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

“Current Trends in Young Scientists’ Research”

IX All Ukrainian Scientific and Practical Conference

Book of Papers

April 21, 2022

Zhytomyr

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

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Друкується за рішенням
Вченої ради
Державного університету
«Житомирська політехніка»
(протокол № 5 від 04.04.2022 р.)

Zhytomyr
2022

УДК 811.111
ББК 81.2 (4 Англ.)

Current Trends in Young Scientists' Research: IX All Ukrainian Scientific and Practical Conference (April 21, 2022) – Zhytomyr: Zhytomyr Polytechnic State University, 2022. – 93p.

ISBN 978-966-683-600-0

The collection includes abstracts of the IX All Ukrainian Scientific and Practical Conference "Current Trends in Young Scientists' Research", that took place at Zhytomyr Polytechnic State University on April 21, 2022. Participants from higher educational institutions of Ukraine and Poland took part in the work of the Conference. The Conference abstracts deal with a wide range of research issues in the spheres of linguistics, literature, language teaching and learning, economics, engineering, information-computer technologies and medical science. The publication is aimed at researchers, students, masters, post-graduate students.

УДК 811.111
ББК 81.2 (4 Англ.)

IX All Ukrainian Scientific and Practical Conference

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April 21, 2022

Редактор: Могельницька Л.Ф.
Комп'ютерний набір та верстка: Отдєльнова Л.Л.
Макетування: Отдєльнова Л.Л.

Свідоцтво про внесення до Державного реєстру суб'єктів видавничої справи ЖТ № 08 від 26.03.2004 р.

ISBN 978-966-683-600-0

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Session work №1

CURRENT RESEARCH IN THE FIELD OF HUMANITIES

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THE PROBLEM OF NON-BINARY PRONOUNS IN THE CURRENT COMMUNICATION TRENDS

The report presents a brief analysis of the problem of non-binary pronouns and suggested ways to overcome it.

The relevance of scientific work resulted from a low level of people's awareness of the concept of non-binary. The close regard for the problem will allow the speakers to use the correct pronouns in the future and help to become more tolerant of gender issues.

Gender-neutral language is a language that avoids prejudice against defined sex or gender. The goal is to avoid words that could perceive as discrimination and biased against representatives of defined gender. The main aim is to reduce the number of gender stereotypes and bring the community to social change [4].

Keep quiet about the issue, but it always exists.

A human is a man. What about a woman? «He is the Subject, he is the Absolute—she is the Other», − wrote Simone de Beauvoir in her book The Second Sex. In it, de Beauvoir drew attention that in the world to think about human nature is not as universal but as the male[3].

The history of development and popularization of gender-neutral language has much to do with the feminist movement and women's studios. These studios were recognized as a separate academic discipline, and they were included in the curriculum of the higher educational institutions since 1980. Women have become an independent part of the scientific community, according to feminists, their contribution to scientific work began to be recognized. In this regard, the restructuring of the academic community (including her language component) began. New gender-neutral and gender-binary terms have been introduced[4].

The urgency of the issue is growing. Humanity stood up for support.

American University in Washington conducts orientation for freshmen and asks for your name, hometown, and preferential gender pronoun.

Several universities have gone even further because they allow registering the desired pronouns and application forms in an official computer database.

The University of Wisconsin's LGBT Community Resource Center in Milwaukee developed the plaque, which actively spreading in various American institutions since 2011. On one side, she was given different forms of eight pronouns, from the traditional "he" ("he"), "she" ("she") and "they" ("they") to the innovations "ey", "per", "sie", "ve" and "zie". For example, the paradigm "he is his (indirect cases) – his (possessive pronoun) – himself (reverse pronoun)" will correspond to: "ey," "em," "eir," "eirs," and "eirself," or "zie," "Zim," "zir," "zirs," and "zirself"

On the back of the plate, there is an exercise in filling in the blanks, which makes it possible to practice the use of various forms of these pronouns[1].

An investment company Goldman Sachs issued advice on using pronouns last November. The company advises its employees not to make assumptions about a person's gender by their name or appearance and, in their free time, to train the usage of gender-neutral appeals in spoken language[4].

For example, back in 2016, the Canadian Senate praised the bill and resurfaced the country's anthem to be gender-neutral. The phrase "love in all your sons" was replaced by the phrase "love in all of us"[2].

Indication of sex can injure a person.

Inconsiderate pronouns when addressing a person can cause a stressful situation. Gender dysphoria is a disorder of gender identity. This concept is characteristic of the transgender state when a person cannot fully accept his or her gender status as a man or woman and feels acute dissatisfaction with it.

There are ways to overcome the problem

It's necessary to raise the topic because the world will not be able to move to the side of gender neutrality. Therefore, in order not to limit people's choices, it is necessary to get rid of instructions on sex person. We may concisely mention a person without using pronouns.

Besides, it is necessary to restructure the language completely to avoid such pronouns, which can be accepted as discrimination against LGBT people. We should focus on the introduction of more gender-binary words into the language. This will help to emphasize the individuality of the person in question and show respect to her [4].

In conclusion, we can confidently say that the problem is a scientific novelty. Firstly, we need to remember that everyone is an individual and the sex of a person is the suggested option only proposed by nature. We have no right to hate a person just for belonging to the defined sex of a person. Therefore, gender-neutral pronouns should be perceived as an object of ordinary and expression of respect for the non-binary person. Otherwise, we will cause a series of conflicts and prove ourselves as incorrect nationals who are biased against each other.

So, the main goal to this day is to be polite towards one another.

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THE MOTIF OF METAMORPHOSIS: A CHANGE OF A PERSON INTO A COMPLETELY DIFFERENT ONE

The theme of a human transformation into something dark and mysterious can be presented in two short stories by Neil Gaiman. “Other People” (2006) [2] and “Troll Bridge”(1993) [4]. Both works have a lot in common, but the most common thing presented in these plots is a change in a human being.

Plot

The first novel tells us about such a thing as hell, where sinners are believed to go after their death. A man turns out in a room with a devil. For his punishments, he used 211 implements, but that wasn’t the worst part. Reliving his life, again and again, knowing all his mistakes without having a chance to redeem them, is the worst.

Troll Bridge is a tale about a seven-year-old boy who liked adventures in his village. One day, he found a new path that seemed magical to him. But when he reached a bridge, he saw a troll who wanted to eat the boy’s life. The kid didn’t want to die at such a young age, so he said that he would return later.

Mistakes and their results

The man from the first story re-experienced his life for thousands of years. Every small and big lie, how he cheated on his wife with her sister, he relived everything. Then, his executioner showed him the results of his choices. It was the biggest lesson in his life.

When the boy in the second story turned fifteen, he met the Troll again and this time wanted him to take his first love instead of him, just like he offered his sister to a monster eight years ago. He avoided death again and lived his life. He was cheating on his wife, and one day he returned to the empty house and found a letter from her. Fifteen pages of truth, she knew everything. He went to the old bridge and let the Troll eat his life.

Realization

After reliving old mistakes, the man opened his eyes and saw another man in expensive clothes entering the room just like he did many years before. He understood that now he has a new role and said: “The time is fluid here”. He became the torturer for the other human.

After avoiding death two times, and living not the best life one day, a man in the second story got a letter from his wife. The man realized what he had done with his life and went to the Troll. He met him with a smile and was happy to see him. The monster became the man, and the man became the Troll.

Torturers

Both men changed their roles from sinners to torturers.

Man, who went to hell, after his ordeal became the devil to torture the next sinner. The good thing is that maybe after all those tortures, he understood his mistakes. The bad thing is that it’s too late.

The small boy grew up and became an adult sinner. He was running from death, but eventually came to it by his own feet. He became the new troll under an old bridge. Not only that, but he wasn’t eating other people’s life, he stayed under the bridge and watched them.

The idea

After reading both pieces, we can find different senses. The man who went to hell represents the understanding of mistakes without the opportunity to fix them. But wasn’t he the devil from the beginning and the man at the end of this cycle? Or he became the devil, and torturing is his new punishment.

Maybe the man, who became a Troll, was a representative of a human. It's us during our life. As children, we used our family to grow up and become independent. With a help of others, we find a job and succeed in our plans. But then we become old we just sit and watch everybody, remembering childhood places so different from now. Maybe it’s about running from death or realizing mistakes we have made. What if the Troll is a fear of a small boy, a person he didn’t want to become.

But one idea is here, the same, for sure. The Hell is the other people. In 1943 Sartre wrote a play called “No Exit” [1]. The story of three people. After their death, they appeared in a room forever together as their punishment. This piece of literature proves that hell is Others. Staying in a room with two strangers who would complain about your life for infinity is a total hell.

Hell knows how many people you let down, hurt, cheated on... Others will also remind you about all sins, making your life negligible.

In both stories, hell was other people. It doesn't matter who they were. Positive or negative characters, they made hell for our sinners.

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DISCUSSIONS ON THE NEW UKRAINIAN SPELLING: THE NEED OF THE NOWADAYS

The aim of the study was to investigate the changes in Ukrainian spelling and analyze current issues related to it. To achieve this goal, we have set the task: to analyze the sources that contain discussions on the new spelling, delve into the topic, and summarize the information obtained during the study. We regard language as the key to a nation's identity and the basis of its ethnocultural integrity. The main feature of this integrity is the functioning of literary language in various public spheres. That is why taking into consideration the current needs for the Ukrainian language, the processes which take part in it, and the changes that happened during the decades of our state's independence, in October 2018, the Ukrainian National Commission on Spelling issued the renewed Ukrainian spelling, which was approved by the Cabinet of Ministers of Ukraine in May 2019 [2].

Nowadays, the totalitarian period of our history is a thing of the past, that is why the administrative imperialistic control over the observance of spelling standards has also stopped. It resulted in the fact that numerous mass media, publishing houses, and educational institutions began to use spelling rules different from the official ones. It led to disorientation for a wide range of Ukrainian native speakers and foreign users of the language, caused uncertainty in their language competence, hindered the expansion of social functions of the Ukrainian language, and ultimately shook the language norm.

The modern edition of the Ukrainian orthography restores and brings to life some features of the orthography issued in 1928, which can be regarded as important parts of the Ukrainian orthographic tradition and the renewal of which has a modern scientific basis. At the same time, the spelling commission was guided by the understanding that the language practice of the Ukrainians in the late 20th century – early 21st century has already become an integral part of the Ukrainian spelling tradition. The modern version of the Ukrainian orthography preserves the approach to language as a sign system and a social phenomenon. The orthographic norm, on the one hand, is based on the close connections of the modern language systems elements reflected in writing, and on the other hand, on the observance of the language tradition and its dependence on it.

The modern Ukrainian language is a dynamic system. The vocabulary is changing, new terms are appearing in various spheres of public communication, and there is a need to adopt common and proper names to the previously formulated spelling rules [3].

Meanwhile, the introduction of an updated spelling raises many questions in society. A considerable part of the population does not accept change and does not want to relearn the rules, or argues that change is not in time. Others consider the changes to be very timely and appropriate. We think that every language needs regular changes and development, and people need time to perceive it. That is why the new Ukrainian orthography can be regarded as an integral part of the construction of state independence.

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GENDER-NEUTRAL PRONOUNS AS A WAY TO TOLERANT SOCIETY

Gender is a characteristic of a person that defines belonging to the concept of "male" or "female". In 2014, Valeria Jones filed a lawsuit against her employer Bon Appetit Management Company in Oregon for $ 518,000 after colleagues referred to her as a woman. Because Jones did not consider herself to be one of the conventional genders [5].

Gender-neutral language is a language that avoids gender stereotypes and prejudices. The purpose of using gender-neutral language is to keep away from words that may be perceived as discriminatory. The aim of introducing and disseminating gender-neutral language is to reduce the number of gender stereotypes rooted in traditional language and culture and to bring changes to society [3].

Moreover, Google Translator has developed a gender-sensitive translation. For example, if you enter the word beautiful, there will be two options when translated into Italian – bellissima (feminine) and bellissimo (masculine). Currently, this does not work with all languages, but only when translated from English into French, German, Italian, and Spanish [2].

The spread and rapid development of gender-neutral language can be traced in the connection with the emergence and institutionalization of gender and feminist studies. In the 1980s, women's studies were recognized as a separate discipline and included in the curricula of higher education [3].

In some countries, the active introduction of gender-neutral pronouns has already begun. For example, American universities, when conducting orientation for first-year students, asked to indicate a preferential gender pronoun. Several universities even allow you to register the desired pronouns in the official computer database. Students can choose from the pronouns "he", "she", "they" and "ze" - or the option "name only" [1].

However, there are slightly different development trends in Europe, because the official EU languages are divided into three categories: natural gender, grammatical gender, and non-gender languages. The most difficult is to use gender-neutral pronouns in grammatically gender languages because each noun has grammatical gender, and the gender of personal pronouns corresponds to the referenced noun. In the case of such languages, it is difficult to create new gender-neutral terms, as this violates their grammatical structure [2].

It is worth noting that since childhood, we do not realize that gender division already exists around us. If we talk about professions such as firefighter, and police officer, then we usually think that it is men's work. At the same time, a nurse, a nail designer, is associated with female work. A simpler example is pink for girls, and blue for boys [4].

This is a rather controversial topic, the majority of the population does not take it seriously and considers people of uncertain gender to be mentally ill. I believe that this opinion is more typical of older people who do not accept innovation. As for the younger generation, it does not cause sharp indignation. On the contrary, they understand the desires and needs of others. If it is difficult for someone to identify themselves with the male or female gender, then why not create a separate pronoun for them to denote gender. Respect for others should be in communication with all people, regardless of their worldview.

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FEATURES OF THE STRUCTURAL AND FUNCTIONAL ASPECTS OF THE CONCLUSION OF ECONOMIC TERMINOLOGY IN MODERN CHINESE LANGUAGE

The study and development of terminological vocabulary, which outlines the concept of certain areas of human cognition, is a very significant task of modern linguistics. The main indicator of this is their research in the works of such Ukrainian and foreign researchers as T. Kiyak, D. Lotte, S. Mishlanova, L. Hoffmann, Felber, G.

Fluck, T. Rölke, V. Danilenko, T. Kandelaki. O. Zyablova, N. Zaripova, O. Ogui, T. Perepelytsya, O. Slaba, and R. Bulmann studied the terminology (including the structural-semantic and functional aspects) in various aspects. Currently, this issue is not given enough attention in the modern Chinese economic language, which led us to choose the topic of the proposed work.

The topicality of the work is due to the trend of research of modern terms in the Chinese economic terminology system, the need for their regular study to identify certain processes of term formation, which allows determining the main directions of development and enrichment of modern Chinese economic terminology. The relevance also lies in the fact that the study of modern Chinese economic terminology in structural, semantic, and functional aspects, allows identifying the key stages of its development, term formation, and classification of this terminology. The need for research is exacerbated by the lack of special studies in this terminology.

The object of research is economic terminology in modern Chinese.

The subject of research is the structural-semantic and functional aspects of modern Chinese terminology.

The objective of the study is to identify structural, semantic, and functional features of economic terminology in modern Chinese.

The scientific novelty is that a comprehensive analysis of economic terminology in modern Chinese; the structural-semantic and functional aspects are analyzed. The theory of borrowings in the structural aspect in the field of economic relations was further developed. In the functional aspect, the structural-semantic paradigm of economic terminology is studied in order to establish the features of terms - synonyms, homonyms, antonyms, and polysemous words.

The practical significance of the work lies in the possibility of using its results and conclusions in the process of organizing and standardizing economic terminology, in theory, and practice of translating texts on economic issues, in the lexicographic sphere, in particular, in compiling bilingual and explanatory dictionaries of economic terminology.

The system of economic concepts is characterized by its unity, integrity, and hierarchical organization of elements that are very heterogeneous in content and role they play. Non-standard content of economic terms is directly dependent on the special place occupied by the economy in the knowledge system. The specificity of economic terms differs from the ambiguity of the definition of the concept of "economy", from which we can observe that "the terminology of the economy is heterogeneous and includes both abstract basic terms and designations of specific areas of economic knowledge." Unlike the lexical units of other terminological systems, such as the exact sciences, economic terms are used in the speech of both professionals and the general public. One of the reasons for this phenomenon can be called the process of terminologizing the words of common language and determinologizing terms. In the context of economic development and the emergence of new realities, there is a growing interest in economic science in society, and as a result, the scope of economic terminology has gone far beyond professional communication.

From a genetic point of view, the vocabulary of the Chinese language can be divided into the following groups:

1) purely Chinese vocabulary;

2) phonetically or semantically adapted foreign language borrowings.

This classification seems to us the most justified for the Chinese language. It is worth dwelling on Japanese borrowings in Chinese vocabulary. According to various sources, most of the borrowings came from the Japanese language.

