methylenetetrahydrofolate reductase (MTHFR) mutation and the role of this gene in the occurrence of cardiac pathology.

There are two dominant MTHFR polymorphisms: 677C> T and 1298A> C. As the researches show in the general population, 60-70% of people have at least one of these variants, 8.5% of cases are homozygous for 677C> T or 1298A> C, and 2.25% are combined heterozygotes.

Methylenetetrahydrofolate reductase is involved in folic acid metabolism and affects plasma homocysteine levels. The C677T polymorphism of the MTHFR gene leads to a decrease in the functional activity of the enzyme.

Moderate hyperhomocysteinemia - induced low folate status is the independent risk factor for diseases. Excessive intracellular accumulation of homocysteine leads to damage of its genetic material and function. If the concentration of homocysteine

increases by 5 $\mu\text{mol/L}$, the risk of coronary disease will increase by 40%.

Mutations in genes MTHFR 677 C>T, MTR 1298 A>G, MTRR 66 A>G, are the trigger mechanism of decreased intensity of catalytic activity of folate exchange, which leads to accumulation of homocysteine. Direct cytotoxic effect of homocysteine activates hemocoagulation processes, platelet aggregation activity, enhances mitotic processes of joint smoothing elements, inhibits metabolic processes of cholesterol metabolism, which in turn leads to the accumulation of lipids in the whole cell, the growth of atherosclerotic processes, which contributes to further destruction of the endothelium of the arterial vessel wall.

Homocysteine in high concentrations competes with SAM for binding sites on DNA methyltransferases and can cause passive disruption of methylation in DNA replication. It has been established that patients with homocysteine level $> 15,3 \mu\text{mol/l}$ have a 1.7 times higher risk of death from all cardiovascular causes, 3.4 times higher risk of myocardial infarction, 4.3 times higher risk of stroke than in patients whose homocysteine level is not more than $10.5 \mu\text{mol/l}$. The main pathogenetic mechanisms of diseases are associated with toxic, inflammatory, atherothrombotic and neuropathic changes in hyperhomocysteinemia.

It should be noted that many populations exhibit a significant degree of genetic heterogeneity, which makes it difficult to genetic analysis, therefore. The study of hereditary diseases requires extensive epidemiological studies that must include large samples of individuals

Modern genetic technologies have given a new impetus to solving the problems of treating diseases of multifactorial nature. The genetic approach allows us to get closer to the biological essence of diseases, and the obtained data serve as the basis for early diagnosis, the choice of adequate treatment and prevention of cardiovascular diseases.

Despite significant efforts to decipher the genetic basis of diseases, further research is needed to establish a more detailed link between genetic influences and an increased risk of complications.

SECTION 4 SOCIAL, PEDAGOGICAL AND LINGUISTIC SCIENCES

BEST KNOWN HARRY PORTER'S QUOTES

A.Aleksenko-Sumy State University, group IT-81

A.M.Diadechko – Academic Supervisor

The Harry Potter series played a decisive role in shaping the characters of the children who became adults along with the heroes of J.K. Rowling. In the era of the development of the Internet and the surge of computer games, suddenly the children returned to reading. Those who have read books or watched films about Harry Potter are more open, empathetic people, they are less prone to prejudice against any minorities - at least, to such conclusions came the researchers in 2014. This book has given us countless incredible moments, and many of these come with quotes that we carry with us in our everyday lives.

“Differences of habit and language are nothing at all if our aims are identical and our hearts are open,” says Dumbledore to student in the Great Hall. These words teach us to accept differences of others. It is essential skill nowadays.

“Family...Whatever yeh say, blood’s important.” said Hagrid. It should be remembered throughout the day because it shows family importance.

“The ones who love us never really leave us, you can always find them in here.” was one of the most heartbreaking quotes. Every Potterhead knows it, and for many people these words helped to accept and deal with the loss of their loved ones.

“Do not pity the dead, Harry. Pity the living, and, above all those who live without love,” Dumbledore says on death and love to Harry. Everyone who read the books or watched the films surely knows this quote. It was iconic because these words Dumbledore said after his own death.

The next quote is well known to everybody. It is Severus Snape's redeeming quote. Though many thought Snape was the

enemy for the majority of the series, in *The Deathly Hallows* we learned that he had been helping Harry all along. As he had "always" loved the boy's mother, Lily. That one word turned him into a hero, and is the quote that is most known amongst Potterheads.

Harry Potter books are filled with a spirit of friendship and adventures. "It takes a great deal of bravery to stand up to our enemies, but just as much to stand up to our friends." Said Albus Dumbledore to Neville Longbottom. And I think everybody felt proud at that moment. "We are only as strong as we are united, as weak as we are divided." is well known quote. It shows us the power of being a team no matter what. "We're with you whatever happens." says Ron, the best friend of Harry. All these quotes render the real spirit of friendship.

Many lives have been touched by Rowling's world, and she has taught her readers so much. The books are rich in lessons and values that help their readers to build the strong personality.

"Happiness can be found, even in the darkest of times, if one only remembers to turn on the light." said the Headmaster of Hogwarts, Albus Dumbledore to give hope to his students when the school was surrounded by dementors.

"I am what I am, and I'm not ashamed" makes us feel worthy and teaches not to pretend to be someone else.

The next quote "It is our choices, Harry, that show what we truly are, far more than our abilities." is possibly the most important piece of advice J.K. Rowling has ever given to us. Your life is not defined by your pre-existing abilities, your looks, or your surroundings. You have the power to choose the person you want to become.

One of the most memorable quotes is from the first film is really meaningful and essential for every person: "I hope you're pleased with yourselves. We could all have been killed—or worse, expelled. Now if you don't mind, I'm going to bed." said Hermione to Harry and Ron after they broke a few school rules.

And as a Ron said after Hermione speech "She really needs to sort out her priorities."

Professor McGonagall said "Ah, of course. There is no need to say any more, Miss Granger. Tell me, which of you will be dying this year?" this quote perfectly describes the friendship between Harry, Ron and Hermione and reflects the whole spirit of the books.

And the last one quote "All was well." can be easily recognized by Potterheads as it is the very last sentence written in the seventh and final book, Harry Potter and the Deathly Hallows.

MAKING THE BEST USE OF FEEDBACK ON ASSIGNMENTS

T. Baraniuk– Sumy State University, group P – 01
A.A. Khodtseva – E L Adviser

Research evidence makes it clear that the way feedback is provided and the way it is used by students makes more difference to student performance than how well the teaching is conducted. This abstract aims to shed the light on what feedback is, and to share student' perceptions of this process.

Students often think of feedback as what teachers have written on their assignments, or even more narrowly, what mark they have got. However, feedback is a great deal more than that. Here are some examples. In a lesson another student may ask a question that you might have asked yourself, and what the teacher says in response is feedback to you as well as to the person who asked the question. The discussion with fellow students can help you to recognise where your own ideas are correct, or have been developed logically with support from the literature and from evidence, and where you are confused, ignorant or plain wrong. This is all feedback. When you are reading you will have thoughts about the subject matter that the author may then deal with in the next section or unit. The authors' text is then feedback on your thinking.

It is all potentially valuable to try and recognise feedback whenever you encounter it. However, not all feedback is accurate or relevant or correct or useful. You have to think about it and evaluate it and decide what you can make use of and what to discard.

Students' role in the feedback process is very important. Teachers cannot beam knowledge into students' heads through lecturing to them – students have to do the necessary studying for themselves if they are to acquire knowledge or skills. Teaching, and the notes students make during classes, are simply useful aids to the process of private studying. Similarly, teachers cannot beam feedback on a student's assignment into the student's head, or correct their misconceptions, or change the way students tackle their next assignment. Only students can do that, for themselves, making use of the feedback that is available to them. Without students' active engagement with feedback, nothing happens, and teachers' efforts in providing feedback are wasted. Whatever feedback students get, whether brief or comprehensive, written or oral, students have to make the best use of it they can. Very little is learnt by glancing at the mark on the last page of an assignment.

Thus, feedback is a central component of all language learning.

LEARNING ENGLISH WHILE PLAYING COMPUTER GAMES

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A. M. Diadechko – Academic Supervisor

English learning games and even video games can help students learn and master English faster and improve overall comprehension. Research studies have concluded that video games enhance traditional learning methods and make mastering a new language like English fun and exciting. Without the firm foundation in grammar and vocabulary provided by conventional learning programs, however, students will not be able to learn

English with games alone. But when the solid educational foundation got at the English class is combined with the benefits of English learning games, students learn faster and retain more than with traditional learning alone. According to a recent survey, more than 78% of teachers noted that learning games, even video games, were effective in helping struggling students compensate for learning gaps in their traditional studies. So how do English learning games, or even video games, help students improve their linguistic skills and cognitive development? The key is practice, practice, and more practice!