Also, one should not ignore such a modern phenomenon of the Chinese language as graphic borrowing. As a rule, graphically borrowed from English abbreviations and multicomponent terms of the native language – a tracing of the full English term - come into synonymous relations. For example: ATM 机 [ATM jī] – 自动取款机 [zìdòng qǔkuǎnjī] – ATM; GNP – 国民生产总值 [guómín shēngchǎn zǒngzhí] – gross national product; GDP – 国内生产总值 [guónèi shēngchǎn zǒngzhí] – gross domestic product. Today, print publications often use English abbreviations or combined abbreviations that contain hieroglyphs and letters of the English alphabet.

Among other methods of forming economic terminology should be a distinguished phonetic adaptation. Phonetic adaptation - is the borrowing of a foreign word in a similar language source phonetic and semantic form. In this case, usually, the phonetic structure of the word changes somewhat: there is an adaptation of the sound composition of the borrowed word following the peculiarities of the phonetics of the receptor language. The penetration of words from other languages into Chinese in different historical periods is since the people enter into economic, cultural, and political ties with other peoples. Phonetic adaptation of foreign terms is a special way to replenish vocabulary. Among the phonetically adapted borrowings, we can distinguish a subgroup of so-called "forced borrowings", which contain proper names (some scholars refer to such tokens as eponyms), currency names and can not be transformed, for example, 道琼斯股票指数 [dàoqióngsī gǔpiào zhǐshù] – Dow Jones index – 纳斯达克 指数 [nàsīdákè zhǐshù] – NASDAQ; 菲利普斯曲线 [fēilìpǔsī qūxiàn] – Philip's curve. Many terms are borrowed from English, even when there are no less accurate Chinese equivalents. The analysis of terminological units showed the presence among phonetic borrowings of the group of so-called inappropriate borrowings, which, in our opinion, can be successfully replaced by the native language, for example, the term "firm" or "company" can be expressed purely Chinese, and has three phonetic adapted tracings: 公司 [gōngsī], 公班牙 [gōngbānyá]. Similarly, the term "merchant" may have two purely Chinese synonyms and one phonetically adapted borrowing: 经济人 [jīngjìrén], 买办 [mǎibàn], 马占 [mǎ zhàn].

Conclusion. Due to the peculiarity of the structure of Chinese as an isolating language with agglutinative morphology, research on terminology in economics is quite significant. Economic terminology is closely related to the complex and multifaceted conceptual apparatus and therefore requires special research. As economic knowledge deepens, so do the concepts conveyed by certain economic terms. Each epoch, based on the terminology of predecessors, develops its own range of terminological concepts. This indicates that economic terminology is a product of historical development, it reflects all stages of economic and social progress. In fact, each period in the Chinese language is characterized by the development of economic and terminological vocabulary, which reflects the level of economic development, economic science, economic relations with other countries, and the nature of industrial relations in the state. All significant changes that occur in the economic terminology are reflected in the language, namely in the structural and semantic aspects.

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SIMPLIFYING LANGUAGE BARRIERS WITH THE USE OF THE SMART TRANSLATOR GADGET "LANGOGO GENESIS"

The aim of this study was to investigate the use of artificial intelligence technologies in everyday life on the digital translator Langogo Genesis example with streaming technology and data processing for instant translation. It is presented Langogo NMT technology, which uses an artificial neural network that provides high translation accuracy.

People's vocal apparatus is built in such a way that they have the ability to use a much wider range of sounds than other inhabitants of the Earth. A person uses about 100 facial muscles to reproduce sounds while communicating. Moreover, dozens of brain areas are involved in communication to turn sound vibration into an understandable interpretation. It goes without saying that the language has arisen from the need to communicate. [2]

There is a possibility of misunderstanding each other, because the variety of languages is used in international communication. But when one doesn't understand the language, you can use the subject's display and make the appropriate sound by pointing to it. This method does not always achieve the expected result, and it is quite primitive. You see the same word in one language has a completely different meaning than in the other one. For example, the English word "gift" in German and Norwegian means "poison", and in Swedish - "married".

Nowadays, artificial intelligence (AI) is used to support the conversational interaction of machines and people, as well as to improve international communication between people. The principle of active interaction between machines and people is focused on understanding voice, text and graphics levels. [1]

The conversational artificial intelligence trend expands the communication and understanding possibilities and limits of people from different countries. Machine translation provides access to information in any form and language provided: written or spoken. It also serves as an opportunity not only to communicate, but also as an access to scientific, marketing and advertising information.

There are many virtual assistants on the market, the most popular of which are Alexa, Siri, Google Assistant, Cortana, Samsung Bixby. They use speech recognition software. There are also many language learning programs, such as Duolingo or Rosetta Stone. This software works with speech recognition algorithms to determine spoken language. It then analyzes the sound to turn it into text.

Langogo Genesis is a multifunctional device that includes an interpreter, Wi-Fi access and AI voice assistant. The device was specially designed to provide comfortable travel for every tourist, regardless his language of communication. Langogo is a two-way translator that provides instant real-time voice translation. It has 24 translation mechanisms with one-button translation design to increase the accuracy and convenience of translation from language to language.

Langogo is not only a travel translator, but also a convenient tool in the business world and education. It has integrated advanced solutions for conferences, lectures, forums translation, and all these increase the efficiency of interlingual communication.

Streaming technology instantly processes the received data and translates in just one second. Langogo also features NMT technology, which uses an artificial neural network that provides high translation accuracy. With 104 languages translated, Langogo meets a variety of requirements in several scenarios. [3]

This translator is equipped with the possibility of voice transcription and can be used during commercial conferences, media interviews, classes, lectures and training recordings. Langogo provides voice transcription, which allows you to convert audio to text in real time, including online editing. Another advantage of this device is the synchronization with the cloud storage, as the user is not limited by the Langogo device, and can view the results of the Langogo translation via any other device connected to the World Wide Web.

Langogo Genesis has gained widespread popularity among travelers around the world, as it translates with high accuracy and supports more than 100 languages. It also has a built-in AI voice assistant, which answers any user's question: help find the way, tell you the exchange rate and more. Thanks to these tools Langogo sales abroad about 30,000 units, the best international evaluation agencies have given high scores and appreciation to the app.

Genesis has many other advantages too. As a program based on artificial intelligence, Genesis is constantly updating the functionality of the Langogo device, increasing and upgrading capabilities, through the cloud technologies with many practical features. Smart Record is one of the amazing features of Genesis.

With Intelligent Recording, Genesis records and transcribes 104 languages in real time. At present, Genesis can distinguish between two or four native Chinese speakers. After recording, users can assign the number of interlocutors, and then a speech script with multiple speakers will be automatically created. On the official Langogo website, users can manage or edit the text decrypted from the record, as well as download the edited text and record. In addition, edited text can be automatically updated on the Genesis device.

Thanks to the "Intelligent Recording" function, Genesis serves not only as an AI translator, but also as an intelligent recording pen. It helps users record voices during travel, business conferences, communication, study, etc., and makes it easy to fill out travel notes, meeting minutes or study records.

Langogo Genesis was first popular in the markets of North America and France, and then became the best-selling AI translator in Amazon Germany.

AI technologies and their solutions are a driver for business growth and economic development. These technologies are used in many areas: from tourism to education and business education.

Digital translators are getting better every year. AI has evolved significantly due to the creation of neural machine translation. The ability to manage large amounts of data gives a very wide range of applications. This may mean that many companies will be able to offer better services and its quality, which eliminates the unpleasant moments of incorrect translation while using Langogo.

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CAT TOOLS AND THE SIGNIFICANCE OF THEIR USE IN PRACTICAL COURSE OF TRANSLATION LESSONS

Actuality of theme. Machine translation is far from ideal, meanwhile, manual translation demands a lot of time and effort. The perfect decision is an automatic translation, which combines machine translation with human editing. Therefore, the best way to do a perfect translation is to use CAT software.

The research aim is to analyze CAT (computer-assisted translation) tools and reveal their role in taking *Practical course in translation of the main foreign language*.

The results and discussion. First of all, it is necessary to mention that CAT tools are software applications that support the translation of text from one language to another. CAT tools for translation are engineered to automate translation-related tasks, such as: submitting, editing, managing, and storing translations [1].

One of the most distinctive features of such tools is dividing the text into segments, which helps to focus on one piece of writing and always know where you stopped. Moreover, during translation, the software saves each source segment and its corresponding translation as an entry in a database called translation memory (a record of previously created translations that is aligned with source texts) [1]. There is also an opportunity to find the appropriate translation from AutoSuggest dictionary (in some tools). If in the same text some words or phrases are repeated, CAT tool offers to use the translation written by the user before. One more advantage of such services is the capacity of creating your own glossary and then use it while translating other documents. In most tools there is an ability to insert source to target (e.g. websites or names that can not be translated).

Every CAT tool has its distinctive features. Some of them have machine translation capability, Spell Check, or real-time collaborative teamwork, others no. Such tools as Smartcat and Omega are free of charge, meanwhile, for using Trados Studio you should purchase the license and then you get the access to the learning materials and pass the exam for receiving the certificate.

All the advantages mentioned help a lot while translating files for the Practical course of translation lessons. The greatest benefit of CAT tools is saving the format (font, size, alignment, etc) of the different files (doc, ppt, xls, pdf). That significantly speeds up the translation process and helps translators-beginners a lot.

Conclusion. CAT software offers a great variety of functions, which differs from tool to tool. The use of CAT tools makes the job of the translator easier and increases their productivity. Using such services during the Practical course of translation lessons helps to gain precious skills, which can be implemented during professional life.

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THE USAGE OF MODERN TECHNOLOGIES IN FOREIGN LANGUAGES

The use of modern technologies in foreign language teaching is a useful aspect for learning foreign language vocabulary and achieving language goals.

Distance learning in the process of learning foreign languages is considered in the works of both Ukrainian and foreign pedagogies, including Y.M. Gorwitz, E.I. Dmitrieva, V. M. Kucharenko, H. I. Mulina, Y. S. Polat, A. V. Khutorsky and others. Researchers say that thanks to the Internet, students can have more opportunities to improve their communication skills.

The relevance of the article is due to the need to introduce information technology in the educational process, which provides high efficiency of foreign language learning, as well as helps to interest students during the learning process. The aim is to theoretically substantiate the need and importance of distance learning in modern education by highlighting the main advantages of using modern technologies.

The American researcher Reims considers foreign language learning as a paradigm, that:

1) sees communication as the basis of the learned language;
2) emphasizes the true purpose of language usage;
3) promotes practical language acquisition instead of the usual study of grammar rules;
4) develops humanistic and interpersonal communication;
5) focuses on the learning process and learning environment [4, p.23]

Distance learning is an innovative technology that requires students to be honest and eager to learn, and tutors to be attentive and persistent when testing student`s work.

Iryna Svirepchuk notes that there are a number of characteristics that should be inherent in any type of distance learning of a foreign language, so that it can be considered as effective:

1. Distance learning involves more detailed planning of student`s activity, clear statement of objectives and goals of learning, delivery of the necessary teaching materials.

2. The key concept of distance learning education programs is interactivity. Distance learning courses should provide maximum interactivity between students and tutors, feedback between students and learning material, and provide the opportunity for group learning. It is very important to provide highly effective feedback so that students can be confident in the correctness of their action. Feedback should be prompt, post-operational and evaluative.

3. The most important element of any course is motivation. This requires the use of various methods and technologies.

4. The structure of the distance learning course should be modular, so that students have the opportunity to see their progress from module to module, have the opportunity to choose any module depending on their level of knowledge. It should be noted that large modules significantly reduce the motivation to learn.

5. Particular importance in teaching English is the soundtrack, which can be implemented with the help of network technologies [2, p.104].

Distance learning of foreign languages with the use of modern technologies should ensure the implementation of such tasks:

1. formation of cognitive activity, the need for knowledge of foreign languages;
2. improving the skills of dialogic and monologue speech;
3. formation and development of skills and abilities with the use of Internet materials;
4. improving listening skills with adapted audio texts;
5. formation of elements of global speech.

The biggest advantage of distance learning when learning the foreign languages is that it allows students to use many learning tools. The way of gain knowledge on the Internet shines more interactively with the help of software for online classes. It improves the ability to acquire and maintain knowledge in the subject. Learning foreign languages remotely provides more opportunities to interest students during the educational process.

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TRANSLATING HUMOROUS PROPER NAMES IN THE COMPUTER GAME SERIES *THE SIMS*

The aim of the paper is to analyse the Polish translation of the proper names in *The Sims* franchise. The translation was commissioned by Electronic Arts Polska, and various translators took part in translating the series. The main subject of this analysis is the use of wordplay in various proper names present in the games. They constitute an integral part of the game, as every character has a name. They are formed with the use of wordplay, which adds a humorous undertone and sometimes a hidden meaning. What is more, names of books will also be discussed, as books play a specific role in the gameplay, and their titles also pose certain difficulties in translation.

The research is focused on explaining key notions related to game localisation, proper names, wordplay and cultural references, and suggests certain strategies that help in the rendition of these challenging notions. At the beginning, the game localisation process is explained. The definitions of game localisation by O'Hagan, Mangiron, Carlson and Corliss are provided. Afterwards, different types of localisation and several problems related to rendering culture, language and register in games are analysed. In particular, the skopos theory by Hans J. Vermeer is presented with regard to the localisation process. The paper also focuses on the notions of maintaining immersion, and rendering game series and in-game humour.

Further, the rendition of proper names is addressed. In this connection, the techniques of rendering proper names by Farahzad and Fernandes are presented and the translation of wordplay is elaborated. Here, Delia Chiaro's and Dirk Delabastita's definitions of wordplay are analysed and compared. Furthermore, Delabastita's model of rendering wordplay and Patrick Zabalbeascoa's binary branching tree are discussed in order to demonstrate various strategies of rendering wordplay. The process of rendering cultural references are explained and several techniques adopted from the ideas of Jan Pedersen are suggested. The second chapter of the paper is devoted to the analysis of the proper names in the game series *The Sims*. Certain difficulties in the rendition of the names are discussed in the paper and are followed by the analysis of the official rendition. The final chapter consists of three parts: the first one focuses on the analysis of proper names with overt meanings, the second one analyses the names that contain wordplay, while the third one analyses the names that contain cultural references. All the examples are examined, bearing in mind the back story of the characters and the meanings of the names.

Session work № 2

CURRENT RESEARCH IN THE FIELD OF ECONOMICS

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INSURANCE MARKET IN UKRAINE AND ITS DEVELOPMENT

The aim of the study was to investigate the insurance market in Ukraine and its development in today's conditions.

Global changes and the rapid development of financial technologies, exacerbated by the complexity of the system of institutions involved and the use of a wide range of financial instruments, are determined by significant shifts in both supply and demand for financial services. The insurance market is forced to respond to the outlined transformations in order to meet the needs and wishes of its customers in order to protect their insurance in terms of improving approaches to doing business, developing innovative sales channels and providing services [1, p.6].

The level of development of the insurance market is determined by the socio-economic situation in the country, the willingness of the population and businesses to consume such financial services, as well as government support for the insurance business.

The COVID-19 pandemic has affected the insurance market. In 2020, the trend of growth in insurance premiums continued - an increase of 12%. Also in 2020, payments of insurance indemnities increased by 9%. In addition, in 2021 the trend of reducing the number of insurers continued. First of all - due to voluntary renunciation of licenses and withdrawal from the market on their own initiative the number of insurers has decreased by 24 companies over the past 11 months.

The National Bank noted that last year and early this year the financial condition of a number of insurers continued to deteriorate. In March 2021, the regulator issued 46 acts of violation of regulations by insurers and seven acts - due to failure to report to companies.

The National Bank has ordered 20 companies to eliminate the violations. It suspended the licenses of another 17 companies, seven of them for non-reporting and 10 for violating regulations.

Some companies have already provided information, and the NBU makes a preliminary conclusion that the business models of insurance companies change from year to year. Thus, about 20 companies in 2020 compared to 2019 had significant changes in the structure of insurance, customer categories, activities [3].

The new operating conditions have led to both positive and negative consequences. The pandemic had a particularly negative impact on aviation insurance and property insurance, as these areas were not necessary due to quarantine. Car insurance has also suffered some losses, especially due to a reduction in the number of contracts related to new car insurance. At the same time, such insurance as CASCO and OSAGO remained stable [2].

COVID-19 has had the greatest impact on health insurance. Insurance companies are changing their programs or making certain adjustments, and a new risk is emerging - the coronavirus, which many companies already insure against.

One of the positive consequences was the development of innovations in the field of insurance, digitalization. Insurance companies work online, so there is no need to meet in the office. Therefore, we can say that insurance companies have already begun to adjust and find different solutions for normal and stable operation.

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CLASSIFICATION OF NEW ENTERPRISE PRODUCTS

The phrase *"new product"* or *innovation* is widely used. This term refers to both modified products and radical innovations that open up fundamentally new ways of satisfying certain needs.

New products can be different in nature and origin. A globally accepted classification is shown in Fig. 1.

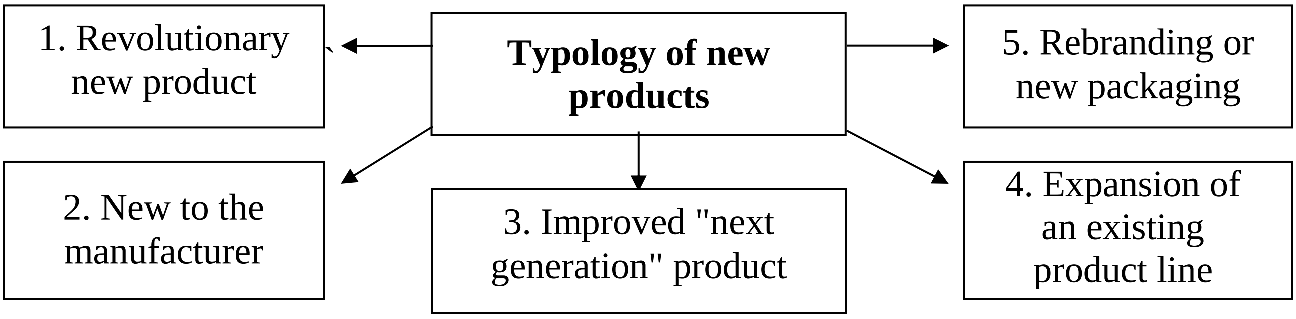

Fig. 1. Classification of the typology of new products [6, p.52]

Depending on the chosen criterion, there are other approaches to the classification of "new products" [1]:

1. Depending on the nature of changes in the physical or perceptual characteristics of the new product, the new product is considered as:

- original (or radically new) products, the physical and perceptual characteristics of which are described in new terms; they tend to bring about a qualitative change in the way people work;

- new (or modified) products whose physical characteristics have been changed but whose perceptual characteristics remain unchanged; they ensure the improvement of existing practical tools to rapidly meet current changes;

- newly positioned products, in which only perceptual characteristics have changed, making the consumer perceive the goods in a new way; these are changes in management, marketing and communication options as components of commercial realisation of the product.

2. Depending on the level of product novelty, the following gradation of innovations can be distinguished [2, 50]: world novelty products; products new to the domestic market; products new to the company; expansion of the existing product range; new product; changes in the product positioning; production innovation resulting in a decrease in the cost of production.

Only a small proportion of innovations (about 10%) are world-class, while most of them (about 70%) are additions or modifications to an existing product range.

3. Depending on the level of risk that accompanies the implementation of the innovation in life, the following situations can be observed (Figure 2):

Marketplace	Goods and technology	
	Known	New
Known	Concentration	Technological risk
New	Commercial risk	Diversification

Fig. 2. Degree of product novelty and strategic risk associated with its introduction to the market [5, p.217]

- the market and the technology are well-known, so the risk is minimal; in this case, the company relies on its competence and previous experience;

- new market, but a well-known technology, the risk is mainly commercial, and success is determined by the marketing know-how of the company;

- the market is known, but the technology is new, the risk is technological, and success depends on the technological know-how of the company;

- new market and new technology: the risks are added, and a diversification strategy is required.

4. Depending on the source of the idea of creating a new product, innovations can be divided into [4, p.90]:

- the market is the only one in which the product is "consumed", i.e., market-driven;

- products that are "lab-generated", i.e., based on fundamental research and the capabilities of technology.

In today's environment, businesses are forced to adapt to market conditions. They are focused on the concept of marketing, namely the search for new ways and methods of satisfying the existing customer needs and creating new ones. Under such conditions, many companies are interested in gaining a competitive advantage that allows them to serve their customers and satisfy their needs better than their competitors [3, p.111].

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GASTRONOMIC TOURISM AS A WORLD PHENOMENON AND ITS DEVELOPMENT IN UKRAINE

The aim of the study was to investigate gastronomic tourism as a world phenomenon, its development in Ukraine and identify the features of gastronomic tours and places to visit.

Humans need food to survive. It provides us with key nutrients that are essential to daily functioning and wellbeing. But food is more than nutrition. Food reminds us of family dinners. It makes us happy when we are sad. It introduces us to different cultures. Gastronomic tourism draws from these psychosocial factors.

Gastronomic tourism is a type of tourism associated with acquaintance with production, cooking technology and tasting of national dishes and drinks, as well as with the culinary traditions of the peoples of the world. Tours for gourmets, connoisseurs of gourmet dishes from around the world appeared in the last decades of the last century, although the first fans of such dishes have been known since ancient times. However, culinary tourism as an independent area of tourism has emerged recently. The term culinary tourism, which is used in many countries today, was coined by University of Ohio professor Lucy Long [2, p. 135].

Features of gastronomic tours

1. Gastronomy is an opportunity to revive and diversify tourism, it is a reliable way to attract tourists to countries and regions already familiar to them.
2. Gastronomic tour excludes the concept of seasonality for travel (travel is carried out throughout the year).
3. In gastronomic travels the tourist learns about everyday life, history and culture of the country much more than in classic excursions.
4. During the tour, he meets families who have been working in the vineyards for centuries, or are engaged in cheese-making, or have been making ham for centuries. These people are of different wealth and origin, the ancestors of some were aristocrats, others entrepreneurs or farmers.
5. In the gastronomic tour, tourists visit wineries, breweries, small farms and factories, taste famous (and not very) national products, as well as wines and other traditional drinks. They visit local markets, take part in culinary master classes with professional chefs and friendly owners of their own farms and lands. Attend gastronomic festivals and culinary shows.
6. The spread of prices for gastronomic tours is very large. The cost directly depends on the duration of the tour, the chosen country, the season and the intensity of the program. Trips to important gastronomic events will cost more [3].

Gastronomic tourism is perfectly suited to meet the needs of age and culturally diverse individuals. Food is uniquely suited to promoting individual cultures and bringing people from diverse backgrounds together. For example, visitors to Poznan, Poland each October and November can experience Saint Martin's Croissant Feast. During this time, bakeries throughout the city create croissants topped with a sugar glaze. This event has thrilled locals and visitors since at least 1860. Not only can visitors get a glimpse of Polish culture, but the purchase of croissants supports the economy and creates jobs for the local people [1, p. 19].

This global trend continues to gain momentum in Ukraine. This is claimed by many national scholars. They note that tourist flows are growing in those regions where interactive tourist services are concentrated, which are based on customs and traditions - festivals, public holidays and more. Gastronomic events are factors increasing interest in gastronomic tourism. They also contribute to the development of new businesses that are related to the tourism industry, which in turn has a positive impact on economic development in the country.

About a hundred culinary festivals and holidays are held in Ukraine every year, and there is a tendency to increase the number of such events. September - the most extensive such events, followed by June, October and August. Thus, the highest activity shows up in the summer and fall. Gastronomic festivals and holidays in Ukraine are dedicated to various dishes: borsch, potato pancakes, dumplings, stuffed cabbage; drinks: wine, vodka, beer; vegetables and berries, cherries, strawberries, tomatoes, cucumbers, watermelons; honey, sweets, etc. It was found that most gastronomic events are held in Western Ukraine, namely in the Transcarpathian and Lviv regions, followed by the city of Kyiv.

In Ukraine, among the restaurants of national cuisine, the most popular is Ukrainian cuisine - 36.8%, in second place - French, which covers 21%; Italian, Caucasian and Japanese cuisine along with 7.9% and 18.5% - other cuisines [5].

Cheese and wine paradise of Transcarpathia

It is best to get acquainted with the traditions of original and authentic cuisine of Transcarpathia, following the route Uzhgorod - Mukachevo - Beregovo. Such a trip and vacation in Beregovo will bring many pleasures, and local cuisine will definitely surprise with its palette of flavors. It is worth trying rich bograch, hearty banosh, meatballs and other local delicacies. But most of Transcarpathia is famous for a variety of cheeses that will not leave indifferent even the most avid gourmets, and delicious wines. Farm sheep and goat cheeses of different varieties are environmentally friendly, as the animals are raised on the cleanest mountain meadows.

Traditional Poltava dumplings

Hospitable Poltava region impresses with its picturesque nature, soulfulness and colorfulness. Here tourists will get acquainted with the capital of pottery Opishnia, visit the legendary Dykanka and many other interesting cultural and historical places. But the region attracts the most with its traditional Ukrainian cuisine. Probably, such a variety of national dishes can't be found in any other city in Ukraine. Especially popular among tourists are master classes on cooking famous Poltava dumplings. This region is famous for this dish, in Poltava itself a monument to dumplings was even erected.

Aromatic coffee with Lviv cheesecake

Lviv is rightly considered to be the capital of gastronomic tourism in Ukraine. The city is a bright representative of Galician cuisine, which surprisingly combines Ukrainian culinary traditions with Polish, Romanian, Austrian and Jewish. But Lviv is most famous for its fragrant coffee and delicious desserts. Lviv chocolate, strudel and cheesecake became world famous. The most popular of them is the Lviv cheesecake, which is prepared according to a special recipe by every self-respecting institution. Serve it, usually with chocolate, caramel or fruit additives. But do not forget that in Lviv you can try not only delicious sweets, but also first-class beer.

Odessa pilaf with mussels

Odesa is famous for a variety of delicious seafood dishes, due to its coastal location. Among many fish dishes you should try gefilte fish. This is stuffed fish made from several types of fish. Fried fish is always in demand. But still Odessa pilaf with mussels is especially popular. It is prepared by both famous restaurants and small coastal cafes. Also, mussels are often simply fried on large metal sheets. Boiled small shrimps, called "crabs", are a traditional Odessa snack for beer.

Cult Korosten potato pancakes

Every September, Korosten hosts an incredibly tasty and interesting event - the International Potato Festival. This is an unforgettable journey into the magical world of local flavor and Polissia cuisine. Korosten is one of the cities of Ukraine, which is famous for its traditional national dishes - hearty, tasty and varied. But potato pancakes are the calling card of the region. A potato monument was unveiled in the city itself during the second festival [4].

Conclusion

Gastronomic tourism is becoming more and more popular among tourists every year, plays an important role among general tourism, leads to its development and diversity. Gastrotourism is of great importance for the country's economy, as it can potentially bring high revenues to its budget. It did not miss the social and cultural infrastructure. Its development improves the lives of the population, gives people the opportunity to communicate and develop in this direction. Gastronomic tourism carries historical memory as well as cultural value for its people. The experience of foreign countries has shown that this type of tourism should be developed and improved.

In general, gastronomic tourism is important in the development of not only the regional tourism market, but also the state. Our country is rich in its dishes and has great potential for the development of gastronomic tourism. It is necessary to improve and promote this type of tourism in Ukraine in all regions.

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GLOBAL FOOD CRISIS AS A RESULT OF WAR IN UKRAINE

Ukraine has been one of the world's largest contributors to the World's Food Programme – the UN agency that provides food aid to countries in crisis. Ukraine plays a major role in global food markets and is among the TOP 5 exporters of grain and sunflower oil in the world. According to the analytical service of the Ukrainian Agrarian Council (UAC), world exports of sunflower oil in the 2021-2022 year amounted to 10.9 million tons, and half of this – 5.4 million tons – were exported by Ukraine. A huge number of countries around the world depend on Ukrainian oil. For example, such giants as India, most African countries and a lot of others rely heavily on imports of sunflower oil for domestic food supplies [3].

As of April 2022, the shortage of Ukrainian oil is already largely felt in the food systems of the whole world. Ukraine has already lost at least $1.5 billion in grain exports since the war began. Food prices are quickly rising and basic goods are disappearing. For instance, in February, US grocery prices were already up 8.6 percent over a year period, the largest increase in 40 years, according to government data. Economists expect the war to further inflate the prices.

Ukraine ranks second in exports of barley and rapeseed in the world, third – in exports of rye and sorghum. In addition, Ukraine provides almost 10% of the world's grain supplies.

With regard to Ukraine itself, the agricultural sector provides up to 40% of foreign exchange earnings, which directly affects the stable exchange rate of the hryvnia.

At the same time, only during the first week of hostilities on the territory of Ukraine, the price of food wheat increased by 100% and amounted to $400 per ton comparing to $150 per ton for the same period last year.

Therefore, the war in Ukraine threatens the global food crisis. The chief of the United Nations World Food Program has warned, “The global food crisis is beyond anything we’ve seen since World War II” [2]. This issue is especially acute for the

Middle East and North Africa (Egypt, Tunisia, Morocco, Pakistan, Saudi Arabia, and Turkey) since these countries are the main buyers of wheat and corn on world markets.

In vulnerable countries with a history of political unrest evoked by fragile economies and unaffordable food, the risks are clear.Rising prices may raise social tension in some countries, such as those with wear social safety nets, few job opportunities, limited fiscal space and unpopular governments [4]. Tunisia depends highly on wheat with an import from Ukraine of 50%. The recent years, Tunisia has struggled with unemployment, inflation and public debt. Yemen has been in war since 2014 and is dependent on bread production. 23 million Yemenis face hunger, disease and other life-threatening risks and it is only getting worse. The Lebanese economy is in crisis with sky-high inflation and usually the country imports more than half its wheat from Ukraine. Even before the war in Ukraine, the prices in Egypt had risen with 80% between April 2020 and December 2021. The halt of wheat production in Ukraine will push Egypt into an even bigger food insecurity than before.

That is why the failure of the sowing campaign in Ukraine, the reduction of grain production, its shortage and, consequently, rising prices, is a catastrophe for the whole world.

Over time, the crisis will only intensify. Russia is deliberately undermining the food security of Ukraine and the world by deliberately striking at Ukraine's agricultural machinery. A huge number of sown areas are currently unusual or blocked. The war has reached deep into the fertile plains of a region known as Europe’s breadbasket, paralyzing harvests, destroying granaries and crops, and bringing potentially devastating consequences to a country producing a large share of the world’s grain [2].

Protracted fighting in Ukraine could interrupt the annual cycle of sowing and reaping on Ukrainian farms, disrupting the global food trade beyond the end of 2022. According to the U.N. Food and Agriculture Organization, at least 20 percent of Ukraine’s planted wheat already may not be harvested due to direct destruction, constrained access or a lack of resources to harvest crops.

Currently, Ukrainian farmers are feeling a total shortage of labor, because many workers went to defend the country – some were conscripted, others went to the defense. However, even if not all workers went to war, in some regions they are simply afraid to go out into the fields, because active hostilities continue.

In addition, there is a big problem with fuel. Ukraine received up to 75% of diesel fuel from Belarus and Russia which have already closed supplies to Ukraine.

The available fuel went to the needs of the army. However, even if fuel was available, it is almost impossible to buy it, as well as sowing material, plant protection products and fertilizer, because farmers lack working capital.

The ports are blocked, and farmers are currently unable to export grain. It is problematic to take a loan, because the banking system is also in a “zone of turbulence”.

In such circumstances, it is extremely difficult, sometimes impossible to conduct a sowing campaign. However, the UAC is involved in solving these urgent issues every day together with the deputies of the profile committee and the Ministry of Agrarian Policy.

Currently, the issue of the availability of employees through the reservation of conscripts has been partially settled – in agreement with the Ministry of Agrarian Policy of the Ministry of Economy, they are not currently drafted into the army.

The government also proposed a program of financial support for farmers during the martial law to implement the sowing campaign. In particular, it is proposed to compensate the interest rate on the loan; the loan amount can reach up to UAH 50 million and be issued for 6 months [1].

However, despite all the measures taken, the world is facing a global food crisis that will affect billions of people around the world. Therefore, there is an urgent need for an aggressive external intervention to avert the food crisis. Information sharing among countries about their food status, as well as keeping borders open for agricultural exports, as suggested by G7 agriculture ministers, are important responses to the food crisis. It may make sense to send in farmers to help to revamp the agricultural sector in Ukraine, but it may be done once the fighting subsides. To reduce the consequences of the catastrophe, the world must immediately stop the aggressor and further provide large-scale support for the rapid recovery of Ukraine's agricultural sector.

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PROFITABILITY OF AGRICULTURAL ENTERPRISES

Modern market conditions put before domestic enterprises new requirements to increase their volume of production and develop in conditions of competition and under the influence of external and internal factors. Any entrepreneurial activity cannot be promising if its financial result is not positive and it doesn't have dynamic growth. Based on these demands of the modern world, the attention of each leader is mostly focused on the profitability of a certain enterprise. Therefore, in order to gain the optimal level of profitability, business leaders need to study carefully the content and essence of present concepts. Only such a thorough approach can make management decisions effective.

Increasing the profitability of agricultural products is the basic activity of agricultural enterprises. It is extremely important to create a reliable platform and hire professional and competent staff. Such conditions will ensure sustainable rural development of economy in the whole country and provide scientific, technical and social progress.

The most problematic issue of the agricultural sector in the economy is the global economic crisis and pandemic. Under such conditions the development of agricultural enterprises and production processes are quite problematic. The market requires to produce and distribute agricultural products according to current needs and taking into account limited resources.