Learning games and video games naturally require the integration of several linguistic skills including reading, listening, speaking, and even writing in some games. And by removing the fear of making mistakes so common in students in traditional classroom settings, students are free to practice the language and further develop their linguistic and cognitive abilities in the process.

It is no wonder reading quickly and accurately in another language is challenging - around 10% of people struggle to learn reading skills in their first language. A team of researchers from the University of Padua were inspired by this fact to see whether video games could help children who have difficulty reading. The findings were fascinating: nine sessions of playing video games for 80 minutes a day improved the children's reading ability more than a year of traditional learning methods. Of course, video games have to contain enough text to make them worth playing. But if you choose the right kind of game, imagine how quickly your reading skills could improve.

You never develop one language skill in isolation. Becoming a better reader makes you a better writer because you develop an instinct for what looks right; becoming a better listener makes you a better speaker because you hear natural pronunciation. Both reading and listening to English can expand your vocabulary and grammar. If you need to turn on the subtitles, do not feel embarrassed - many native speakers do the same so they don't miss any essential information, and reading while listening will help you absorb more language.

Any person is listening to the other person and thinking about how to express what he or she wants to say. People do this naturally in their first language. Understandably, it is more difficult in a second language because you need to work harder to think of the words you need. A research team at California State University studied whether action video games can improve multi-tasking. They found that 5 hours of gaming a week for 10 weeks increased people's ability to concentrate on more things at the same time. This comes as no surprise, because video games involve a lot of concentration – that is why you can play them for hours and feel like you have been playing for 20 minutes. So, play video games and you will get better at concentrating on more than one thing. This means you will get better at communicating spontaneously.

The days of text-based video games are behind us. Games nowadays are often voiced by talented actors with a variety of accents, so playing games exposes you to a lot of natural English. The best way to practice listening is to listen to something you find interesting, so find a game that you like and your listening skills will improve at a remarkable rate.

Homework, quizzes, tests, and even in-class assignments can cause a great deal of stress and anxiety in students, particularly those who may be struggling to keep up. This stress and anxiety can actually derail a student's progress and cause them to feel isolated from their more successful peers. But video games and even most learning games are the great equalizer because they help alleviate stress, increase social engagement, and even help students have fun while learning English or any new language.

In fact, research recently published in “The Washington Post” shows a wide range of health benefits from video games and learning games including the fact that they:

- help reduce or alleviate Symptoms of Depression;
- help reduce or alleviate Symptoms of Insomnia;
- help alleviate Transitory Stress Symptoms.

THE IMAGE OF WOMEN IN MEDIA

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Gladchenko O.R., Siryk A.E., Academic Supervisors

A woman in the media space is a thin and objectively beautiful person: she thoroughly takes care of herself, manages to do all the household chores, she has a happy family, she is a model wife and mother.

Most women represented in advertising fit conditionally unattainable standards of beauty. This is based on the fact that women in the advertising industry are presented from the point of view of men, within a framework dictated by heteronormativity and a sexist world view.

In the advertisement shot by «male gaze», there is a sexualization and objectification of the female body and the theme arises on traditionally male interests.

Advertising promotes the idea of forced beauty for all women imposing all the subtleties of appearance on them.

In the media, the image of a beautiful woman is always used to attract and retain the attention of her audience so a woman's assessment is primarily based on aesthetic criteria.

Beauty industry brands offer women endless remedies to combat "ailments", which strengthens the dogma claiming that physiological phenomena such as stretch marks and wrinkles are not the norm and females need to get rid of them as soon as possible.

That's the reason why women have adaptive preferences, the needs that they must constantly adjust in a patriarchal society. Without fulfilling these obligations it will be extremely difficult for a woman to adapt in society, since otherwise she will face condemnation and discrimination. Adaptive preferences include expensive surgical procedures and beauty practices.

This phenomenon can be eradicated globally with the help of public critics of advertising that negatively affects women. All sorts of events when a woman suffers from the influence of a

particular media phenomenon, the types of assistance to victims, depending on the situation should also receive wide media coverage.

Normalization, public demonstration, and taboo phenomena are very important. The goal of normalization is not to change the layout of reality, but to transform its perception and our attitude to it. That is, in this case, you need to give people the necessary information, supporting it with facts and presenting it peacefully.

It should be noted that women who are acutely susceptible to this phenomenon are often characterized by cognitive distortions called the «should/must» concept and the illusion of truth.

In this case, it is important to teach a woman to distinguish her desires to act for the well-being and for the sake of public acceptance. Women are driven by a subconscious fear of being wrong, which is most often formulated as "I'm doing this for myself."

It's also important to teach a woman to keep track of what she likes and dislikes, when she feels comfortable and when she doesn't. That seems significant to teach a woman to understand and form her own opinion. She should first listen to someone else's point of view, not taking it as fundamental and at last make her own decision.

If a woman is prone to the «should/must» concept, it is important to help her understand that it is substantial to consciously replace the concept of debt with the concept of desire in her beliefs. When a woman "wants" something so much, it will be easier for her to understand whether she really needs it.

In conclusion it must be noted that a sense of duty does not make people happy, and women in our time are still very susceptible to it because of generally accepted requirements.

SOME INTERESTING FACTS ABOUT HARRY POTTER

S.Dolhov-Hordiichuk-Sumy State University, group EPm-01
A.M.Diadechko - Academic Supervisor

Have you ever noticed that the Harry Potter books are full of mysteries and mysterious hints? All of them probably only Mrs. Rowling knows about. However, not only in the Harry Potter books you can find a lot of secret messages: in the movies there are also hidden interesting details that we may not have noticed or not known.

J.K.Rowling and Harry Pooter share a birthday. They both blow out candles on July 31.

J.K.Rowling' education came in handy for writing the Harry Porter books. At university, she minored in Classics, and she put that education to good use, peppering the books with Latin. The idea that wizards would still be using Latin as a living language amused her although she took great liberties with the language for spells. Thus Hogwarts's motto is *Draco Dormiens Numquam Titillandus*—"Never Tickle a Sleeping Dragon."

Harry's eyes are not green in the movies. In the books, Harry's eyes are described as "bright green"—but Radcliffe's are blue. When Sorcerer's Stone was in pre-production, they called Rowling and told they had tried green contacts; they could also be trying making Radcliffe's eyes green in post-production. How important was it, the wondered? Rowling said that the only thing that was really critical was that Harry's eyes looked like his mother's eyes, so whoever played Lily Potter would need to have some resemblance to Radcliffe. This was a relief for Radcliffe, who had an extremely adverse reaction to the contacts.

The Hogwarts distributing hat usually "thinks" for less than five minutes. The writer explained that Hermione Granger, Neville Long Pops, and Harry Potter sat under the hat longer than other students. But when young Professor Minerva McGonagall and Peter Pettigrew, an accomplice of the Dark Lord, underwent the "initiation," there was a so-called "hat stalls"-the hat thought for more than five minutes. It could not decide whether to send McGonagall to Ravenclaw or Gryffindor, while Pettigrew had the

choice between Gryffindor and Slytherin. So there were only two "hat spots" to choose from.

In the *Philosopher's Stone*, Harry becomes the world's first freshman to be hired as a catcher on the Quidditch team. After this news, his friends show him stands with the names of the best catchers in Hogwarts history. Next to the name of Harry's father, James Potter, one notices the name of Minerva McGonagall, the school's vice principal and transfiguration teacher. She did play on the school's Quidditch team and was quite successful at it, but she was injured in the game against Slytherin.

Rowling's mother, who had multiple sclerosis, died in 1990, after which Rowling suffered a period of depression. She would use the experience to characterize Harry Potter's dementors, creepy creatures that feed on human emotion. She said that she knew sadness. Sadness is to cry and to feel. But it is that cold absence of feeling—that really hollowed-out feeling.

Crybaby Myrtle has a full name. The famous toilet-dwelling ghost was so named because she constantly lamented her unhappy fate. The girl was killed by a basilisk released by Tom Riddle with one look. The author of the novel revealed the secret that the heroine's name is actually Myrtle Elizabeth Warren. She has nothing to do with the American politician Elizabeth Warren! Elizabeth is one of the common classic British names.

In a battle between good and evil this epic, not everyone would make it through alive. This is not to say that Rowling knew exactly who was on the chopping block. She thought about killing Arthur Weasley after he was attacked by Nagini in *Order of the Phoenix*, but instead opted to save him, partly because there were very few good fathers in the book. She also seriously considered killing Ron, then thought better of it. Instead, Lupin—a character she had no intention of killing when she began the books—and Tonks died during the final Battle of Hogwarts. Rowling explained that she wanted there to echo what happened to Harry just to show the absolute evil of what Voldemort's doing.