According to scientific researches the main purpose of agricultural enterprises is "to make profit and satisfy the needs of consumers using high quality agricultural products. Special attention now is given to production management at all stages of performed operations, including processes from supply to sale. At the same time, flexibility is becoming increasingly important in production and it can be achieved through rational organization process and usage of new equipment and technologies, etc. "[1].

Issues related to increase of the profitability of agricultural enterprises are covered in scientific research of Ukrainian and foreign scientists. The presence of debates in these studies indicates importance and significant interest in the chosen area.

Nowadays the economy of Ukraine is not so good, that's why a large number of enterprises face several problems related to ensuring a sufficient level of profitability and competitiveness. For instance, in the case of absence or reduction of profitability, there is a direct threat of reducing the liquidity of the enterprise and consequently, its bankruptcy. A market economy makes profit one of the most important economic indicators. Stable development of the enterprise and economic development of the country are tightly interconnected [3].

The American economist F. Knight notes that no economic term or concept is used in such a huge number of meanings as "profit", this also applies to the category of "income".

Making a profit is the main goal of each commercial enterprise. The company can be called successful, when her income exceeds her expenses. It is a general truth, if expenses exceed the income, the company suffers losses. The growth of company's profit give it a wide range of potential opportunities.

The total profit of the enterprise is the end result of the work. It takes into account the profit from all activities of the enterprise: profit from sales of goods, works, services - gross profit, profit from operating activities, profit from ordinary activities, income from extraordinary activities. In addition, calculate net income. The main component of total profit is the profit from the sale of marketable products. It accounts for over 95% of total profits.

Suppose it is known that one company get 10, and another - only 2 million UAH. profit. To say that the first company, which has a profit 5 times higher, works better than the second - is to draw the wrong conclusion. In order to accurately calculate the profitability of the enterprise, you need to compare profits with the costs of the enterprise or with the amount of production assets of the enterprise. This comparison characterizes the profitability of the enterprise.

A satisfactory level of efficiency requires, on the one hand, exceeding the final results over the costs of achieving them, and, on the other hand, comparing the results obtained with the results of similar objects. Based on this, although the absolute amount of profit received by the company is a very important indicator of activity, but can`t characterize the level of efficiency, this is due to the fact that the absolute amount of profit characterizes only a one-time economic effect.

The level of profitability is characterized by the analysis of absolute and relative indicators. The absolute indicator is profit. At the expense of profit the company can increase the wage bill, expand and increase production turnover, finance other activities. In general, profit is defined as the difference between the profit of sales and their cost [2].

The dynamics of enterprise development directly depends on its profit. When distributing funds from profits, some of them are allocated for the purchase of more advanced equipment, training of employees, improving of working conditions, advertising that leads to increased efficiency and getting more income.

The formation of the company's profit is influenced by a wide variety of external and internal factors. External factors include: economic conditions, market capacity, effective consumer demand and state regulation of enterprises. Internal factors include: the volume of output, production cost, the price of sold products and range of products [4].

The economic meaning of profit is revealed in the functions it performs. Profit is an important category of market relations and has the following functions:

1) evaluation function - is the ability to assess the quality and efficiency of the business entity during a certain period;

2) distributive function - means using profits as the formation of sources of financing the enterprise and deductions in the form of taxes to the budgets at all levels;

3) incentive function - is the ability to stimulate the owners and employees of the enterprise, to conduct operational and financial activities more efficiently, to obtain greater profits, to meet their own needs and the needs of the enterprise [5]

Moreover, there is a significant need for effective and efficient management of enterprise profits. With the help of effective profit management, which includes the implementation of the evaluation, distribution and incentive function of profits, the company is able to ensure its economic development and productivity [8, c.35].

Furthermore, during the formation of the company's profit it is necessary to develop a system of indicators to assess its potential volume and quality. In the process of profit distribution the most important areas of enterprise development should be determined, because it will help the company to work more effectively. There is a tendency to reduce the income of economic entities in the economy of Ukraine significantly, which leads to a decrease in profits or even losses of many enterprises.

With the help of profitability, the company determines the adequacy of profits in comparison with other economic variables related to the financial and economic activities of the enterprise. To determine profitability, you need to correlate profits with the factors that have the greatest impact on profit. Such indicators may be: income, expenses, resources or capital [3].

Profitability is an indicator that characterizes the effectiveness of the financial and economic mechanism and profitability of the enterprise in conditions of fierce market competition, as well as the economic crisis. It reflects the adequacy of the management system and the feasibility of management measures in the operation of the trading company [6, c.31].

Profitability can exactly characterize the level of management and the appropriateness of decisions made by managers over a certain period of time. The profitability of agricultural enterprises directly depends on the achieved level of efficiency of certain types of production.

Summarizing all above, profitability is a relative indicator of enterprise's efficiency. The main factors which indicate it are the quality of products, its cost, reducing losses of material resources during production, as well as more productive use of equipment [7, c.16]. In order to make a more accurate and high-quality assessment of the enterprise, it is much better to use the profitability indicator, which allows you to compare the results of activities with the resources spent on their achievement [6, c.30].

Thus, according to our study, profit analysis, educational literature and scientific articles we have found the lack of a comprehensive methodology for economic analysis of financial results and profits. That’s why, the development of comprehensive methodology is highly important, because the analysis of formation and distribution of profits can help a certain business to flourish and to overcome the effects of crises and prevent them in the future.

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THE DIFFERENCE BETWEEN THE CONCEPTS OF A LEADER AND A MANAGER

The success of every company depends on the person who manages not only production processes but also human minds.

Speaking about a head of the company, there are always two terms: a leader and a manager, which are not the same. A manager is a person who distributes work and is responsible for its results which can be different.

But there is also a place among managers for leaders who influence the team and act as levers for it, accelerating the achievement of the company's goals [1, c. 63].

Thus, a manager is a position that allows a person to make their subordinates do their job as efficiently as possible and reach the company's goal. The main manager's functions are:

● direction and control of work and company resources;

● providing recruitment, maintaining the required number of well-motivated and developed
personnel to ensure the achievement of missions and objectives;

● track progress in the implementation of plans to ensure that the company achieves its goals as cost-effective and efficient as possible;

● develop and maintain a research program to ensure that the company stays advanced in the industry [2, c. 74].

The manager is a member of the organization responsible for performing the above mentioned functions. But the question arises whether all managers are leaders?

Most managers tend to be leaders, but only when they perform leadership responsibilities, which include communication, motivation, inspiration and guidance, as well as encouraging employees to rise to a higher level of productivity [3, c.58-60].

Unfortunately, not all managers are leaders. Some managers have poor leadership qualities and employees carry out the orders of their chiefs because they are obliged to do so, not because they are influenced or not inspired by the manager.

Manager’s responsibilities are usually a formal part of a job description. The managers carry responsibility not only for their actions, but also for the actions of their subordinates.

The main difference between a manager and a leader is that leaders do not necessarily occupy managerial position. Anyone can be a leader, even if such a person is not an authoritative figure in an organization.

The leader personally invests in tasks and projects and demonstrates a high level of passion for work. Leaders are very interested in the success of their followers, allowing them to achieve their goals (not necessarily organizations goals).

A leader does not always have material or formal power over his followers.

Subordinates of the manager are obliged to carry out orders, while the following is optional when it comes to leadership. Leadership works on the basis of inspiration and trust among employees and those who want to imitate their leader, can stop at any time. As a rule, leaders are people who perceive changes, who are agile, creative and adaptive.

A striking example of a leader who has grown into the manager is Tim Cook, CEO of the United States Apple Corporation. In 2004, Tim Cook assisted Steve Jobs (the founder) in running the company, when the founder was being treated for cancer, and in 2007 Tim was appointed the chief operating officer. After Steve's death in 2011 Cook became CEO.

For most people, replacing a successful manager like Jobs was impossible, but Tim Cook, who knew the company perfectly, could continue Steve's business. The current CEO Apple already had the necessary experience to run the corporation and handle the responsibilities tremendously effectively. And in the absence of Steve Jobs, Cook was CEO and in charge of all day-to-day management operations. He isn't like Steve, but he has all the qualities of a leader, first and foremost, professionalism to achieve further goals of the organization. Today, the company is in the top 5 most expensive companies in the world, thanks to Tim Cook. And Steve Jobs remains an inspiring leader as other corporations discover new things and think differently.

Thus, the difference between a leader and manager is that the manager is an administrator, who has a clear plan, responsibilities and the system he oversees, while a leader is a person-innovator who inspires the team and encourages and generates new ideas. You need to understand when to suspend your external supervisor and to open an internal leader, because working with a team requires transformation, adaptation and enthusiasm.

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THE CURRENT APPROACHES TO QUALITY MANAGEMENT IN THE HOSPITALITY INDUSTRY INSTITUTIONS

The relevance of considering quality management in the hospitality industry in Ukraine is due to a number of reasons, among which it is worth emphasizing the following. On the one hand, there is a significant increase in the number of institutions in the hospitality industry, although uneven in territorial terms. On the other hand, there is reason to believe that the issue of quality management in the service sphere is not given due attention. Thus, obviously, the level of service quality of domestic institutions in the hospitality industry is much lower than foreign institutions, and the domestic certification system is under development. It is also important to point out the insufficient efforts of hospitality industry institutions to develop and implement the requirements of internal standards of customer service, etc. Note that as Ukraine's popularity as a tourist attraction increases in the near future, these problems will become more acute without making the appropriate decision.

The above-mentioned problems determine the study of quality management in the hospitality industry in terms of existing approaches to it as a necessary element in the study of experience in the field.

The aim of the study is to analyze the current approaches to quality management in the hospitality industry.

The results of the study of professional sources on the existing issues [1–3] allow us to identify the following main approaches to quality management:

1. Production (or technological) approach. Its essence is to properly establish production processes in the hospitality industry institutions, which provide services to consumers.

2. Approach based on the implementation of quality management of international standards ISO 9000 series.

3. Consumer approach. It emphasizes the benefits for the consumer from consuming the service.

Consider in detail the latest approach, which includes: the SERVQUAL method, chart design method, touchpoint method, consumer scenario method, reengineering method, Mystery Shopping method, balanced scorecard system, etc [3].

The SERVQUAL method gives a general idea of service quality and is a multi-dimensional research instrument designed to capture consumer expectations and perceptions of a service along five dimensions that are believed to represent service quality:

1. Reliability. The ability to perform the promised service dependably and accurately.

2. Assurance. The knowledge and courtesy of employees and their ability to convey trust and confidence.

3. Tangibles. The appearance of physical facilities, equipment, personnel, and communication materials.

4. Empathy. The provision of caring, individualized attention to customer.

5. Responsiveness. The willingness to help customers and to provide prompt service.

The SERVQUAL method was developed on the basis of the concept of service quality, created in 1985 by A. Parasuraman. The basis of this method is the algorithm "Expectation-Perception" (P–E). Perception in the methodology is regarded as a measured attitude of the consumer to the service he received.

The chart design method. It is a schematic representation of all stages of the service delivery process, taking into account their division into visible and invisible areas for the client.

The touchpoint method. The process of interaction of the company's staff with consumers at the time of service is called "point of contact". This moment is considered to be controlled, and therefore there is a possibility to model the process of service provision and, accordingly, its control.

The consumer scenario method. It is based on the fact that, in addition to the manager and marketer, service consumers can also participate in the design process.

The reengineering method. In essence, it is similar to the chart design method. However, the difference is that the analysis, control, and adjustment of the process of providing services are all departments of the enterprise.

The Mystery Shopping method. The purpose of this method is to assess the quality of services. Its essence is that representatives of companies under the guise of a buyer visit commercial establishments, and then receive "services". The advantage of this method is unexpected control, secrecy, and direct observation.

Thus, based on the analysis of approaches to quality management in the hospitality industry, we can conclude that currently there is a wide range of methods that take into account the specifics of the service sector and have both advantages and disadvantages. We believe that the issue of quality management in this service sphere needs further research.

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ANALYSIS OF THE BANK'S FINANCIAL CONDITION

The prosperity of each country is impossible without banking. Banking activities are aimed at the processes of collection, distribution, redistribution and use of centralized and decentralized funds, which ensure the practical implementation of all governmental tasks. That's why a well-planned banking affects thoroughly the stability of the economy. The stability of banking institutions is determined by assessing the financial condition. Not only the bank itself depends on the positive financial result, but also the clients who interact with it, and if the bank goes bankrupt, it will definitely cause losses to enterprises and individuals.

Thus, we come up to the conclusion that the problem of bank efficiency, which is reflected in its financial condition, is extremely relevant, because the level of banking stability depends on the level of the economy of the whole country.

The purpose of this thesis is to study the theoretical and methodological principles and practical foundations of the analysis of the bank financial condition, as well as to develop and improve the efficiency of the bank JSC CB "PrivatBank".

In the course of this study the following tasks were set and solved:

1. The essence of banking activity and analysis of financial condition is revealed.
2. Methodical approaches to the analysis of financial condition are allocated.
3. The normative-legal and information base of the analysis is determined.
4. The current state of the banking system in Ukraine is analyzed.
5. The economic characteristics of the bank such as analyses of assets, liabilities and financial results were studied.
6. The financial condition of Privatbank is fully analyzed on the example of the following indicators: financial stability, liquidity, profitability, etc.
7. Ways to improve the financial condition of Privatbank are proposed.

During the study such methods as analytical and comparative methods, comparative analysis, logical, complex, systematic and statistical methods were used.

The practical significance of the obtained results lies in the development and economic justification of ways to improve the efficiency of banking and the effectiveness of the financial condition of JSC CB "PrivatBank".

Assessment of the financial condition of economic entities involves the study and calculation of a set of indicators that reflect the various aspects of the bank and show the effectiveness of management decisions. According to the results of the financial condition assessment, it is possible to see the problematic aspects of the bank's financial activity and develop measures to increase liquidity, solvency, profitability, financial stability, assess the production mechanism and determine its development prospects. [1, p. 228]

The main sources of information for assessing and analyzing the financial condition, financial results, efficiency of financial resources, creditworthiness, investment attractiveness of the bank are the bank's financial statements, namely: Statement of financial position (Balance Sheet), Profit or Loss Statement or other comprehensive income, Statement of Cash Flows and Statement of Equity. Taking into account these documents, workers can complete a financial report.

Financial reporting is an important tool for managing financial processes and phenomena in the bank. The main basis for conducting financial analysis in the bank is the results of accounting, which can be represented as a continuous unified process of accounting for business transactions on the state of assets and liabilities of the bank. The correctness and clarity of financial reporting is a way to effective financial analysis and optimization of management decisions.

Thus, financial statements prepared according to generally accepted standards provide a typical list of information about the bank's activities, meet the needs of most users and provide certain opportunities to conduct financial analysis and provide objective forecasts. [2, p. 30]

In order to analyze the financial condition of the bank in Ukraine, we took into account a system of certain coefficients that characterize the activities of the bank. In world practice, the rating system for assessing the financial condition of the bank is mostly used. The most common method used to analyze the financial condition of the bank is the analysis using financial ratios, which consists of four main blocks: 1) assessment of capital adequacy (financial stability); 2) calculation of liquidity; 3) assessment of business activity; 4) assessment of profitability. [3, p. 221]

The domestic scientific community offers different approaches to diagnosing the financial condition of banks. Prymostka L.O. gives off the following characteristics of the methodology: determining the main indicators of banks (quantitative indicators, assets, liabilities); Structural components of banks' loan portfolio; Quarterly dynamics of banks' income and expenses. [4]. Opinion of Samorodov B.V. : Study of the outflow of deposits attracted by banks from legal entities and individuals; indicators of capital and assets of banks; formed reserves of banks; the ratio of assets and liabilities of banks; currency component of banks' assets and liabilities; loans issued to legal entities and individuals; the ratio of funds raised from individuals and legal entities. [5]

International Financial Reporting Standards (IFRSs) are standards and interpretations issued by the International Accounting Standards Board (IASB) [7]. They cover: International Financial Reporting Standards, International Accounting Standards, Interpretation of KTMFZ, Interpretation of the PKT.

Financial statements are prepared by the financial and economic service of the entity, because according to IFRS 1, the responsibility for the preparation and submission of reports lies with the governing body of the company. In accordance with the standards, the company's financial statements should include: balance sheet, statement of financial performance (income statement), statement of changes in cash, statement of changes in equity, explanatory note and accounting policies. [6, p. 5]

Taking into account theoretical material and after the practical analyses of the dynamics of assets of JSC CB "PrivatBank" during 2018-2020, the following conclusions were made: firstly, the total number of assets compared from 2018 to 2020 increased by 104,477 thousand UAH or 37.58%. The reason for this increase is the increase in investment securities at fair value through other comprehensive income by UAH 39,897 thousand or 50.31%; also significantly affected the growth of investment securities at fair value through profit, which increased by UAH 14,506 thousand or 16.82% and current tax assets by UAH 6,476 thousand or 35 times.

Also, there is a decrease in some balance sheet items. In particular, investment securities at amortized cost by UAH 12,823 thousand or 88.2%; investment real estate by UAH 407 thousand or by 12.19%. Thus, the effectiveness of JSC CB "PrivatBank" over the years is only increasing. This means that the bank is moving in the right direction. Even during the pandemic, he was able to avoid major damage and adapt to stressful conditions.

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LOGISTICS AND ADVERTISING METHODS OF STUDENT STARTUP "PAPERCRAFT MODELS"

Aim of the investigation is a study of logistics and ways of advertising the student startup "Papercraft Models".

In the age of digital technology, designers are increasingly turning to paper products, ie "papercraft". Designers are attracted by the ease of working with paper, texture, smell, variety of paper colors, as well as the ability to create both three-dimensional and flat things. Regardless of the technique, you can create a real thing that can be felt by touch, show to friends, give to the client [1].

Paper products are used in advertising campaigns by global brands, and they are gaining popularity in the domestic market. Leading companies have entire departments of designers who make and work by hand with real tools and materials more than with virtual ones.

The advantage of working with paper is organicity and recyclability. Designers try to create projects while taking care of the environment. The finished product after use can be given for recycling. Examples of the use of papercraft in environmental campaigns are the Naturalment and Abyss projects [1]. Paper models are also created by Paperwolf and Paper Beetle Kits by Assembli.

We present a project that, in our opinion, benefits both the economy and the environment. We produce 3D models with low polygonality, called "PaperCraft-Models" - paper models. They can be used for home decor or any event, unusual gift, hobby for a child. PaperCraft-Models are made primarily in that it is an environmentally friendly handmade product. It is creative, unusual and, most importantly, it is the fastest solution for the decor. It also makes a contribution to solving modern environmental problems. According to information taken from serpstat.com, there are 3.5 million gift searches every month [2].

Note that currently the environmental situation in Ukraine needs help. Quite often we see problems with the disposal and recycling of garbage, toxic substances and materials. Air pollution is also a very important problem. We believe that people need to change course to reduce harmful emissions into the atmosphere. This startup will help people replace materials that are harmful to health and the environment, thereby reducing negative emissions into the atmosphere and land. Papercraft-Models decor is not only visually appealing, but also environmentally friendly.

The product is offered for both corporate clients and private users. You can choose your original model from more than 1.5 thousand models. Papercraft-Models can add a pleasant atmosphere and style to any party, add zest to your home decor and make your photo unforgettable. You can view the finished models on our Instagram page [3].

The project has a wide scope. The markets for our products are the market for gifts, decor, various events and educational games. We see the design of themed parties, photo studios, shops as a promising activity.

Although our product can be used for various purposes, but based on our research, we position the product primarily as a creative and environmentally friendly gift, because according to our data about 80% of our products are sold for creative gifts, 15% are sold for decorations premises and 5% for various events. We also consider the sale of goods abroad, as foreign markets are more mature and characterized by greater demand compared to Ukrainian markets.

As for the logistics of all processes, they usually occur sequentially. When a customer expresses his desire to order a product from us through one of the communication channels, we specify the technical characteristics of the desired model, namely the size, color, density of the cardboard and its type. We also agree on a time frame for the model to be completed or shipped and collect all the information we need to send the order. For the most part, our customers choose Nova Poshta delivery services. After receiving and processing the order, we proceed to the next steps depending on the task assigned to us. We offer 3 types of our products: ready model, gift set and scheme in electronic form.

When ordering the scheme in electronic form, we send it in pdf format to the customer's e-mail after payment. In the case of ordering a gift set, the order is sent within one working day. As a rule, the gift set includes: printed scans of the model from a special thick cardboard, instructions for use, a stationery knife, a ruler, glue and a craft box. If desired, the composition of the set may be different. If the client has chosen a ready model, after its assembly by the master, it is packed in a box under the sizes of this model and sent to the customer. In the process of compiling the model, the master can send additional photos to the client about the stage of the process on decision of the customer. If the client wants to order a model that is not available, the master must first model the 3D model, lay it out on a diagram and print its parts on separate sheets of cardboard, and then proceed to the direct assembly of the figure.

If the client has a desire to learn how the models are assembled, he can find this information in our instructions. The complexity of manufacturing and assembly of different models is different, but we have customer reviews that say that they have never made something like this, but they did it without any major difficulties.

Thus, in our opinion, the project is promising and worthy of being presented on the market of environmentally friendly products in Ukraine and abroad.

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STARTUP, ITS FEATURES AND PRACTICAL AUTHOR'S IMPLEMENTATION OF THE PAPERCRAFT MODELS PROJECT

In recent years, the word "startup" has become commonplace in our time. It can be said that it has even become fashionable. We hear this word on television, see it in the news, on the Internet. Moreover, books are written about it. But not everyone understands what it really is, whether there is a difference between a newly created company and a startup, and in general, what the features of a startup are.

Most people associate the word "startup" with a picture of people who plan to start a business in difficult, uncomfortable conditions with their innovative idea. But this is just a picture created in the mind based on stereotypes. The word "startup" comes from the English concept of a startup - "start" and means a newly created or still in the process of creating a company.

Startups are companies or ventures that are focused on a single product or service that the founders want to bring to market. These companies typically do not have a fully developed business model and, more crucially, lack adequate capital to move on to the next phase of business. Most of these companies are initially funded by their founders [4]. It means that this company has a business idea that needs development and promotion, but its creators are still busy researching the market and finding funds to implement it.

Startups are sometimes companies that are going to offer innovative products and services to consumers but are currently in the process of finding suitable business technologies and financial support. The future of such companies looks uncertain [5].

The difference between a startup and a new company is that startups are looking for a suitable business model, while companies already have one and are successfully implementing it [6].

In the age of digital technology, designers are increasingly turning to paper products, i.e., "papercraft". Designers are attracted by the simplicity of working with paper, texture, smell, variety of paper colors, as well as the ability to create both three-dimensional and flat things. Regardless of the technique, you can create a real thing that can be felt by touch, show it to friends, and give it to the client [1].

As for what we do, we produce low polygonal 3D models that can be used for house or party decor, unusual gifts, or a hobby for a child. We have presented our startup project Papercraft Models in Kyiv on the “Yep! Starter Program 2019” and entered the Top-7 startups of Ukraine in this program.

We suppose that a party is not a party without PaperCraft Models because they can decorate it and make it more visual. PaperCraft Models are low-poly, eco-friendly 3D models that are suitable for décor, cool gifts, and hobbies. There are 3 types of products that we can provide our customers with: a gift pack, finished models, and e-models. We offer our product to corporate clients and general users with a choice of more than 1.5 thousand models. Our products can add a cool atmosphere and style to any party, bring a sparkle to home decor, and make photography unforgettable. And the children will also be very excited using them.

The reason why we produce PaperCraft Models is first of all because it is an eco-friendly handmade product. It is creative, unusual, and, most importantly, the fastest solution to decor and gift-giving problems. According to information taken from serpstat.com, the market is big [3]. There are 3.5 million searches for gifts each month. We have found out that most of our customers are men and women between the age of 16 and 40, with good taste. Wherever we go, the decor is used everywhere, from home to work interior. Therefore, it is very important to live in this ecological environment, no less creative, and with the opportunity to organize it for less. This project, in our opinion, is very promising. After all, working on it, we realized that at the moment we have almost no competitors. If there are, then single. Among them are «Bumadov», «PaperHouse» and «PolyFish».

It should be noted that the project has a wide scope. The markets for our products are the market of gifts, decor, various events, and educational games. We see the design of themed parties, photo studios, and shops as promising activities.

Also, a new direction of product sales is the supply of our products to preschool and general secondary education institutions for educational purposes. When working with preschool and primary school children, teachers can use PaperCraft Models in art lessons, coloring white figures, while developing children's imagination. Under the supervision of teachers and educators, children can make models of figurines, while developing fine motor skills. Middle and high school children can make figures on their own, decorate their classrooms with them, and use them for extracurricular activities, decoration of school exhibitions, parties, etc.

Although our product can be used for various purposes but based on our research, we position the product primarily as a creative and environmental gift, because according to our data about 80% of our products are sold for creative gifts, 15% are sold for decorations premises and 5% for various events. In addition, this product is being prepared for launch on the market of educational games. We are also considering selling goods abroad, as foreign markets are more mature and in greater demand than Ukrainian markets.

We got 50 orders during the 3-month test period. 91% of all our orders were satisfied with our product. Now you have a great opportunity to find an unusual gift on our Instagram page [2]. Our store is open from Monday to Friday, namely from 9 am to 5 pm. We deliver our products with «Nova Poshta» and «UkrPoshta» services. In the future, we plan to open a studio workshop and sell models not only in Ukraine but also abroad.

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THE IMPORTANCE OF DIGITAL BUSINESS MODELS APPLICATION

Today, the most successful modern brands are more often used to adopt new technologies, which give them a chance to overview the way they run business and improve efficiency.

The new generation of technology, such as an artificial intelligence (AI), can fundamentally change the means of achieving goals, when it concerns customers. AI uses programs, e.g. chatbots that helps to answer a question and give specific information by giving a response to users. AI can even recognize and provide a variety of instant answers to the same question, using the desired voice and tone [1].

This type of innovation can be included in the so-called digital business model – a form of value creation based on the development of customer benefits with the help of digital technology. It is worth noting that its use increases not only the profit of a company, but also helps to determine its sustainability in the modern world, because the traditional business models are being destroyed by the digital ones.

Also companies tend to use software as a mean to upgrade their business models, but this usually leads to only minor improvements.

For example, all large-scale manufacturers of the home appliances industry equip their products with an Internet connection. Most of them have an app that accompanies refrigerators, air conditioners and washing machines. However, this is only a small advantage. «The digital business model has a revolutionary perspective that goes far beyond connectivity features or marketing channels to existing products. The main point of this business model is that the new ways of making profit are generated by the new users, new products and new markets» [2]. But at the same time it maintains the protection by the impossibility of copying.

Let's study functioning of the business models' system on the example of the legendary corporation Apple.

Apple is a hardware business. A large percentage of its profit comes from the sale of products such as phones, TVs, computers, watches, accessories and so on. Each of these products has its own operating system: macOS, watchOS, iOS, etc.

iOS is a software platform that brings together a large number of entities: users, operators, accessory manufacturers and, of course, application developers. iOS interacts with each other in a separate clear scheme. A premium product is offered for a premium price to users. An access to higher-income users is proposed to operators. A rich user base in exchange for a wide-ranging accessories and a shared revenue from the accessories' sale are offered to accessories manufacturers. A rich database of more than billion devices sold, for which they can build apps, are offered to application developers.

Accordingly, the iOS platform demonstrates the network effects. The more users are attracted to the platform, the more developers are needed to create apps, and therefore, the more users will be involved to these applications. These network effects increase the demand for Apple hardware products.

Now let's study how the value for customers is created, delivered, captured and defended. The comparison of the both traditional business model of Apple and the digital one, where network effects are used to drive demand to its core business, was made by Lund University professors [2]:

	CREATE	DELIVER	CAPTURE	DEFEND
Traditional	Unique products	Devices own apps	Hardware sales	Brand
Digital	Millions of apps	3rd party apps and accessories	Hardware sales	Developer ecosystem

«Firstly, Apple creates value by offering the unique design of phones and tablets. Digitally, it creates value that helps users to exploit the device to meet different needs from booking a bus ticket to playing SubwaySurf. This became possible due to many apps created by the outside software developers.

Secondly, Apple delivers this value through the device itself, and its own applications such as Apple Music and GarageBand. In the digital form, the value is delivered through the outside applications and accessories.

Thirdly, Apple captures value directly through the sale of devices. The percentage of shared revenue from music applications and accessories is more than recoups costs.

Finally, Apple defends its business model with its own brand and unique integration of hardware, software and accessories. Digitally, it protects value through the developer ecosystem that is locked by Apple products, both in terms of distribution and delivery of applications. Apple's business model is almost impossible to copy, not because of the brand, but because of the combined networking effects between users, developers, operators and accessory manufacturers, which have led to a multimillion-dollar offer. This also means that Apple apps cannot be run and distributed on devices other than Apple» [2].

So, such digital transformations are not only the introduction of new software, technologies and processes, which are more efficient and automated than traditional one. It is a completely new, innovative way to do something that can become a background of the business.

This means that organizations need to consider everything, taking into account the digital transformation initiative. It includes the way from how people will respond to changes, how it will affect customer relationships, costs, how it will meet business goals, and so on. Digital transformations give companies the opportunity to move their business into the future and to withstand competition and develop in new areas.

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LEGISLATIVE AND REGULATORY SUPPORT OF SOLID WASTE MANAGEMENT IN UKRAINE

As the modern legal state, Ukraine has chosen the best normative direction for the development of the modern waste management industry, taking into account the experience of other states, including EU member countries, by introducing modern Ukrainian legislation and adaptation acts.

In 2017, the Government of Ukraine approved the National Waste Management Strategy in Ukraine until 2030, which aims, in particular, to introduce the principles of the circular economy. The volume of waste generation continues to grow, and the practical implementation of legal requirements is rather slow, some issues remain unresolved, and full-fledged statistical accounting of waste is not conducted.

Thus, in 2020 the total amount of waste accumulation was 15635.3 million tons, 462.4 million tons of waste were generated: 100.5 million tons were disposed of, 276 million tons were sent for storage, 1-1.1 million tons were incinerated. In 2019, 94% of household waste in Ukraine was disposed in landfills. Among them, only 19 are equipped with degassing units. Such units are an important component of the safe operation of landfills. If degassing does not occur, methane (30-60% of household waste biogas) can cause fires and landslides.

It is proved that the application of international law and positive international experience will make it possible to successfully implement waste management projects and programs and to form effective approaches to their management. Directive 2008/98 / EU provides for: emphasis on maximum reuse of waste, resource conservation, replacement of primary natural resources (mining) with secondary ones; introduction into legislation and implementation of a five-stage hierarchy of waste; regulation of assigning waste to the category of hazardous, development of the List of waste, waste classification; introduction of expanded producer responsibility; planning waste management and Prevention of its formation; maintenance of public registers of business entities in the field of waste management. According to the waste hierarchy (Fig.1), the first, most desirable way to manage waste is to prevent or reduce its formation. If this is not fully possible (and this is how it often happens), the second level of the hierarchy should be applied - reuse (which is advisable, for example, for glass products) or recycling (recycling into new products, which is advisable for products made of plastic, paper, metal; the level of recycling, for example, paper in Switzerland in 2019 reached 82%). What remains after reuse and recycling falls into the third, least desirable level of the hierarchy - burial in environmentally friendly sanitary landfills. Such remains can also be used for energy production (for example, incineration). But the era of burial is coming to an end. In Switzerland, for example, since 2000, the disposal of waste in landfills has been stopped. Waste that has not entered the reuse or recycling cycle must be incinerated. The only exception is inert waste, such as construction waste. Encouragement to implement the first three stages of the waste hierarchy in Europe is part of Zero Waste initiative and it is being actively disseminated in European cities.

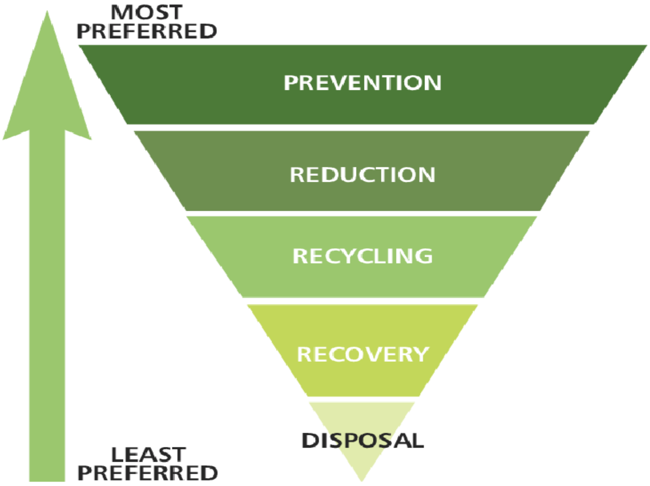

Figure. 1 Waste Management hierarchy in accordance with Directive 2008/98 / EU

The analysis of the current legislation of Ukraine on the readiness to introduce into the law and implement a five-stage hierarchy of waste is carried out (Table 1).