LEXICAL FEATURES OF LIVERPOOL DIALECT

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N.V. Tatsenko – DSc, Professor

It should be noted that a dialect is a variety of a national language, defined by a limited number of people connected by a territorial (territorial dialect), social (social dialect), and professional (professional dialect) community. Besides, a dialect is also a unique language used by a specific group of people, living in the same territory or belonging to the same social status and profession.

Liverpool dialect (Scouse) is a dialect of English spoken in the metropolitan county of Merseyside. The dialect is mostly associated with Liverpool, the largest city in the county. Of particular interest are the lexical features of Scouse. Three episodes of the first season of the British television series *Bread* (BBC) served as empirical material for this research. The analyzed series was filmed in Liverpool (1986-1991). The following are the results of the lexical analysis of these series:

1. The noun *gob* usually replaces the noun *mouth*, for example: 1) *Just put the money and shut your **gob**!* 2) *We thank thee, oh God, for giving me the will to cook the food and for giving us all a **gob** to eat it.* Based on the examples given we can conclude that the word *gob* replaces *mouth* in almost all cases, regardless of the situation. Exceptions are only some set phrases, for example: *Wash your mouth out, my girl!*

2. Greeting *Hello, love*, or saying *yes, love* is very common among Scouse speakers. It does not matter whom the person greets or addresses. It could be either a family member (friend) or a stranger. For example: 1) ***Hello, love**, yes, he is coming now* (an appeal to grandfather); 2) ***Yes, love*** (an appeal from an employee of the Ministry of Health and social security in Liverpool to the visitor); 3) *Don't upset yourself, **love*** (a conversation between two unfamiliar people).

It is also worth noting here that instead of *love* in greetings or addresses, the noun *sweetheart* can be used, which is translated in Ukrainian as *dear, beloved*. It also does not matter whom the

person is addressing: 1) *Did you get the job? – tell me where, sweetheart, tell me where* (a conversation with an employee of the Ministry of Health and Welfare); 2) *It's me, sweetheart* (an appeal to a stranger).

3. The word *ta* is often used instead of *thanks* in informal conversations between friends, and family members: 1) – *Breakfast, granddad! – Ta!* 2) – *Cup of tea, dad? – Ta!* It is important to note that *thanks* or *thank you* are used in more formal conversations with strangers, for example: 1) *Thank you, Mr. Boswell thank you!* (a conversation with an animal shelter worker); 2) *Well, thank you, my baby!* (a conversation with the priest).

4. The noun *lad* is used instead of the usual *boy* or *son*, for example: 1) *He is a growing lad;* 2) *These mums and their lads, eh?* In this case, the noun *fella* is used instead of *man* or *boy*: 1) *If we saw this fella, we would chase him;* 2) *You bought a bike at this fella!*

Therefore, the abovementioned lexical features of the Liverpool dialect reflect the lexical diversity of Scouse. Some dialectics determine the mentality of the inhabitants of Liverpool, in particular, greetings and addresses. In general, these features do not create special difficulties in the speech perception and translation of a native speaker of the Liverpool dialect. Thus, based on the lexical examples, we can conclude that over the past twenty or thirty years, the Scouse vocabulary has been significantly enriched. Many new words and expressions have appeared. Some words and phrases, on the contrary, practically came out of use. However, there are certain similarities with the Liverpool dialect. Undoubtedly, the Liverpool dialect continues to rapidly develop and flourish.

In conclusion, it is also worth noting that the Liverpool dialect (Scouse) is unique, unusual, and extremely interesting to learn. Its lexical features reflect the culture and mentality of the Scouse carriers – the inhabitants of Liverpool and the surrounding area. Undoubtedly, it is necessary to study regional dialects to have a complete understanding of the versatility and richness of the English language.

WHY LEARN A FOREIGN LANGUAGE?

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A.A. Khodtseva – E L Adviser

Knowledge of foreign languages is the key to success in today's world, where communication in foreign languages and the processing of vast amount of information is becoming increasingly important. Learning languages can benefit you in many ways. One of the most rewarding aspects of the human experience is our ability to connect with others. It can also advance your career, feed your brain, deepen your connection to other cultures, boost your confidence.

Moreover, recent research conducted at the University of London showed that learners of foreign languages are more flexible and creative thinkers. British scientists have confirmed a direct link between the activity of gray matter and acquisition of several languages. No wonder the wise old sayings say: "*How many languages you know, so many times you are a man*", "*He who knows languages, owns the world*". The study of foreign languages teaches and encourages respect for other peoples: it fosters an understanding of the interrelation of language and human nature. Foreign languages expand your view of the world, liberalize your experiences, and make you more flexible and tolerant.

English is now the most important and widespread language in the world. It is the official language in five countries: Great Britain, Canada, USA, Australia and New Zealand. English is one of the six official and working languages of the United Nations. It is the second working language in the European Community. In many Asian and African countries, such as India or Egypt, people in the former British colonies speak English in addition to their native language. People also speak English in Europe. English is spoken almost all over the world. It is the official language of international business and trade, the Internet and technology, science and art.

As for me, I study English to communicate with others. I like to meet new people, share my knowledge and obtain new information from others. I like to discuss different issues and just socialize with interesting people.

English is a wonderful language. It is the language of great literature, the language of William Shakespeare, Jonathan Swift, Walter Scott, Charles Dickens.

The great German poet Wolfgang Goethe once said: "He who does not know a foreign language does not know his own." That is why, in order to better understand yourself and the world around you, you need to learn foreign languages.

STIGMA AND ABLEISM: ACTUAL DIFFERENCE IN TERMS

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The topic of inclusion in modern society is gaining more popularity. Correct perception of people with disabilities involves the fixation on inclusive and sensitive language, as human's perception often starts namely from the way we speak.

The study of inclusion, sensitive and offensive language, hate speech is in the scope of modern sociolinguistics. The brief inspection of the related theoretic material have revealed the fundamental problem in defining some terms concerning inclusion, sensitive language, and hate speech. The purpose of the study is to define the terms "ableism" and "stigma".

The analysis of lexicographic resources have shown that the term "ableism" (originated from *able (adj.)* + *-ism*) is defined as unfair treatment of people because they have a disability (= an illness, injury, or condition that makes it difficult for them to do things that other people do) [1]. Another dictionary provides with the definition "unfair treatment of or negative attitudes towards disabled people" [2]. Verbal ableism includes using such words as "*bipolar, OCD, lame, retarded*". This reasearch develops the theory that lexemes "*bipolar, OCD, lame, retarded*" could be

named as “ableisms” in a linguistic meaning – nominations of disabilities, used in negative sense and having a deprecating meaning.

Previous studies have indicated that verbal ableism is often misused with another term “stigma”. The lexicographic investigation has shown that “stigma” is defined as a strong feeling of disapproval that most people in a society have about something, especially when this is unfair” [3]. Further research has revealed that in modern academia “stigma” is defined as describing mental health conditions, addictions, and people affected by them, for example, “*addict, drug abuser, alcoholic*” [4].

Studying the definitions of both terms gave the possibility to point out, that “stigma” has common and linguistic meanings broader than “ableism” lexemes, as the latter considers only a part of social deviations, met in the society. It could also be concluded, that “ableism” might be viewed as a partial synonym to “stigma”, but not its full substitute. Further study may lead to more profound research of the linguistic nature of “ableism language” and “stigmas” in the sociolinguistic scope.

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ORIGIN OF SURNAMES

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Names are the badge of individuality. After a person receives a name by which he can be identified, he enters upon a truly subjective existence.

The sources from which names are derived are almost endless: nicknames, physical attributes, counties, trades, heraldic charges, and almost every object known to mankind. Before the Norman Conquest of Britain, people did not have hereditary surnames: they were known just by a personal name or nickname. When communities were small, each person was identifiable by a single name, but as the population increased, it gradually became necessary to identify people further.

After the Norman conquest in 1066, the Norman barons introduced surnames into England, and the practice gradually spread. Initially, the identifying names were changed or dropped at will, but eventually they began to stick and to get passed on. So trades, nicknames, places of origin, and fathers' names became fixed surnames. New surnames continued to be formed long after 1400, and immigrants brought in new ones.

Local names

Surnames deriving from a place are probably the oldest and most common. They can be derived from numerous sources - country, town or estate - or from features in the landscape - hill, wood or stream. Many of these names, and their derivation are obvious, other less so. Many people took their name from their farm or hamlet. Nearly every county, town, riding, hundred, wapentake, village, hamlet and even single house, at any date, has given its name.