Table 1. The analysis of legislative support for the waste management process in accordance with EU requirements

Stages of the waste management hierarchy	Names of the main regulatory legal acts in the field of waste management											
	Law of Ukraine "On Waste"	Law of Ukraine "On Environmental Protection"	"About housing and communal	"On the improvement of	"On licensing of types of	"On ensuring the sanitary and	"On cooperation of territorial	"On the Association of co-owners	"On state regulation in the field of Public Utilities"	National Waste Management Strategy in Ukraine until 2030	National Waste Management Plan until 2030	Methodological recommendations and procedure for developing
Prevention of waste generation	+	+	-	+	-	+	-	-	+	+	+	+
Reduction	-	-	-	-	-	-	-	-	-	+	+	-
Recycling	+	+	-	-	-	-	-	-	-	+	+	+

Recovery	-	-	-	-	-	-	-	-	-	+	+	+
Disposal	+	-	+	+	+	+	+	+	+	+	+	+

A significant part of these levels of the waste management hierarchy is reflected in national legislation. Law of Ukraine "On Waste" (No. 187/98-BP of 5.03.1998). Thus, Article 5" basic principles and directions of state policy in the field of waste management " contains the following principles: minimizing the generation of waste and reducing its danger; promoting the maximum possible disposal of waste by direct reuse or alternative use of resource-valuable waste; ensuring safe disposal of non-recyclable waste by developing appropriate technologies, environmentally friendly methods and means of waste management. In turn, the National Waste Management Strategy adopted in 2017 and the National Waste Management Plan until 2030 set ambitious goals for the country. For example, the municipal waste disposal rate should decrease from 94% to 35% by 2030. That is, in 13 years, Ukraine needs to go through a path that other countries took almost twice as long to complete.

Therefore, to achieve the indicators defined in the National Waste Management Strategy and the National Waste Management Plan, effective joint work of all stakeholders is necessary: central and local authorities, businesses, the population, international partners and volunteers. The solution to the problem of waste management should be carried out at the state level, first of all, through effective legislative regulation, which should take into account the national characteristics of the population and the positive experience of European legislation. This situation should be corrected by the law "On Waste Management" 2207-1D, which has already passed the first reading in the Verkhovna Rada. It provides for the consolidation of the principles and regulations of European legislation in the field of waste management, in particular, the introduction of hierarchy principles in waste management. It is also necessary to review СанПіН (sanitary rules and regulations) 2.2.7. 029-99 and the state waste classifier DC - 005-96, develop a National waste list in accordance with European standards, review the forms of statistical observations of waste and develop a new regulatory framework for environmental tax.

Session work № 3

CURRENT RESEARCH IN THE FIELD OF INFORMATION COMPUTER TECHNOLOGIES

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RAPID DEVELOPMENT OF THE WEB ENVIRONMENT

It is noticeable that we are observing the rapid development in technologies' scope which is an integral part of modern society. The main feature of the process of technology emergence is its continuity. Technology helps to keep in touch with people who are on another continent. Is this the best-invented thing in the world? Could our ancient ancestors have imagined such a possibility?

But we must admit that our society now depends entirely on technology and the lack of it deprives people of many opportunities. Therefore, every day our information world reaches an increasingly sophisticated flexibility [1].

There is no doubt that without the creation of the Internet, our world would look completely different and progress would stop for more than a century. Everyone knows that the Internet plays an important role in research and development. For instance, both the existence of small businesses and the scientific and research work of many universities are connected with the Internet. The availability of the Internet allows people to demonstrate their ideas and thoughts. Today one page of the site is enough for the world to see your invention. Kickstarter is a great example of this.

Speaking about the web environment we all need to know what it means. It is a fully developed website (or a set of programs) with all the features necessary to provide users with. Most programmers know that there are two types of web development: front-end and back-end [2].

Figuratively speaking, we can compare back-end development with all the stuffing of a car hidden from the user: systems — fuel and cooling, an engine, transmission, ventilation and air conditioning. And everything that the user sees and operates: on-board system settings, 2-3 pedals, a steering wheel, a beautiful body and an interior — that is the front-end part.

The first one is also called client-side development, which gives the opportunity of viewing and interacting. Its main purpose is to ensure that the user who opens the site can see the information in an easy-to-read format. The problem is that today users have devices with different screen sizes, which makes the developer understand all aspects of modern devices when creating a site. Namely, they need to develop a project and be sure that the page opens correctly in different environments, operating systems and devices. Because of these factors front-end development becomes more difficult. It should be mentioned that several tools help to develop the site. The most used one is HTML which is a markup language that creates web pages by using tags, then CSS which is a style sheet language intended on describing the appearance of HTML file and JavaScript which is one of the most popular languages aimed at introducing interactivity into your website. As you can see, there are three programming languages without which the web designer cannot create a regular page. Specialists in this field are often called artists and designers because they also turn white canvas into eye-catching beauty.

The second type is called server-side development where the focus is on how the site works. Such solution enables to create responsive sites that work much faster than standard request-response sites. The developer in the field works with databases, servers and applications. Most people think of a back-end developer when talking about a web developer. The main task for this type of development is constant or occasional change of content. It is used in social networks such as Telegram, Facebook and Twitter. The back-end developers know the languages mentioned above. They also have to use such languages as Java, PHP or Python to have their work done. It should be noted that Java and JavaScript are not the same languages. Java specializes in the development of videogames, applications for Android and iOS, web applications, etc. Many of the world's leading companies use a team of programmers working on the database. They are like petite gears. No one thinks about their significance but without them the website would not work.

In conclusion, if you look at the statistics of 2021, three of the most popular programming languages are Python, JavaScript and C/C++[3]. Therefore, web development will continue to be in demand. The power of the web is in the openness of its standards. And to develop under the web you need to understand it and to feel its philosophy. The developers should take more responsibility for the decisions they make and the approaches they take. Alan Kay said, "There is no better way to predict the future than to create it." The world is on the path to even greater progress, and the World Wide Web will promote the development.

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MODERN RESEARCH IN INFORMATION AND COMPUTER TECHNOLOGIES

The aim of the study was to investigate development of Information and computer technologies from start of history till now.

I want to start from 1946 year, because in this year in USA was presented first computer – ENIAC. Computing machine weigh 30 tons and had 18000 electrical lamps. As ENIAC calculated a trajectory in 30 seconds that took a human 20 hours, one ENIAC could replace 2400 humans. Speed 5000 operations per second. On the hand, invention of computer was amazing. In other hand it wasn't possible to improve technology without transistor.

Thanks to this invention appeared possibility to make faster computers. Main advantage of transistor is that with it computers stay smaller. Modern computing machines greatly comfortable and user-friendly than first of them. Every year the biggest producers compete whose processors faster and energy efficient, that's why cost of CPU increase every year. The biggest producers for example: Intel, AMD, Apple, Samsung, Qualcomm wants to reduce technical process. In few words it is mean that in the same square put more transistors. That process needs high precision equipment that just one company in the world it is TSMC (*Taiwan Semiconductor Manufacturing Company*). Despite this fact, producers successfully perform orders. How about Information Technologies? Especially invention of Internet. In few words Internet it is tool to connect all computers together. On hand it's greatest invention of 21th century. On other hand, Internet has too much disadvantages. How about fake's or fishing, maybe you every morning scroll "tape" in your favorite social media?

I think once in life you were face-to-face with that problems . But Internet has more advantages. To my mind, 21th century , it is time of information revolution due to Internet. Just some statistic: from 2000 to 2009, the number of Internet users globally rose from 394 million to 1.858 billion. By 2010, 22 percent of the world's population had access to computers with 1 billion Google searches every day, 300 million Internet users reading blogs, and 2 billion videos viewed daily on YouTube. In 2014 the world's Internet users surpassed 3 billion or 43.6 percent of world population, but two-thirds of the users came from richest countries, with 78.0 percent of Europe countries population using the Internet, followed by 57.4 percent of the Americas. However, by 2018, Asia alone accounted for 51% of all Internet users, with 2.2 billion out of the 4.3 billion Internet users in the world coming from that region. The number of China's Internet users surpassed a major milestone in 2018, when the country's Internet regulatory authority, China Internet Network Information Centre, announced that China had 802 million Internet users. By 2019, China was the world's leading country in terms of Internet users, with more than 800 million users, followed closely by India, with some 700 million users, with the United States a distant third with 275 million users. However, in terms of penetration, China hasa 38.4% penetration rate compared to India's 40% and the United States's 80%. As of 2020, it was estimated that 4.5 billion people use the Internet, more than half of the world's population. Internet gives a lot of possibilities to work with it. We can find information in few clicks or make order in e-shop. It’s help us to be connected with relatives. To sum up, we live in age of informational-computer development. Just keep contact with modern technologies and they will help you.

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PROGRESS OF ICT IN SOME DEVELOPING COUNTRIES

Information and communications technology (ICT) is technology that is used to handle the communications processes such as telecommunications, broadcast media, audiovisual and transmission system, and for monitoring functions. ICT includes hardware (computers, servers, etc.) and software (operation systems, searching systems and network protocols). Nowadays IT is an important and inseparable part of politics, economy, business and everyday life of very country.

Developing countries are sovereign states with a lower industrial and economical basis and a lower Human Development Index relative to other countries. Though being developing countries economically, India and Belarus are Tech Booming republics. The increasing IT job market with its high demand for top-class programmers has changed the personal attitude of the whole generation.

There are 5 problems which hinder IT progress:

- Outdated politicians. According to the law, companies that offer the lowest price for their services or goods are awarded contracts during tenders. In this case, domestic companies are not competitive. Therefore, entrepreneurs look into a possibility of amending the law in order to simplify the rules of participation for local companies.
- Deficit of state funding. For developing countries with their small IT industry, the only solution that to become profitable is an individual support from the government of more or less mature IT products. For example, South Korea did the same in the 80s and such giants as Samsung, LG and others developed as a result.
- Weak and limited internal market.
- Insufficient number of quality graduates. Insufficient financial security of educational institutions, lack of links between educational institutions and the real IT

industry, the inconsistency of educational processes with market needs, as well as the low level of research have a negative impact on education.

- “State is a bad manager”. Developing start-ups and supporting hi tech projects is necessary to strengthen the national economy. Issues of digitalization always arise in developing countries because of the policy that state must be engaged in the creation of rules and regulations to create conditions for business.
- Lack of diversity in venture capital market. The global practice of start-up development – venture capital financing – is developing at the moment. Developing countries don’t have venture investment yet. Few investors are ready to invest into IT start-ups or ready to wait for profit for a long time. A start-up business model should have either a short pay-back period, or at least bring some return from the beginning.

Despite the problems mentioned since the end of the XX century the boost in the development of IT industry has taken place in the world. The governmental strategic policy, which is aimed at boosting IT exports, has brought global technological brands. For instance, High Technology Park (HTP) was opened in Belarus and the main goal of this project is “Formation of favorable conditions for the development in the Republic of Belarus of software, information and communication technologies aimed at increasing the competitiveness of the national economy”. However, at the beginning HTP didn’t bring expected results. That is why a special preferential tax regime that significantly lowers operational expenditures was passed. In order to take a new qualitative step in the development of technology and ensure high rates of profit growth, it is necessary to create a whole regulatory system aimed at stimulating the product model in the field of IT.

Nowadays, despite the deepening crisis in the traditional sectors of the economy, the technological industry is growing rapidly in Belarus and India. Considering the fact that the average monthly salary in the Belarusian tech sphere ($1,600), in India ($1,584) exceeded that of all other industries ($420) fourfold in 2015, in India ($460) the IT job market saw a record number of applications from people, from all spheres of life. The amount of offers for various non-academic coding trainings, courses and boot camps for both adults and kids has also reached the highest level in recent yeas.

All in all, the authorities of developing states stopped huge brain drain from their countries. On the other hand, some ICT professionals are still leaving their native places, but these people just dream about working on interesting projects in international teams, with industry leaders.

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INFORMATION TECHNOLOGY AS AN OBJECT OF INFORMATION WARFARE

The aim of this study was to investigate how and for what purpose information technology is used in information wars. In the course of the research, data from various sources have been analyzed and certain conclusions have been drawn on this research topic.

Despite the fact that we live in the 21st century, such a word as "war" is unfortunately still in our lexicon, especially for Ukraine. This word is painful in connection with recent events and recent years. This word is associated with violence, killings, destruction of infrastructure, but the war may be on the information front, and here it also has the same great power. The American researcher McLuhan said a very interesting phrase about this: "Truly total war is a war with the help of information."

Information warfare is the presentation of information in a way that forms the desired point of view in society or a group of people, public opinion, the course of complementary logical ideas, a comprehensive system of views on certain issues in favor of the organizer of information propaganda. [1] One of the most important types of war in which modern technology plays a crucial role is cyber warfare.

The offensive force in cyberwar today is:

- DoS attacks - an attack on a computer system with the intention of making computer resources inaccessible to users for whom the computer system is intended. You can organize two methods: the first - a flash mob, when a certain number of users agree and at some point begin to make requests to the attacked server, and the second - a botnet, when infected a certain number of computers with special programs that also make requests to the attacked servers;
- Program bookmarks so-called "logic bombs" that are hidden in a secure program system, through which you can gain unauthorized access to classified information;
- Hacking, handing out or inserting propaganda into the content of other websites;
- Hacking private pages or servers for information [2].

All these forces are carried out with the help of modern information technology and given the capabilities of the Internet, even the average user who has never dealt with in-depth study of information technology, can carry out hacking attacks, as well as spread misinformation, etc. And it should be noted that the information war really has a powerful impact, because as a result of appropriate coverage of events by means of information technology, the population has a certain impression of a certain event. For example, on August 3, 2016, the archive of the mailbox of the employee of the so-called State Security Committee "DPR" Tatiana Egorova, who was responsible for working with journalists, was published. The archive contained correspondence between the DNR State Security Service and representatives of Ukrainian and foreign media (Inter TV channel, Ukraina TV channel, ICTV, Gazeta Wyborcza and many others) in which the latter coordinated the content of their TV stories and publications with the wishes of DNR and Russian intelligence services. [3][4].

Information warfare is a means of achieving any goal of the party waging this war. Like any means, information warfare is designed to perform certain functions, namely to control public opinion and information technology has an important role to play in this matter.

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THE INEVITABILITY OF TECHNOLOGICAL SINGULARITY

Undoubtedly, the exponential growth of technology and progress that is currently being observed is leading to a future point in time when technology will rapidly improve itself to surpass human intelligence, changing human life as we know it. This process is called technological singularity.

The concept of technological singularity and the term "singularity" itself was popularized by the American science fiction writer Vernor Vinge in his 1993 essay "The Coming Technological Singularity: How to Survive in the Post-Human Era", where he noted that this would mean the end of the human era, as the new superintelligence would continue to improve and develop technologically at an unfathomable rate [4]. In addition to reiterating the nature of the concept, Vinge also laid out four possible scenarios for how this event could take place. They included:

- Superintelligent Computers: This scenario is based on the idea that human beings may eventually develop conscious computers. If such a thing is possible, said Vinge, there is little doubt that an artificial intelligence far more advanced than humanity might naturally result.
- Networking: In this scenario, large networks of computers and their respective users would come together to constitute superhuman intelligence.
- Mind-Machine Interface: Vinge also proposed a scenario where human intelligence could merge with computing to augment their intelligence, leading to superhuman intelligence.
- Guided Evolution: It is also possible, said Vinge, that biological science could advance to the point where it would provide a means to improve natural human intellect.

The other prominent prophet of singularity is inventor, futurist, and one of Google's chief engineers Ray Kurzweil. He believes that technological development is exponential. This means that the more advanced the technology is at the moment, the faster it will develop in the future. As the power of the technology will increase, the speed will also increase. In his book "The Singularity is near", Kurzweil agrees with Vinge but believes the later has been too optimistic in his view of technological progress. Futurist is convinced that by the year 2045 we will experience the greatest technological singularity in the history of mankind: the kind that could, in just a few years, overturn the institutes and pillars of society and completely change the way we view ourselves as human beings. Just like Vinge, Kurzweil believes that we'll get to the Singularity by creating a super-human artificial intelligence (AI) [5].

Additionally, in his opinion, at this time the whole Earth will begin to turn into one giant computer, and gradually this process can spread to the entire Universe. Kurzweil paints a picture of a future in which computing devices will continue to get smaller and more powerful until the accelerated evolution of technology becomes the main driver of our evolution. He says that we will no longer be surrounded by computers: we will put them in our bodies (in the brain and the blood), thereby changing the nature of human existence

Furthermore, to understand the possibility of technological singularity, it is necessary to determine in which areas of technological development people have achieved the greatest success, that can lead humanity to the singularity:

1. computer software with genetic algorithms;
2. artificial nanobots and microchips created by the evolution of microcomputer systems;
3. integration of the human nervous system with the hardware of computers;
4. unification of human and computer consciousness in a single user interface;
5. dynamically organized computer networks.

Nevertheless, current developments in AI are not showing any progress in general or biological intelligence beyond a very low level. The top AI researchers have said that even a primitive AGI is a long way off and it's unknown if it would ever compare to human intelligence. On the contrary, some people believe that we'll eventually reach a point where technology is so advanced that it surpasses our ability to understand or control it. Others believe that there may be an exponential increase in computing power and artificial intelligence that leads to massive changes in our society, economy, and even human biology.

From these facts, we may conclude that changes have already begun, unprecedented new technologies will continue to arise and no one can determine exactly what will happen, but sooner or later the technological singularity will come and we have to be ready for it.

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VIRTUAL AND AUGMENTED REALITY AS AN INTEGRAL PART OF OUR PRESENT AND FUTURE

There are many advanced technologies, but virtual and augmented reality stand out in their background.Though the names sound somewhat futuristic, virtual and augmented technologies are growing at a rapid pace today. There are different versions of headsets with some type of screen displaying virtual reality. And you can use augmented reality on such devices as a regular smartphone or a laptop.

The term "virtual reality" (VR) was first introduced by the American computer scientist Jaron Lanier in 1989. The active home use of VR began with the release of the Oculus Rift in 2016. This device gave a new impetus to the development of video games in virtual reality, which is one of the most popular areas of VR use today.

However, it does not mean that virtual reality headsets are used only in the entertainment industry. For example, there are VR services which encourage socialization and development of communication skills. Virtual Speech is the most popular of these projects. Practicing in cyberspace, insecure and poorly socialized people can become more relaxed and confident. It can help them in developing their soft skills.

Virtual reality is also actively used for various types of design. It is much easier to evaluate a car part or a house project which were recreated in cyberspace than in regular drawings.

The integration of VR into education has been going on for several years. It is obvious now that a student surgeon who has just read about heart surgery can learn the subject worse than his classmate who performed such an operation in a simulation of reality. There is also a chance that VR headsets can replace microscopes for educational purposes. For example, studying a 3D model of a particular cell instead of looking at it under a microscope is more interesting and easier for perception.

The growing market of virtual reality gives an opportunity for shopping. Some online stores have already had VR fitting rooms. Thus, the risk that you will not like or do not fit the clothes or shoes ordered online is significantly reduced because you have already tried them on.

It should be mentioned about the connection of VR technologies and tourism. Thomas Cook created a VR tour "Try Before You Fly" which allows you to watch a test version of a holiday in different parts of the world in 5 minutes. As a result, the turnover from booking tickets for tours in New York grew by 190 per cent. Another example of using the virtual reality technology in tourism is the program VR Expeditions 2.0. Applying it, you can stay at home and not only visit many attractions of our planet but even walk on the surface of Mars.

The famous American writer L. Frank Baum was the first to mention the idea of an electronic display that can overlay data onto real life. This idea formed the basis for an augmented reality (AR) technology. Unlike virtual reality, AR does not require special headsets. You can use a phone camera or special glasses, such as HoloLens from Microsoft. There are many video games using this technology and the most popular of them is PokemonGO. The game involves active movement around the city to find and catch Pokemons – fictional creatures of the Japanese popular franchise with the same name.

AR can be used in fitness giving performance analytics as well as some advice as to the diet and exercise.

There are also AR programs for improving shopping. They help customers to see the price of the product on the shelf and read the reviews about it.

Augmented reality significantly improves the security of devices equipped with a camera. For example, you can set your smartphone to unlock using Face ID technology which analyzes the face of someone trying to access the device.

AR can also give a start to the development of another futuristic technology – holograms. This program helps to improve online conferences by projecting images of participants (just as science fiction writers tell about that on the pages of their books).

Despite their popularity, VR and AR technologies are still developing rapidly. It is difficult to imagine the world even in 10 years, but it is easy to predict that the impact of virtual and augmented reality on the material world will be great. It will be really exciting to see how these technologies will be applied to both business and our everyday life.

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COMPUTER COOLING SYSTEM

Computer cooling systems is a set of means for heat dissipation from computer components that are heated during operation.

The main sources of computer heat are: processor; video card; motherboard elements (chipset, CPU power); Power Supply.

Mid-range processors can generate from 65 to 135 watts of heat. The usual video card of game level in the course of work can warm up to 80-90 ºC. The power supply can be easily heated up to 50 ºC. A chipset on a motherboard can also heat up to 50-60 ºC. Heat dissipation of other elements is much lower compared to the above.

The design of the housing must ensure the free passage of air through the system unit. It is also necessary to check whether the housing has a sufficient number of vents and seats for fans (the more, the better).

Air cooling systems

The principle of operation is the direct transfer of heat from the heated component to the radiator due to the thermal conductivity of the material or through heat pipes. The radiator radiates heat into the surrounding space with thermal radiation and transfers heat by thermal conductivity to the surrounding air, which causes the natural convection of ambient air.

Liquid cooling systems

The principle of operation is the transfer of heat from the component of the heated radiator by means of the working fluid circulating in the system. Distilled water is most often used as a working fluid, sometimes oil, antifreeze, liquid metal, or other special fluids.

Freon installations

Refrigeration unit is the evaporator which is installed directly on the cooled component. Such systems allow to obtain negative temperatures on the cooled component during continuous operation. It is necessary for extreme overclocking of processors.

Waterchillers

The systems combine liquid cooling and Freon installations. In such systems, the antifreeze circulating in the liquid cooling system is cooled by a Freon unit in a special heat exchanger. These systems allow the use of negative temperatures achievable with the help of Freon units for cooling several components (in conventional Freon units, cooling several components is difficult). The disadvantages of such systems include structural complexity and high cost, as well as the need for thermal insulation of the entire liquid cooling system.

Open evaporation systems

Installations use dry ice, liquid nitrogen or helium as the working fluid, which evaporates in a special open container mounted directly on the cooled element. It is used mainly by computer enthusiasts in cases of eqiupment extreme overclocking. It allows receiving the lowest temperatures, but has limited working time (demand constant replenishment of glass with refrigerant)

Systems with Coat elements

The Thermoelectric Cooler for cooling computer components is never used on its own due to the need to cool its hot surface. Typically, the Thermoelectric Cooler is installed on the cooled component, and the rest of its surface is cooled by another cooling system (usually air or liquid). As the component can be cooled to temperatures below ambient temperature, condensate control measures must be taken. Compared to Freon units, the Thermoelectric Cooler is more compact and does not create noise and vibration, but is noticeably less efficient.

Conclusions

1. Efficient adaptive cooling systems must be used to ensure the reliable operation of modern computers.
2. The choice of cooling system method depends on the conditions of use, taking into account energy consumption, air pollution, restrictions on noise levels and housing size.
3. It is recommended to consider the criterion of "price-quality" of the product when designing computer cooling systems.

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Session work № 4

CURRENT RESEARCH IN THE FIELD OF ENGINEERING SCIENCES

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ECOLOGICAL TRAIL "THE CHORNOBYL EXCLUSION ZONE"

Due to the deteriorating environmental situation in the country, accompanied by environmental pollution, irrational use of natural resources and reduced biodiversity, many problematic issues regarding the formation of relations between man and nature have come on. The issue of public ecological consciousness is related to the environmental education and culture of an individual, regardless of age, education and social status. The creation of ecological trails is a perspective direction for raising and developing the ecological consciousness of the population. The development of ecological trails is one of the forms to increase ecological thinking and worldview. Ecological trail is a cognitive tourist trail, which is equipped and contains specially protected walking and cognitive routes created for the purpose of ecological education of the population.

Studying the discipline "Nature Reserves Management" at higher education establishments, students considered the possibility of creating ecological trails for ecological education of younger generation. Thus, students were offered the option of creating an ecological trail within the Chornobyl Radiation and Ecological Biosphere Reserve. Researchers noted that a few years after the Chernobyl accident, the gradual restoration of fauna and flora in the area of radioactive contamination occurred: favorable conditions for this were the evacuation of the population and the cessation of economic activity. The researchers' forecast for the future was favorable, i.e., a slow transformation of anthropogenic landscapes into Polissya natural complexes was expected. The purpose of creating such an ecological trail is the information and educational knowledge dissemination. It is important to understand the values of biological and landscape diversity, to form environmental awareness and culture, as well respect for nature. The Exclusion Zone and the Zone of Unconditional (Mandatory) Resettlement are the unique part of the most typical natural complexes of Polissya, which need to be preserved in their natural state under constant ecological monitoring of the environment.

The ecological trail “The Chornobyl Exclusion Zone” is located in the Ivanivskyi district of Kyiv Oblast, twenty-three kilometers north of Chornobyl, in the city of Pripyat and its environs, on the territory of the State Environmental Agency for Exclusion Zone Management. The ecological trail is designed for schoolchildren, teachers, vacationers, organized tour groups, etc. The ecological trail is visited in an organized way under the guidance of a guide and an inspector of the State Environmental Protection Agency. The total length of the trail is 13 km 700 meters lasting up to 4 hours. The route along the trail is carried out both by car and on foot. There are 6 view stops on the route, where the guide will acquaint you with the uniqueness of these places, flora and fauna. During the ecological trail it is forbidden to: deviate from the route, touch buildings, trees, plants, eat, drink, smoke outdoors, drink alcohol, sit on the ground, put personal belongings on the ground, take out any items, leave pictures, inscriptions.

Stop 1 - "Pond with catfish". Ecological trail passes near the pond with catfish. The artificial reservoir was intended for cooling heated water in the reactors of Chornobyl power station. For the rational use of the reservoir, fish were bred in it, and now, despite the high level of radiation, many fish live in it. After the nuclear accidents, when people left the radiation-affected areas, nature quickly began to recover.

Here you can meet the largest freshwater predator - catfish. Usually these huge fish are hidden at the bottom of rivers, and in the cooling channel of the Chornobyl nuclear power plant they can be not only seen but also fed. This fish should not be caught or eaten, as it accumulates radioactive substances.

Stop 2 - "Chernobyl Bridge of Death". The usual pedestrian bridge that connected the city with the Chornobyl nuclear power plant was called the "bridge of death". During the Chornobyl accident, this bridge was covered by a radioactive cloud, the radiation background reached 600 R/h. There was a legend among the population that a person who crossed this bridge died a few days later. This is usually a fiction, but such a negative name has become attached to this bridge.

Stop 3 - "Red Forest". Pine forest, which was located in close proximity to the Chornobyl nuclear power plant. Pine plantations were strongly affected by radiation, thus needles turned a brick color, and all the forest turned into "red" or "rusty". Due to a possible secondary source of radioactive contamination, part of this forest was buried underground. Eventually, the ecosystem began to recover and young pines began to grow in this place.

Stop 4 - Secret radar station "Arc" (Chornobyl 2). The most famous monument of the Chornobyl zone is the DUGA-1 radar station. The station was designed to track the launch of missiles from the United States during the Cold War, and the 1st and 2nd nuclear power units were to supply electricity directly to the station. There were three such complexes in the Soviet Union. The first two radar antennas have long since ceased to exist, but the Chernobyl one has survived. For a long time the object was classified. However, today it is one of the favorite places to visit and take pictures.

Stop 5 - "Amusement Park in Prypiat". The opening of the park was scheduled for May 1, 1986, but due to the disaster it was not destined to receive guests. The symbol of both Prypiat and the entire Chornobyl zone was the Ferris wheel, on which no one rode. Dilapidated swings and abandoned alleys emphasize the contrast between past and present.

Stop 6 - "Cemetery of barges and ships". The Gulf of Prypiat - the Chornobyl Bay - was used to repair ships at a local shipyard. As a result of the accident at the NPP, all ships that were exposed to radiation during the transportation of goods had to be placed in a settling tank. It was this quiet creek that was chosen as their last resting place. Yes, this is where the cemetery of barges and ships appeared.

Ecological education and upbringing of the population is possible only if the content of ecological disciplines becomes the basis for the development of ecologically oriented values that will help to realize the value of nature to meet the material, cognitive, cultural, aesthetic and spiritual needs of human; to understand that human is a part of nature.

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DETERMINATION OF NICKEL IONS CONTENT IN WATER BODIES OF KHOROSHIV DISTRICT, ZHYTOMYR REGION

Nickel is a fairly common chemical element in the environment. Its content in the earth's crust is about $5{,}8 \cdot 10^{-3}$%. Due to weathering and leaching of rocks and minerals nickel can enter the aquatic environment from the earth's crust. Man-made pollution is also possible. Therefore, it is very important to determine the content of Nickel ions (2+) in surface waters. Thus, water bodies located in the Khoroshiv district of Zhytomyr region were selected for the analysis of natural water. This area has a unique geological characteristic, namely, a great variety of minerals and rocks of the Volyn deposit. The peculiarities of the rocks chemical composition in this region make it possible to predict natural inflow of nickel into water bodies. At the same time, on the territory of the district there are mining enterprises that carry out man-caused load on the environment of the region. Therefore, the hydrochemical composition of water bodies can be determined not only by natural origin but also by man-made loads. Some of the water bodies in the area were created artificially, these are quarries flooded with water. Water samples were taken from six water bodies, four of which were of anthropogenic origin and two of natural origin. These are the following objects: 1) Irsha river (natural object); 2) Terenets Lake (natural object; 3) quarry №1; 4) quarry №2;

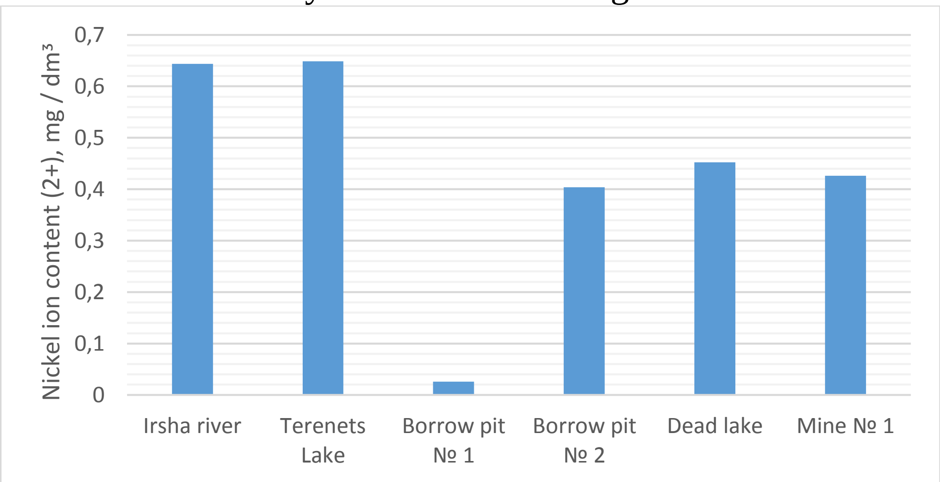
5) Dead Lake; 6) mine № 3. Water samples were taken into plastic bottles according to standard methods. Samples were signed, transported to the chemical research laboratory for further processing during the day.

Ni^{2+} ions were determined qualitatively and quantitatively by methods of analytical chemistry according to standard methods. According to the acid-base classification, Nickel ions (2+) belong to the sixth analytical group of cations. The group reagent for the cations of analytical group VI is the action of excess ammonia solution, which converts the nickel cation into the ammonia complex $[Ni(NH3)6]^{2+}$. Chlorides, sulfates and nitrates of nickel cation are well soluble in water. The aqueous solution of nickel salts (2+) is green, due to the formation of the aqua complex. At the beginning of the study, qualitative reactions were performed for the presence of Ni2 + ion in all samples of water. Qualitative reaction on nickel cations (2+) in water is the reaction with dimethylglyoxime (Chugaev's reagent) which forms a bright pink precipitate of complex salt with nickel cation in ammonia medium.

$$NiSO_4 + 2C_4H_8N_2O_2 + 2NH_4OH \rightarrow Ni(C_4H_7N_2O_2)_2\downarrow + (NH_4)_2SO_4 + 2H_2O$$

The results of the study showed the presence of Nickel ions in all water samples.

Quantitative determination of nickel cations (2+) in water was performed by volumetric analysis, namely, inverse titration, leading to the transition from blue color to red in the presence of the indicator erychrome black. $ZnSO_4$ solution was used as the working solution. According to the law of equivalents, the content of Nickel ions (2+) in studied samples was calculated. The obtained results were compared with the values of MPC (Maximum Permitted Concentration) for surface waters (MPC - 100 mg / dm^3). The results of the study are shown in the figure.



Studies have shown: 1) MPC does not exceed the limit of Nickel ions content in all samples of water bodies; 2) the content of Nickel ions in natural water bodies is 1.5 times higher than in artificial ones. This can be explained by the geochemical method of nickel entering the water, which is explained by the geological environment of the formation of natural water bodies.

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PECULIARITIES OF RAW MATERIAL STOCKING

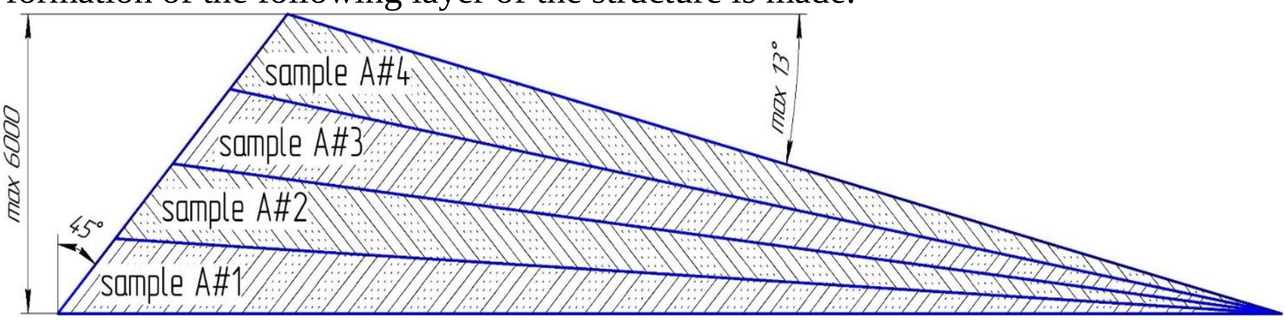
Raw materials are stored in a specially prepared area with two stockpiles of each brand of raw kaolin. Kaolin brands have defined specifications for raw kaolin. Each stockpile is numbered with the number of the stockpile and brand of raw materials. Dumping of the heap should be carried out in a way to ensure the homogenization of raw materials. The process of filling and forming stockpiles at all stages is controlled by the worker-unloader on the dump.