Occupations

Other surnames were formed from a person's job or trade. The three most common English names are Smith, Wright and Taylor. Cook and Turner are also very common. Occupational names will differ in frequency in certain areas for several reasons. The geography of a district may favour one or more specific industries such as stone-masonry, thatching or fishing and the distribution of Mason, Thatcher and Fisher will

reflect this. The more prolific 12th- to 14th-century building skills are represented by such popular surnames as Wright, Slater, Leadbeater, Carpenter and Plummer.

Nicknames

Sometimes a nickname became a hereditary surname. Names such as Fox, from the crafty animal, or White, perhaps from the hair or complexion, are widespread. Names deriving from plants and animals are almost certainly nicknames - such as Catt, Sparrow and Oak - but may also be location names or even occupations. But most nicknames come from colour, complexion or form. Other examples of nicknames derive from personal or moral qualities.

Baptismal names

Many baptismal or Christian names have become surnames without any change. A son may have acquired his surname by adding -s or -son to his father's name. The first method was favoured in the south of England and in the western border counties, while the second was preferred in the northern half of England and Scotland. Occasionally, -son was added to a mother's names, as in Mallinson and Tillotson.

In England, names ending with the suffix "-son" or "-ing" were often originally patronymic. In addition, the archaic French prefix *fitz* meaning "son" appears in England's aristocratic family lines dating from the Norman Conquest, and also among the Anglo-Irish. Thus, there are names such as Fitzgerald and Fitzhugh. Of particular interest is the name "Fitzroy", meaning "son of [the] king", which was sometimes used by illegitimate royal children. In Wales the 'patronymic' system of taking the father's forename as the child's surname, continued in some communities until the 17th century.

The use of "Mac" was prevalent in Scottish Gaelic, Irish, and Manx, in which it denotes "son." "Mc" is also a frequent anglicisation in both Scotland and Ireland. In Ireland, the prefix "Mac" is used to form a patronym, such as "Mac Coinnich"—or the anglicized "Mackenzie"—son of Coinneach/Kenneth. The female equivalent of *Mac* is *Nic*, condensed from *nighean mhic* (in Scottish Gaelic) or *iníon mhic* (in Irish), both meaning daughter.

THE IMPORTANCE OF LEARNING ENGLISH FOR EXECUTIVES AND SENIOR EXECUTIVES

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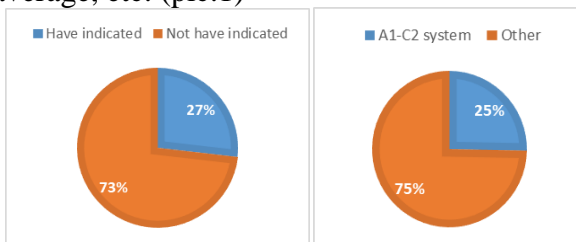
Undoubtedly, language is the primary means of communication through which people convey their thoughts, feelings, knowledge, and experience. According to the world's most extensive catalog of languages Ethnologue, 7139 languages belong to 142 different language families in the modern world. [1] It is no wonder no one person can learn them all at once. However, in today's globalized world, people from different countries need to somehow communicate with each other. That is why it is so necessary that there is a single international language. English as the "lingua franca" (common language) performs this function. We want to investigate whether top managers and senior executives need it, to what extent, and what level of language proficiency is essential for them.

The importance of the English language in business is due to the fact that the number of companies that work with foreign clients, partners, buyers or suppliers is gradually increasing. There is one more reason – eighty percent of information stored on computers worldwide is in English as well. Thus, English is the ideal and preferred language in the business community.

English is the language of business and communication worldwide. Such huge companies as Airbus, Nokia, Renault, Samsung, Microsoft use English as a single corporate language and an absolute must. We would like to clarify how important English is for Ukrainian companies, what level of language proficiency is required from top managers, and whether it is desirable or required at all. We analyzed 913 vacancies for top managers on *Work.ua*, the largest online job search platform in Ukraine, to answer this question.

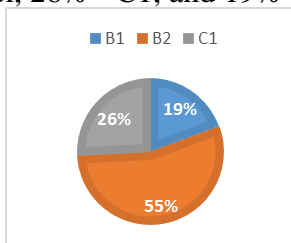
The analysis showed that 245 out of 913 questionnaires had English proficiency requirements in their descriptions or were even written entirely in English. In other words, every fourth top manager or senior executive is obliged to speak a foreign language to succeed in business. (pic.1)

At the same time, 62 employers indicated the level in the A1-C2 system, 183 described the level as conversational, average, above average, etc. (pic.1)



Picture 1. - Requirement for the English language in the vacancies of top managers at *Work.ua* for 12.12.21-12.01.22[2]

Of those employees who indicated the minimum language proficiency level in the A1-C2 system, 55% of the vacancies had a B2 level, 26% - C1, and 19% - B1. (pic.2)



Picture 2. - Requirement for the English language in the vacancies of top managers at *Work.ua* for 12.12.21-12.01.22 [2]

Thus, we can say that the importance of learning English for top managers is due to an active economic dialogue with foreign clients, partners, suppliers, and even colleagues from different branches of large companies. It is also supported by the fact that more than a quarter of vacancies on the largest online platform in Ukraine require an intermediate and higher level of English. Similarly, English can be considered a hiring criterion as it is needed for the smooth running of work. Employers expect their employees to know English and be fluent and competent in it.

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STUDENT SLANG

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Student slang is a peculiar language (new words or old ones with new meaning) common among university students. Each university may have its own set of expressions, which are passed on from senior courses to juniors. Student slang has been formed and developed since the emergence of the first universities. Even in medieval Europe students changed words and phrases in order to stand out in their own group. This allowed them to feel in a certain grouped position of the students. Three main functions of student slang are: Representative (or Identification function); Conspiracy, and Creative. Some possible reasons for students to use slang are:

- a) to achieve a certain social status in the group;
- b) for fun and pleasure;
- c) to demonstrate the sharpness of your mind;
- d) for greater expressiveness of speech;
- e) to draw attention to your own person;
- f) to create a friendly atmosphere;
- g) for following fashion;
- h) to hide the subject of conversation.

Here are a few most popular examples of student slang words.

Mixer This is an old-style party between a fraternity and a sorority. We're talking about these two communities and zero outsiders. The brothers and sisters get to mingle.

Tea This term is one of the most popular college slang terms and it involves secrets, gossip, and drama. When you are unveiling a secret, you use "tea" which means "secret."

Veg Out This is something you do after exam weeks or after a big party. It means to relax and do nothing else with your time.

Dope This term is not related to drugs. At college, you can often hear it used as an adjective that means cool.

Froomie It is a stereotype that your college roommate is supposed to be dirty, loud and disorganized. Bur froomie is a roommate you actually like. It is a friend-roomie.

LANGUAGE ACCENTS: THEIR NATURE AND HOW THEY CHARACTERISE PEOPLE

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There are nearly seven thousand languages in the world; most of them have a huge number of accents, which are different and close to each other at the same time. One language can have from one to two hundred and more accents. In English, linguists have counted one hundred and sixty different accents.

An accent is a way of speaking typical of a particular group of people and especially of the natives or residents of a region [1]. Accents are pronounced differently by people from different geographical places, different social classes, of different ages and educational backgrounds. The word ‘accent’ is often confused with ‘dialect’. The word ‘dialect’ refers to a variety of a language that is different from others not just in pronunciation but also in such matters as vocabulary, grammar, and word order. Differences of accent, on the other hand, are pronunciation differences only [2, p. 3].

An accent usually differs from the generally accepted literary norm of the language. It can be ‘foreign-speaking’ (a foreigner speaks a foreign language) or ‘local’ (different manner of speech of native speakers). An accent usually shows people’s identity.

Accents developed historically when groups of people lived in isolation, without everyday connection with other people who used the same language. This was more pronounced in the past due to the lack of fast transport and mass media. People heard only the language used in their area, and when their language changed (because language is dynamic by its nature and constantly evolves) their accent took over a particular nature, resulting in national, regional, and local deviation.

Social class is another factor. A great number of local accents are associated with working-class people, while middle

and upper-class people use more standardized English. But this is a comparatively recent phenomenon. In point of fact, until the standardization of English in the 16th century – when one variety of English was chosen to be used in official documents and printing press – it was admissible for people of different social classes to speak in their own accents.

Certain traditional accents are disappearing, but new popular varieties continue to appear. Some accents are assumed ‘better’ than others and some features become popular. It can be influenced by culture and music. For example, linguistic peculiarities of ‘black English’, associated with R&B, hip hop, and rap music are considered to be ‘cool’ and are used by other speakers. What is more, people adjust their language according to who they are speaking to, and why, for example, formally at work or casually with family and friends. People can also change their language to make themselves better understood, a phenomenon that is called ‘linguistic accommodation’. Background, gender, class, and age can all affect the accents which people use. There are also private reasons for using accents to identify themselves.

In general, people like being a part of different groups, and language accents can be considered a key factor in expressing the recognized differences between these groups.

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SWEAR WORDS AND CONSEQUENCES (WHAT ABUSIVE LANGUAGE ENTAILS)

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In medical practice, there exists the following phenomenon. In paralysis, complete loss of speech, when a person cannot say "yes" or "no," he can freely utter whole expressions consisting exclusively of the obscene lexicon. The phenomenon is bizarre at first glance, but it says a lot. It turns out that the so-called "foul" passes through completely different nerve chains than all other regular speech.

Some researchers concluded that the words we call foul came from pagan spells aimed at destroying the human race, bringing infertility to the nation. No wonder all these words are somehow connected with the reproductive organs of men and women. Obscene language acts as a curse for the Slavs.

The other abusive words are the names of pagan gods, namely, demons. A person who utters such words automatically summons demons to himself, his children, and his family. It is not a coincidence that this phenomenon is called infernal vocabulary in philology. "Infernal" means "hell, from hell."

The swearing undoubtedly has the same pagan, occult roots, but its purpose was to curse the enemy. Swearing is an expression of aggression and threats. To be more exact, the curse that a person sends to the one he "cusses out" aims at striking the enemy in the very "heart" of his life force: what is cursed are motherhood, life-giving masculinity, and everything connected with them. Such a curse is a sacrifice to Satan, and both the foul-mouthed person and his addressee get sacrificed.

Maybe someone doesn't use "dirty" words. Instead, they use a surrogate of swear terms. You are not far from swearing by uttering the surrogate of swear words.

The obscene language is proved to come from the sacred names of the gods, who had incredible power. Foul is the words of

a force that carries terrible destructive energy (it kills people at the DNA level, especially children and women).

Non-pagans and Satanists still use abusive language as a powerful magical tool when performing black liturgies.

Another exciting observation also refers to the unprintable lexicon. Such diseases as Down disease and cerebral palsy have not been detected in those countries whose national languages do not contain insults that indicate reproductive organs.

God is genuinely disgusted when we utter demonic spells! In ancient Judea, warnings against slander were taken so seriously that even nowadays, it is forbidden to hear profane swearing in Jewish families. A proverb says: "Rotten words proceed from a rotten heart." When the human heart is corrupted, rotten bad words appear as signs of spiritual decay.

According to the Apostle Paul, the use of bad words destroys man's earthly life and closes the door to eternal life. Since man is born not only for temporary existence but above all for Eternity: "The wicked do not inherit the kingdom of God." (1 Corinthians 6:10).

Cussing defiles a man and kills his soul. There is a false shame in the company of swearers to say a sincere, kind word.

Such a company not only mocks the words "love," "beauty," "goodness," "mercy," "compassion," but it ceases the very possibility of an open, pure view. The results are the degeneration of the family's institution, the birth of sick children, and the decay of society due to the destruction of moral principles.

Today, when our country is at war with the most cruel and insidious enemy, the use of foul can be, to some extent, justified because of people's outrage resulting from the mass murder of civilians, torture, and rape by Putin's soldiery.

Nevertheless, all the arguments mentioned above prove the devastating character of foul for the human soul and spirituality and even for their mental health. So, more and more people are standing out against abusive language. We do not want to attract negative energy and be like those Russian soldiers who cannot stop using offensive language even while speaking on the telephone with their mothers. It's time to eradicate fouls from our vocabulary.

THE INFLUENCE OF SOCIAL NETWORKS ON THE ADOLESCENT PERSONALITY FORMATION

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Today, the Internet and social media are an integral part of human life. For most people social networks are the source of information and means of communication. The classical system of socialization, namely: family, school, friends, is moved to the background by social networks, which play an increasing role in the process of personal socialization and having a direct impact on their value orientations. According to the statistics, the minimum time a user spends in a social network is three hours, and they visit their account at least twice a day.

The term "social network" was introduced in 1954 by the British sociologist Bucky Barnes in his book *Human Relations*. A community comes together with people directly communicating with each other on different reasons. In 1995, Randy Conrad created the first social network *Classmates.com*.

The attributes of the social network were also classified. According to A. Nekless, they should include informality, mobility and discretion.

The advantage of social networks is a variety of information that will help expand the horizons and deepen knowledge in different areas. Usually teens use social media to introduce their achievements and creativity to the world. Teenagers can also satisfy their need to communicate and make new acquaintances. Moreover, a lot of teens use social networking sites to calm down and relax after a hard day.

But the negative consequences of using social media are: addiction to social media and the Internet, harmful effects on the state of users' mental functions, insecurity of personal information, open access to unreliable or negative information, financial costs. Besides, many teenagers give up their favorite hobbies in order to spend more time on the Internet.

In conclusion, we can add that social networks and the Internet have a great influence on the formation of teenagers' norms and values, so they need to learn how to filter and select only useful information, this will help to avoid all the negative consequences.

IMPORTANCE OF BLENDED LEARNING IN TEACHING FOREIGN LANGUAGES

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Our era is the society's transition from post-industrial to informational. The development of computer network technologies has become one of the promising platforms for the development of distance education, e-learning, and mobile learning (m-learning). New information technologies open students' access to non-traditional sources of information, increase the efficiency of independent work, give new opportunities for creativity, find and consolidate any professional skills, and allow them to implement fundamentally new forms and methods of teaching. Such modern learning technologies include blended learning, which is widely used in studying foreign languages.

Blended learning is based on the integration of learning technologies, the capabilities of which contribute to their widespread use not only for leisure but also in the educational process, which determines the relevance of the topic. The peculiarity of this training is that it combines traditional technologies with innovative technologies of electronic, distance and mobile learning. This technology is based on integrating the classroom system (face-to-face learning) and e-learning technology via the Internet (online learning). Information and communication technologies help broaden students' horizons, deepen their knowledge of the world around them, the development of speech and thinking, the effectiveness of the learning process, and provide innovation, mobility, and interactivity in the lesson. Blended learning is especially effective in learning foreign languages. It involves both the need for live communication and the need for online reading, watching videos, visual "memorization" of words, the presence of gameplay and interactivity to remember the material better.

Blended learning is a process of interaction between subjects, which combines traditional and distance learning models, takes place in the classroom and beyond, in synchronous

and asynchronous modes, based on the widespread use of online learning [1]. The student attends "live" classes in the classroom. However, computer-mediated activities are also widely used, i. e. the mediator of learning activities are computers, online mode, mobile devices, and unique training programs/platforms/resources. Blended learning is used in the education of schoolchildren and students. There may be training and corporate training of employees. The term 'blended learning' has several synonyms, such as 'hybrid learning', 'technology-mediated instruction', 'web-enhanced instruction', and 'mixed-model instruction'.

Thus, considering the blended learning method, we believe that it can be successful if the role of students and their autonomy is strengthened, and the emphasis is shifted from teaching to learning, and most importantly - from teacher to student. Significant problems are the dependence on technical means of learning, which must be reliable, easy to use, and modern; otherwise, the desired result will not be there. Therefore, the issue of technical support is significant. Foreign experts distinguish six models of blended learning [2]:

- 'face-to-face driver' model. The fundamental part of the study material is studied in live communication with the teacher;
- rotation model. The curriculum is divided between individual e-learning and classroom learning;
- flex model. The central part of the curriculum is mastered by students independently through e-learning. The teacher conducts consultations to explain complex topics;
- 'online lab' model. The curriculum is mastered within the school through e-learning in computer rooms;
- self-blend model. Students choose additional courses to the introductory course independently;
- 'online driver' model. Most of the curriculum is studied on electronic platforms. However, the teacher conducts classes in person and consultations (organization of control by the teacher and self-control by the student).

Electronic platforms are used in the field of education, which allow to supplement the traditional capabilities of the

education system, approach the content of the learning process in general, and perform creative tasks in particular. Such training platforms can be paid and free (MOODLE, LAMS, Sakai, ATutor, Claroline, Dokeos, OLAT, OpenACS, ILIAS) [1].

In our opinion, distance learning is fundamentally essential as it will help to distribute educational material and monitor student performance effectively. Electronic platforms that provide the opportunity to create courses and work with students online allow students to work and continue the learning process quickly and remotely. Teaching students a foreign language should simultaneously bring the main course closer to using a foreign language. The primary goal of teaching a foreign language is the development of professionally oriented communicative competence. Furthermore, foreign language activities should play a prominent role in professional situations (awareness of activities). Thus, the principle of activity approach (subjectivity) is combined with communication and implemented in the personal-activity approach through a blended learning system.

From our point of view, blended learning is the most logical and natural step of improvement and the evolution of the traditional learning model. Blended learning accelerates the formation and adjustment of self-learning skills and finding the necessary information, increasing learning effectiveness. There are not only classroom learning activities but also constant and regular independent work using technical tools in ICT, leading to continuity of learning.

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IMPACT OF STRESS ON STUDENTS 'EDUCATIONAL PROCESS

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In modern conditions, the priority is the quality training of medical students, because as the situation has shown, the life of the whole world depends on doctors. Online form of education, test tasks, lack of personal contact with the teacher and the patient - all this is a negative aspect in the training of future physicians. It can be noted that these circumstances are one of the reasons that leads to stress. Due to the pandemic, the war and the transition to distance learning, medical students have lost the opportunity to work directly with patients, have the practice of communicating with patients and practicing skills directly under the control of the teacher. Another important aspect is that most tests are conducted through online testing, but this does not develop clinical thinking, which is one of the most important skills in physicians, but increases the level of stress experienced by students because there is no way to explain their opinion and discuss with the teacher. We conducted a survey that showed it is easier for students to answer open-ended questions than test tasks. The exam always provokes feelings of fear and anxiety. However, the teacher can reduce the level of stress in students. First, before the exam, it is necessary to hold a consultation, where he must clearly provide instructions, explain how and what will take place and answer students' questions. Second, the teacher must set students up for optimism. During the current control, it is better for students to give a presentation, which is a support. Group learning allows students to interact and come together to achieve a common outcome. Role-playing is one of the best forms to motivate students, students feel in the role of real doctors, which is positive for the future profession. Students have many stressors during their studies, but it is possible to reduce their number, it will not affect the quality of assessment, as all our methods do not contradict the rules of academic integrity and have many advantages over tests and computer control, because they involve live communication between students and teacher.

SWAT ANALYSIS OF APPLICATION TICTOK

D.O.Medvedovska - Sumy State University

Social media applications are fast becoming more and more popular in the educational process nowadays. We can mentioned such strengths of TikTok:

- **Leading Place.** According to the last survey, more than 1.1 billion people worldwide use TicTok. Approximately 60% of them are young people who can be characterized as generation Gen Z. The social net leads its business in over 154 countries across the globe.

- **Teamwork Culture.** The most important thing to know about TicTok, it popularizes and promotes group activities and teamwork tasks. Such activities include different challenges, comedy, dancing, funny videos, etc. and involve friends, family, and acquaintances into environment of solitude and monotony.

- **Safety and Privacy.** The policy of TicTok says, that if you are not a follower of a content creator, you could not send a private message.

- **Free tools.** In the past, when you created video, you needed special equipment and professional programs. Sometimes such programs cost a lot. TicTock provides you with necessary professional software for free. Moreover, such software convenient, user friendly and simple to use.

- **User-friendly.** TicTock is simply, easy and comfortable social net. You don't need any special equipment or skills to use it or make your own videos. It is also not necessary to filter the video which you want to see in your account. The platform uses your likes and chooses relevant videos.

Weaknesses of TikTok.

- **Time Consuming.** Statistics shows that nearly 83% of young people, who use TicTock, start to create their own videos. It is rather big amount to make the conclusion that the platform encourages young people to get involved in video-making activities. But we can say that they spend their time, efforts and enthusiasm in such activity. There are very few of them who would earn a living out of it.

- Addiction. Different surveys show that ordinary TikTok user spends from 52 to 80 minutes a day on the platform, depending on the user' age. Younger users log to the platform approximately 8 times daily. Such figures show that the platform is a sort of addiction and a thief of time and attention.
- Improper audio content. The platform doesn't censor audio background for videos. Sometimes such music contains promoting the trend of nudity, drugs, crude humor, and cruel values that are unacceptable for any civilized society. It may be dangerous for young minds.
- Editing difficulties. Previously it was mentioned that platform is user-friendly, but for those users who wants to became more advanced it is not so. They have to spend a lot of time watching different tutorials and educating videos. Those users who hasn't enough time and skills for video editing may feel disappointment about their videos.

Opportunities for TikTok.

- Technical Skills. TikTok users have wide range of professional editing tools. Young generation is common with the usage of new technologies and video sharing. It is very helpful for young people to be technically educated in modern world of high technology. Moreover, some of them could earn money on this skills in future.
- Cooperation. Due to the platform creators could keep in touch all over the world. If a young person is an active user of TikTok, his or her videos go viral, then he or she will be noticeable in this society. He or she could get a chance of making the platform your source of livelihood.
- Marketing. TikTok replaces common ways of promotion and marketing in financial market. Many top-ranking users of TikTok become influencers and promoters for new goods and services. More and more companies, organizations and establishments start to use the platform.
- Charity. TikTok helps to raise money for different charity issues. The platform makes the process faster and easier due to large auditory and different challenges.

Threats to TikTok.

- Competition. TikTok has a wide list of competitors (Facebook, Instagram, Snapchat, etc.) in the same field.

THE IMPACT OF PATHOGENIC TEXTS ON YOUNG PEOPLE AND WHAT TO DO ABOUT IT

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Young people are the biggest consumers of media content. Text, video, and audio messages constantly shape the worldview of young people. This directly affects the political, economic, cultural, religious, ethno-national and other processes which take place in the state. It is important to study the counteraction to the individual manipulative influences used by convergent media. This issue is very acute in times of emergencies and social upheavals such as war. One of the biggest factors influencing the worldview of young people is pathogenic texts. They include hate speech, propaganda, contempt for state aspects, and racial enmity.

N. Lishchynska in her article "Pathogenic text as a means of mass manipulation," notes that a person has a certain dependence on pathogenic information. Consumers do not even notice that the information is harmful. Russian propaganda texts published on the resources available in Ukraine are striking examples of the destructive influence on the consciousness of the individual. An example is — «lenta.ru». In particular, in the fresh material "We will not agree. Ukraine threatens to abandon talks with Russia." "How dangerous is such a decision for her? The narrative of Ukraine's inevitable loss in the negotiation process is promoted right in the title. What should we do to protect young people from the destructive effects of such reports? First of all - to provide quality media education, starting from school; to broadcast educational TV programs for the specified age group; widely use social networks for this purpose. For young people who want to improve the level of media education, it is necessary to provide affordable education in modern formats. And most importantly, we need to take the texts of Ukrainian journalists to a qualitatively new level, so that reports from the media of the aggressor state are perceived as information that is not credible.

THE IMPORTANCE OF LEARNING FOREIGN LANGUAGES IN TODAY'S WORLD

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There are thousands of languages in today's world and each of them has its impact on the modernization of modern life, namely through communication and dissemination of information through communication and knowledge of these languages. Today, the most popular language among foreign learners is English [1].

Not surprisingly, this language has many simplified grammatical constructions and systems unlike most languages, so it is relatively easy to learn. It should also be noted that the speakers of English are 1.1 billion people [1].

Therefore, it is not surprising that this language is very popular and is studied in most schools around the world. Moreover, there are many reasons for this. First of all, because it will allow people to receive the latest information quickly and without wasting their time and money on obtaining information on topics they need as all the most important world information is first published in English. It is also a big plus in terms of employment, many companies have foreign customers from various services and therefore they need specialists who can speak and learn information from the first sources, thanks to the knowledge of English.

In addition, the knowledge of foreign languages, which are especially popular, will allow you to travel without problems and communicate in establishments such as shops and hotels because you will be understood, and services will be provided because you and these employees know international languages. So, this proves once again that workers who know foreign languages will be more willing to hire. This is one example of a situation that occurs thousands of times a day. Also, with the help of these languages, we learn the culture, history, and principles of people who speak them, and it helps us to develop and not degrade. It develops our thinking and expands our perspectives

and memory because learning anything develops our memory and especially the study of language systems and various constructions that have their logic.

If we talk about the study of unpopular international languages and languages on the verge of extinction or even considered dead, we can say that the study of such languages is not a waste of time, there will also be advantages, especially if you have a connection between these languages and your profession. Learning such languages will make it easier for you to learn new languages, and languages that came from those languages, it is especially useful for philologists [2].

The knowledge of ancient languages is valuable for historians who study mythology or try to read ancient books and do some research. Latin and Sanskrit are considered such languages, and they are still taught in educational institutions.

It is very important to keep at least in writing all the languages we know today because we do not know what will happen to the language system in the future. We have all the resources to do that, so this is our mission today, especially for those who work in the field of philology. Because future generations must learn from our experience and mistakes, and only improve the languages and areas of influence of these languages on other areas of life. Language is the life of a nation. And as long as the language is alive, the nation is alive. Languages help us to understand the cultures, history, and principles of the nations that invented languages, so learning foreign languages and preserving them is an extremely important mission for all humankind.

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WHAT ARE PERSONAL BENEFITS OF FOREIGN LANGUAGES STUDYING?

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Nowadays knowing foreign languages for every person maybe one of the most needed options to make life successful. There are 7174 languages all over the world and understanding some of them can be useful. Why can it be important?

Firstly, knowing foreign languages gives us potential to get education all over the world, study at any university you like and choose any academic grant program abroad. You can also take international courses (e.g., <https://www.coursera.org>) and attend classes of famous university lecturers. It will help you to obtain knowledge in the area you study. Moreover, materials from foreign sources can be used for your course and scientific works.

Secondly, you can communicate with people from different countries. Different places of birth, cultures and traditions change mentality greatly. People can give a lot of new information, recommendations and share their experience, which sometimes can be unusual for you. For example, cooking new recipes, visiting interesting places, studying modern topics, etc. These all can expand your worldview and make your life more exciting.

Finally, when you go abroad you can have some difficulties with a local language. Understanding it gives you comfort and confidence in travelling. If you want to explore a new country without a guide you will probably have problems with explaining what you need or what you want to buy. You can also have a risk of being lost in a foreign country. But if you know how to say some words in a local language and can understand people, you will feel relaxed and calm.

One of the most popular foreign languages in Ukraine is English. According to the data rating Educational First English Proficiency Index (EF EPI) 63% of Ukrainian people know English perfectly well.

As a result, studying foreign languages gives a lot of benefits in education, communication and travelling.

CORONAVIRUS WORDS

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The coronavirus continues to shape our lives and language. The coronaspeak (new vocabulary that has emerged as a result of the pandemic) has helped us stay safe and informed during these scary times. New vocabulary reflects the biggest health crisis. When a global pandemic strikes, leave it to Generation Z to come up with new ways to describe the coronavirus and the effects it is having on the world.

Covidiot – First and foremost, covidiot – is an insult for someone who disregards health and safety guidelines. This term can also refer to someone who is hoarding groceries and spreading misinformation about the virus. We all know bloggers that went to the Maldives in the midst of a pandemic.

Miss Rona/The Rona – Some have started calling the virus itself "Miss Rona" or simply, "The Rona." For a few weeks, some particularly callous young people were callously calling the virus the "boomer remover," referring to their belief that only old people would die or be seriously affected by the coronavirus.

Post-Rona – Despite the fact that the pandemic is not retreating people are already preparing for their "post-rona" lives by planning outfits, looking up restaurants, and fantasizing about brunch with friends.

Hamsteren means stuffing food into your cheeks like a hamster. The Netherlands prides itself on household thrift. So until recently the verb mostly had jolly connotations: annual supermarket promotional events rewarded star hamsters who were stocking up on supplies. "Hamsteren is not nice," the Dutch prime minister said in a press conference. Now shops are calling on people to stop the practice too, and social-media memes ridicule the hoarders.

Coronacation is making the most of a forced staycation, due to cancelled classes or events.

Vaccination –Not to be confused with a coronacation— basically the past years we all spent at home, away from our

offices, schools, loved ones, etc.—a vaccination is the one we have all been waiting for. As vaccines slowly become *the* golden ticket to international travel, a vaccination is that long-overdue and well-deserved holiday being planned for the minute you are properly vaccinated and deemed ‘safe’ to travel.

Blursday – With days blurring into one another, merging into eventless weeks, catapulting into lull months and then some, every day is a Blursday.

WFN – With our beds becoming our boardroom, WFH is an abbreviation for work from home. It is the new out-of-office.

Quarantine & Chill – Since people cannot come over for "Netflix & Chill" anymore, some have started to post pictures of themselves relaxing while in self-isolation.

Quarantini – Your 5pm reward for surviving yet another WFH blursday, quarantini is a quarantine martini. It is probably sitting in your coffee mug as you listen to this – no judgments. You can have yours shaken, stirred, or with a twist.

Zooming – It is not a secret that FaceTime and Skype are things of our pre-pandemic past. Zoom zoomed into our lives once Covid hit and has become our primary mode of communication since. We even have weddings on Zoom. Zoombombing is photobombing but on Zoom. Of course we have all had these uninvited accidental appearances made by our fam, kids, or pets.

Social distancing has inspired a lot of creative adaptations for our celebrations—and equally unique terms for them. We have been introduced to drive-by graduations, weddings, and birthdays, as well as drive-in concerts.

Waist-up dressing – This phrase comes from Zoom meetings. Party on the top and pyjamas down-below, it is the balancing act between being presentable and comfortable.

Coronacut – Coronacut refers to the awful haircut you gave yourself out of desperation.

Coronials or coronababies – Last but not the least is coronial or coronababy. This is a child conceived during lockdown.

MANIPULATION OF CONNOTATION IN THE INFORMATION SPACE

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The relevance of the topic is connected with the information and its manipulation. Every day we receive a huge amount of information from completely different sources: mobile phones, the Internet, television programs, and the like. Due to the overloaded information field people suffer from unnecessary information, which is called "information noise". However, manipulators who use their methods against information-depleted citizens feel best in such conditions, and connotation is the most effective method which they employ.

Connotation can be defined as additional semantic or stylistic nuances due to the semantic and internal form of the word, which are superimposed on the basic meaning, giving the expression of emotionally expressive color, modality, expression of will [1, p. 515]. There is a positive and a negative connotation, and, as the names imply, a positive connotation creates a pre-optimistic, often unfounded attitude and negative - a biased pessimistic attitude to an event or thing.

Manipulation of connotation is a dangerous thing for the information space, because it has a very strong impact on society. The process creating necessary conditions for the manipulation of connotation is complex, but as a result you will get a machine for changing mass consciousness of large groups of people.

The danger of a negative connotation makes it possible to enshrine chauvinistic and discriminatory views comfortably. Skillful manipulators, oriented in a specific situation of the information field at a specific time, can easily find a "lever of influence" on society. For example, in the conditions of war when one state fights with the other it is very calm to fix negative connotation of people living in another state. On the other hand, people of different religious persuasions can be set against each other with relative ease if the information field has a negative connotation about the basic concepts of another faith.

To understand the destructiveness of the effect of connotation, it is necessary to understand that the connotation is created from a huge amount of news in clearly defined colors. If you show something to people, for example, some brand car, and focus only on the negative side, (in our case it will be accidents happened to this brand car), people will remember that brand as dangerous and unreliable. One-sided and mass coverage of the negative aspect creates a negative attitude in people, which may not be supported by facts, but amplified by the opinion of people in general.

The main difference between negative and positive connotations is that in a positive connotation it is much more difficult to make a "silent call" to action. Positive connotation is formed in the same way as negative, but the negative attitude is replaced by "pink glasses" effect and the information is highlighted only from optimistic points of view, while in the negative connotation constant dissatisfaction can grow, at first changing into silent dissatisfaction and then turning into open hostility to something, without any good reason.

The main reason for concern is that, unfortunately, the majority of the population, especially the elderly, is simply not ready to accept and analyze complex manipulations associated with negative connotations, and therefore our population is very vulnerable to this type of manipulative pressure.

In summary, negative connotation is an effective tool for manipulating the masses, which can also be a hidden "language of hostility". In consequence it becomes extremely destructive to a society. Therefore, it is necessary to strictly control and prevent the artificial creation of such effective manipulative tools. Control of the information sphere in this case is a positive intention that will help control the information space not by banal censorship and prohibition of dissemination of information, but organizing information campaigns to refute such manipulations.

In further research we would like to consider this problem more broadly and qualitatively and much more fully.

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LATIN AND ENGLISH IN MEDICAL TERMINOLOGY

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The word “medicine” is derived from the Latin word “medeor” which means “to heal, the ability to heal, art of healing”. Medicine is a branch of health science concerned with the maintenance of human health, prevention, alleviation, or cure of disease.

Latin is considered to be the language of pharmacology, anatomy and all medical branches in general. Under the influence of the great anatomical work of Andreas Vesalius, “De humani corporis fabrica”, the terminology of anatomy is almost exclusively Latin. Many Latin terms crept into medical terminology. On the one hand, Latin was the language of science up to the beginning of the 18th century, so all medical texts were written in Latin. On the other hand, English is the language of modern society and modern medicine. It’s a common knowledge that both languages play a crucial role in the study and development of medicine.

The development of medical terminology coincides with the development of medicine as a science. The history of medical terms goes all the way back to the ancient Greeks, specifically Hippocrates.

In this context, it is necessary to say that the history of medicine has five stages: the Greek period, the Arab period, the Latin period, the national period and the English period. Let’s analyse the Latin and the English periods.

During the Renaissance, Greek and Arabic medical works were predominantly translated into Latin. At that time, Latin was designated as the international language of science. Anatomists played an important role in updating the Latin medical terminology of that period, as the 14th century had a large number of anatomical discoveries.

With the development of national terminology, the English terminological system began actively developing. English and French replaced Latin which prior was the main medical language. It was in France that Latin first started retreating from medicine. In the twentieth century English began displacing French, and as a result became the language of international communication. The British Empire spread English through its colonies; this process contributed to English becoming the first truly global language. English also facilitated worldwide international communication. At the present stage of development of medicine and medical terminology, English dominates as the language of international communication. Scientific conferences are held in English; books, magazines, manuals are published in English as well.

The main aspects of English in the context of medical terminology are the following:

1. If you want to learn about the latest developments and discoveries in medicine from around the world, you'll read about them in journals and research reports published in English.
2. A good chance for training, internship, practice in foreign clinics.
3. You will be able to conduct treatment for patients from other countries.
4. Communication with foreign colleagues and academic mobility.

The main aspects of Latin in the context of medical terminology are the following:

1. The primary role in the description and classification of diseases belongs to Latin language.
2. It is the language of prescriptions, medications, chemicals and chemical compounds.
3. The importance of the Latin terminological system for medical students is an indisputable fact. Much of the medical terminology is based on Latin words. Approximately 95% of English terms are borrowed from or created on the basis of Latin and latinized Greek, so, they are easy for understanding.

Latin and English play an important role in the development and understanding of medicine. If you want a successful career in medicine English and Latin are absolutely essential because to become a highly qualified healthcare professional it is necessary to penetrate into the inner depth of medical terminology and apply clinical and pharmaceutical languages in practice at all healthcare institutions.

ADVERTISING SLOGANS

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Slogans and their accompanying campaigns are some of the best tools advertisers have to connect with their audiences. But even though these short phrases look like they are easy to create, a lot of time and effort has to go into crafting a perfect slogan, especially if you want it to stick in people's minds and persuade them to act. A slogan is a phrase, usually only a few words in length, that is highly memorable. Good slogans are punchy, effective, and powerful snippets that advertisers use to promote a product, brand, company, or certain aspect of a given product. The best slogans they conjure up images, memories, tastes, and emotions. Here are 10 famous slogans that have successfully stuck with brands and products for years.

McDonald's famous "bah-da-bah-da-bah... I'm Lovin' It" is almost impossible not to sing along with and instantly conjures images of those famous McDonald's golden arches. A slogan that people have been "lovin'" since 2003, it expresses the company's emphasis on fast food that tastes great even if it might not be the healthiest choice!

Lay's "Betcha Can't Eat Just One" is one of the most well-known taglines in America and is 100% accurate when it comes to potato chips of all shapes and sizes! But while eating just one chip might be crazy, regardless of the chip brand, Lay's did well to catch the phrase before anyone else.

The story of Kit Kat's slogan "Have a Break" have a chief thinker: Donald Gilles at the JWT London advertising agency in May 1957. The term "Break" has a double meaning that suited it perfectly to the product. "Break" to break (alluding to the characteristic sound when you break the bar) and "Break" to rest. This double meaning would become the backbone of the slogan with "Have a Break".

M&Ms have a surprisingly fascinating history. This candy's hard outer shell was initially designed to enable soldiers to transport and eat them during the war; so they could have a sweet treat without getting melted chocolate everywhere! The "Melts in your Mouth, Not in your Hand" slogan was coined in 1954.

Red Bull might not "give you wings" in a literal sense, but their powerful campaign certainly did give wings to their image and reputation. However, this particular company's slogan did get them in hot water when a consumer sued the company for false advertising when the drink did not, in fact, give them wings. So it now reads "Red Bull Gives You Wiiiings" (with three "I" s).

Coca Cola has been around and has done many different things to get their product well known. In 2009, Coca Cola introduced "Open Happiness", which was used to try to sell the beverage. The Coca Cola ad persuade buyers of all ages that opening a bottle of Coke will bring them happiness.

Back in 1994, Sprite came out with a new ad slogan, "Obey Your Thirst." The slogan seemed to suggest that thirst was in control of our actions and guiding our choices. It was popular for a while, but eventually and the folks at Coca Cola changed it to "Freedom From Thirst."

Maybelline New York's ad agency definitely struck gold with this tagline created in the 1990s. The agency changed Maybelline's tagline to "Make IT Happen" in February 2016. However, chances are that anyone who grew up with the original "Maybe She's Born With It, Maybe It's Maybelline" will still sing the little tune any time they think of the well-known cosmetics company.

Nike uses its slogan on packaging, on clothing, and throughout its ad campaigns. This consistently helps with recognition. The origin story for this slogan? Not so nice. According to The Washington Post, in 1988, advertising exec Dan Wieden pitched Nike this slogan, which was based on the last words of a man convicted of murder. Morbid inspiration.

Apple's "Think Different" slogan was first released in a commercial called "Here's to the Crazy Ones: Think Different" and became synonymous with Apple products and the brand as a whole ever since. The goal behind Apple products was to change the world with new tech. Evidently, they achieved this when they transformed the world of computing, then cell phones, forever.

THE DEVELOPMENT OF PROFESSIONAL COMMUNICATIVE SKILLS OF PH.D. STUDENTS

S. Zolotova, Sumy State University

S. Mikhno, Sumy State University

How is academic material presented through speech? What techniques are used to organize concepts when the audience is listening rather than reading? The thesis of teaching professional communication has recently gained leading importance in the process of learning foreign languages by Ph.D. students of higher educational institutions in Ukraine. Communication needs to be designed to reflect the requirements of the spoken channel, the information being transmitted, and the needs of the specific audience.

The sharp increase in academic mobility of researchers, and expanding ties with foreign partners have been a great challenge for foreign language teachers at universities. University teachers face a number of requirements to improve methodological competencies in teaching foreign languages for Ph.D. students: to review their own teaching methods, to find new ways of transforming knowledge to students with further access to good results of communication in the professional sphere, which

corresponds to the European levels of foreign language proficiency.

The system of acquiring communicative competence by future specialists is a complex process. Considering this process as a close relationship between a teacher and a student, we need to take into account the main issues of FL teaching methodology:

- meeting the needs of the audience, a clear definition of the aims of the course;
- the level of students' motivation;
- providing methods of increasing their interest in learning a foreign language of high complexity;
- giving the initiative of speaking and personal activity to Ph.D. students during the lesson;
- understanding the need for high professional qualifications of university teachers;
- the teacher's ability to navigate a large number of educational and methodological complexes of foreign publications;
- wide use of computer support materials and other technical means.

A high level of students' readiness for professional activities and effective communication in a foreign language environment, such as participating in international conferences, developing joint projects with foreign partners, teaching English to foreign students, doing research, etc. reflects the main features of gaining necessary skills to exist and to work in the world of the scientific community.

Among the learning objectives Ph.D. students must be able to describe the factors influencing the design of academic communication; to recognize and understand the most often used verbal techniques for maximizing listener comprehension; to become familiar with multimedia techniques used in academic communication and their advantages and disadvantages. Perhaps the most obvious feature is the use of words that are specific to

academic communication and to the subject, which is discussed during lessons.

Special attention is focused on an important aspect of postgraduate education - the ability to speak logically, consistently, argumentatively, and convincingly express their point of view.

It is an indisputable fact that speech in elite scientific circles involves the use of accurate lexical units, constant expressions, and linguistic literacy, which reflects the relevant situations in the academic environment. To reach this purpose Ph.D. students study the use of euphemisms, signs and lexical items, phraseological expressions, and special tools for combining ideas and semantic groups, that make the language more natural for the scientific community.

Unplanned discussions, where Ph.D. students have the opportunity to initiate and interpret the situation themselves, are very effective. Speakers can extend their ideas with new thoughts and invite responses from partners, who are likely to follow the same conventions in their own talk. Thus, academic speech is not merely a channel for transmission of completed work, but a medium for developing ideas.

Learning academic communication for the needs in higher scientific fields is quite a long and complex process and its effectiveness is determined by the widespread use of innovative approaches to foreign language teaching and learning.

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Наукове видання

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