There are 11 dumps in the main stockpiles of raw materials. The minimum volume of each dump is 5000 tons. The maximum volume is 7000 tons. The height of the dump cannot be more than 6 m. The height of 6 meters is determined by the dimensions of the Volvo L150H wheel loader, which is used to dismantle the stockpile.

During the formation of each layer of the dump, the raw material is bulldozed by the KOMATSU bulldozer. The angle of inclination of the blade from the reversal of the formation is determined by the brand of the dump truck. For the SCANIA AND VOLVO brand, it is no more than 13 degrees. The width of the stockpile is determined by GPS points.

The head of the geological surveying department is responsible for changing the marks, status or numbering of the stockpile. The head of the mining department is responsible for the safe conduct of work, and compliance with the correct and safe dimensions of the dump.

Before bulldozing the dump from the imported raw materials, the unloader takes a sample from each dump at the end of each shift. The obtained samples are delivered to the laboratory. The first part A is analyzed, and the second part B remains as an arbitration sample. According to the analysis of sample A, the geologist compares the quality of imported raw materials for the past day with the quality of the block or stockpile from which the raw materials were filled. After the received data the decision on the formation of the following layer of the structure is made.



In case of significant deviations from the required average value, the geologist informs the head of the geological surveying department and they together take measures to prevent the deviation of the relevant limit values.

Upon completion of the dump storage, the head of the geological and surveying department informs the head of the laboratory about the need for sample analysis B. The notification is made by sending an email.

The name of the sample taken from the stockpile looks like the following: stockpile number + deposit + name of the stockpile + type of sample + date. For example sample A of the second shift at the Velyko-Hadominetsky pit from the C2 W5 field dated September 20, 2018, is named 5WC2A18092002; the third shift at the Glukhivtsi pit from the C3 G4 stockpile dated May 25, 2018 - 4GC3A18052502; the second shift at the Glukhivtsi pit from the temporary stockpile GT1 / 2 C2 from October 10, 2018 - GT1 / 2C2A18101001.

In conclusion, it should be emphasized that raw materials are stored in a specially prepared area. The dimensions of the stockpile are determined by the type of vehicle/truck performing the work and the GPS points. The formation of the next layer of the structure depends on the quality of imported raw materials.

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TOXIC EFFECTS OF SYNTHETIC DETERGENTS ON THE ORGANISM OF THE MOIIUSK PURPLE (PLANORBARIUS PURPURA)

In every house, in the bathroom or in the kitchen, we deal with daily things like shampoo, dishwashing liquid, soap, washing powders and detergent for cleaning difficult dirt and other things. Things we are accustomed to in our everyday life are called synthetic detergents. The first synthetic detergents for general use were produced by the Germans in the World War. Modern technologies make human life much easier, because it is enough just to put the powder in the washing machine and get a clean thing. The same can be done with utensils. But do we always think about how these means of "comfort" can affect us and the environment we live in? Where do they go from our home?

One of the causes of surface water pollution in Ukraine is the discharge of untreated and insufficiently treated municipal and domestic wastewater directly into water bodies and through the municipal sewerage system.

Synthetic detergents are extremely durable and stored in water for years and decades.At the same time, we should not forget that a lot of living creatures live in natural reservoirs where sewage enters: mammals, fish, mollusks, insects, crustaceans, plants, etc. Local residents bathe here, and water can later get to our house.

One of the types of SD that every housewife uses in everyday life is washing powder. This practically indispensable means, which makes our clothes clean, seems absolutely safe at first glance. In fact, washing powder often contains hazardous ingredients that are difficult to completely wash off during washing and that remain on clothes from wash to wash. In contact with skin or mucous membranes, these substances can cause irritation and allergies in both children and adults.

The aim of the research was to study changes of morpho-physiological parameters in organisms of freshwater mollusks on the example of freshwater gastropod mollusk purple under the influence of synthetic washing powders.

The use of mollusks as objects of study is due to the fact that they are included in a number of trophic chains and are also bioindicators of aquatic pollution. The mollusks are extremely demanding to water quality and their presence in biocenoses is an indicator of its purity. In addition, they are convenient objects for study because their sensitivity to toxicants is much lower and their endurance is much higher than in the vast majority of aquatic animals. Freshwater mollusks are common and often predominant components of the hydrofauna of Ukraine.

Surfactants are the main active ingredients in detergents. Ideally, surfactants should be made from natural substances, from components of plant and animal origin: they are safe for humans and harmless to nature.

But, unfortunately, producers of cheap domestic chemistry use synthetic surfactants, which contain components of the oil processing industry, as far as they are much cheaper and easier to produce, but at the same time more toxic. Synthetic surfactants are of several types, but the most aggressive are anionic. The composition of washing agents includes the following groups of substances: phosphates, zeolites, phenols, optical bleaching agents, dyes and aromatizers.

The research experiment to study the toxicity of detergents in various brands was preceded by an anonymous survey of our city residents on the popularity of detergents. The results of the survey showed the following: the most popular among the population were such washing powders as "Gala", "Ushastyi Nan" and "Persil". These SD were used during our experiment.

The mollusks were placed in containers with different concentrations of powder for 20 days. After conducting the experiment, we obtained the following data: during the study of the effect of detergents on the body of mollusk purple, it was found that the most toxic of the three detergents is "Ushastyi Nan", in its solution mollusks died faster than in other detergents.

Detergents concentrations of 2, 1.5 and 1 mg / l, caused a generally insignificant death of studied invertebrates in solutions of powders "Gala" and "Persil". Low concentrations of Gala and Persil caused lower deaths during biotesting (40 to 60%).

The least toxic among the studied washing powders was "Persil", where only 20% of individuals died at the highest concentration of 2 mg / l on day 7 of the experiment.

Taking into account the data obtained in the course of the experiment, we can draw the conclusions that the lowest toxic effect on living organisms have powders with low phosphates content.

The least toxic washing powder, in terms of its impact on molluscs, turned out to be "Persil", which contains less than 5% phosphates and the same amount of anionic surfactants (5-15%). "Gala" occupies an intermediate position between "Persil" and

"Ushastyi Nan", but information on its phosphate content is hidden by the manufacturer.

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Session work № 5

CURRENT RESEARCH IN THE FIELD OF MEDICINE

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USAGE OF ACTIVE INGREDIENTS AND COMPONENTS IN PERSONAL CARE AND BEAUTY PRODUCTS

Target: help people to be able to determine what type of skin they have

Problematic: There are so many cosmetic products in our world that many cannot choose something for their skin type.

Most people are wrong when they guess their skin type. They are wrong about whether they are oily or dry, and whether they have sensitive skin. "

It is especially difficult to determine your true skin type because it can change over time and depend on climate, hormones and diet. (There is also debate over whether "normal" and "sensitive" skin is generally a true skin type.)

Here are some tips from dermatologists on how to determine your skin type, as well as tips for skin care, as well as recommendations for cleansers and moisturizers for each.

1. Oily skin

The skin secretes natural oils to keep itself moisturized, but for people with oily skin, this process can go into overdrive, especially if they have larger pores.

The bigger the pore, the more active the oil glands, and the more active the oil glands, the more they'll secrete

This can translate to an oily film on your face throughout the day, as well as frequent breakouts.

If you have oily skin, you should avoid using thick creams and moisturizers. However, that doesn't mean you should skip hydration altogether.

2. Dry skin

'Dry' is used to describe a skin type that produces less sebum than normal skin. As a result of the lack of sebum, dry skin lacks the lipids that it needs to retain moisture and build a protective shield against external influences. This leads to an impaired barrier function. Dry skin (Xerosis) exists in varying degrees of severity and in different forms that are not always clearly distinguishable.

Recommends avoiding very hot showers and steering clear of products containing detergents or sulfates, which can irritate the skin.

When it comes to moisturizing, dry skin can handle a creamier product, rather than a lotion or a gel. Use a cream moisturizer morning and night in addition to sunscreen.

3. ***Normal skin***

As with combination skin, it's tricky to define normal skin. there is no medical definition of normal skin, but broadly speaking, it could mean that the skin is healthy and well hydrated.

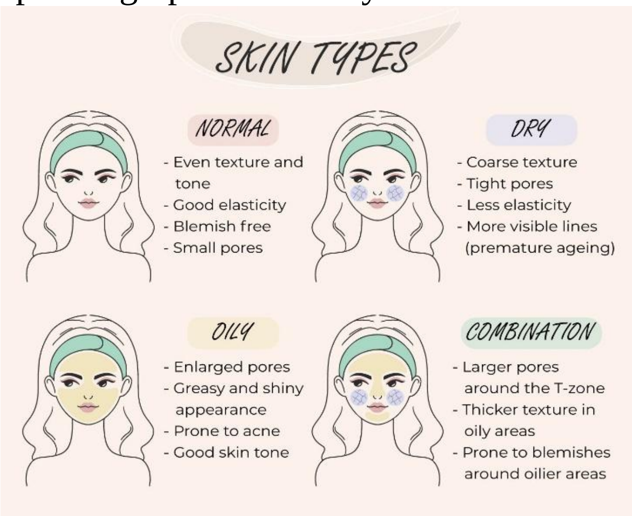
"Normal skin makes enough sebum to hydrate the skin, so, in reality, normal skin is oily skin with just enough sebum production to keep skin healthy," she said. "'Healthy skin' would be a better word, but that is not a true skin type either."

Combination skin

In combination skin the skin types vary in the T-zone and the cheeks. The so-called T-zone can differ substantially – from a very slim zone to an extended area.

Combination skin is characterised by: an oily T-zone (forehead, chin and nose) ,enlarged pores in this area perhaps with some impurities, normal to dry cheeks

The causes of combination skin: The oilier parts of combination skin are caused by an over production of sebum. The drier parts of combination skin are caused by a ack of sebum and a corresponding lipid deficiency.



Conclusion: I can say that the skin can be of 4 types and each type needs special care. I hope this article helped you understand and understand what type of skin you have.

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4. Косметическая дерматология Принципы и практика. Бауманн Л.

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RICHTIGE DIAGNOSE IST RICHTIGE BEHANDLUNG

Um eine richtige Diagnose zu stellen, müssen Sie viele wichtige Etappen durchgehen. Zuerst sammelt der Arzt eine Krankengeschichte (die Anamnese).

Die Anamnese basiert auf dem Gespräch mit dem Patienten. Der Arzt muss das Vertrauen des Patienten einstreichen. Im Gespräch mit dem Arzt erzählt der Patient über seine Beschwerden. Durch Fragen versucht der Arzt, ein möglichst genaues Bild zu bekommen. Das Gespräch ist sehr wichtig. Ist sein die Krankheit vielleicht mitverursacht durch psychisches Leid. Die Art, wie der Patient redet, gibt häufig schon Einblick in die Gemütslage des Kranken [2, c. 561].

Dann untersucht der Arzt den Patienten am Krankenbett, um die klinischen Symptome festzustellen. Das sind Beobachtung (Hautfarbe, Schwellung), Palpation (schmerzhafte Stelle, Verhärtung), Perkussion (heller Klopfschall über den Lungen, dumpfer über dem Herzen), Auskultation (Herztöne, Atemgeräusche, Darmgeräusche, Gefäßgeräusche), Fühlen (Hauttemperatur, Hautfeuchtigkeit), Puls-, Blutdruck- und Fiebermessen [1, c. 94].

Wichtig in der Diagnose sind Laboruntersuchungen (Blutbild, Serumwerte, Urinbestimmungen) und weitere Untersuchungen (Röntgen, EKG, Spiegelungen, Biopsien). Sie geben uns das genaueste Bild [5, c. 188].

Anhand der Krankengeschichte, der klinischen Symptome und der Untersuchungsbefunde stellt man die Diagnose fest. Findet der Arzt bei der Untersuchung keine krankhaften Veränderungen, obwohl der Patient über Beschwerden klagt, liegt die Ursache im psychischen Bereich. Es handelt sich dann um eine Störung, das heißt, eine psychische Belastung führt zu körperlichen Symptomen. So kann z. B. Kopfweh, Magenweh oder Asthma auch psychisch bedingt sein [4, c. 143].

Nach der Diagnose verschreibt der Arzt eine Behandlung. Es gibt viele Behandlungen und Arten von Medikamenten. Das sind verschiedener Abkochungen, Aufgüsse, Emulsionen, Extrakte, Pasten, Pulver, Salben, Schleime. Pillen ist universell Arzeneimittel. Sie bestimmen gegen Mehrkrankheiten.

Nach der Diagnosestellung kann die Behandlung, der Verlauf und die Prognose mit dem Patienten besprochen werden. Gerade bei schweren Erkrankungen mit schlechter Prognose ist die Zusammenarbeit zwischen Patient und Arzt sehr wichtig. Eine gute, ehrliche Information hilft in den meisten Fällen gemeinsam die schwierige Lebenssituation ertragen [3, c. 300].

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COMPLICATIONS AND RISKS OF CLINICAL BENIGN BONY GROWTH: EXOSTOSIS

Exostosis, also called osteoma, is a benign growth of bone extending outwards from the surface of a bone. It can occur in any bone and be triggered by a number of factors. When the exostosis is covered with cartilage, it's called an osteochondroma [2, p. 340]. Exostosis can be painless, or it can cause severe pain and require surgical removal. It frequently appears in childhood.

The exact cause of exostosis is not yet understood. There are a number of examples of exostoses that occur due to local irritant stimuli. Moreover, there are different reasons of exostosis: injuries and blows, inflammation of the mucous membrane of the inner part of the joint, osteomyelitis, fibrosis, bursitis, limitation of the periosteum, chronic inflammation in the bones, aseptic necrosis bones, disorders of the endocrine glands, disconnections, chronic joint diseases, syphilis, anomalies of the skeletal system, chondromatosis. Indeed osteochondromas have also been previously documented to cause vascular injuries and symptoms, including popliteal artery compression and rupture as well as acute lower limb ischaemia. In several generations of one family, bone exostosis is almost always detected [3]. And most often the pathology is diagnosed in children aged 8 to 18 years.

The symptoms of this disease can be very different. The disease often does not manifest itself and is detected only by chance during radiography, which is done for a completely different reason. Sometimes the reason for detection is the large size of the tumor, when it can be easily felt or even seen.

In some cases, large exostoses can cause pain or active discomfort, as well as affect the restriction of movement. Watch out for people who may turn into a criminal tumor. This happens when the exostosis appears in the past pressure and is also in the area of inflammation. This most often happens when the tumor is in the area of the heel bone. Also, the bones that are prone to the development of such growths hould include the femur, tibia, ribs, forearms, vertebrae and shoulders. On the fingertips growths are very rare. Here they grow under the nails. This type often causes pain and also leads to detachment of the nail plate.

In other parts of the body, marginal exostoses do not cause pain. However, if this happens, you should think that the tumor began to regenerate into cancer, that is, the process of malignancy began. In addition, osteochondroma can begin to grow inside the joint (around a knee-cup). Without a quick and accurate diagnosis, as well as without the removal of exostoses, this can lead to significant deformation of the knee, which will eventually cause disability. As the vertebrae grow, changes such as nerve root compression or even spinal cord injury can also occur [1, p. 171]. Keep in mind that the size of the osteochondroma in the picture may differ significantly from the real thing, as its outer surface is covered with cartilage.

MRI can also be used in the diagnosis, but this method has some contraindications that you must know.

Treatment of exostoses is possible only surgically. No conservative treatment or folk methods to get rid of this disease will not help. If the disease was detected before the age of 20 and does not interfere with a normal lifestyle, and does not give any symptoms, the operation is not performed. The patient takes an X-ray of this area every year and is observed by an orthopedist.

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SLEEP DISORDERS AMONG MEDICAL STUDENTS DURING THE OUTBREAK OF COVID-19

Admission: Sleep is essential for our physical and mental health. Most of us know that all people need around 7-8 hours of sleep per night, but it is especially important for students. Consistently getting quality sleep will improve student's mental, emotional, and physical performance. It improves their immune system, balances hormones, boosts metabolism, and improves brain function. The main reason sleep is so important for a student's success in school is because this is the time when their brain is "cleaning" itself. Our brain cells eat, reproduce, and make waste products every day. When we are awake, our brain is super active with learning, thinking, and controlling our entire body. As a result, during sleep, our body uses this time to remove all that waste and allows us to repeat the learning processes day after day. If a student is not getting enough quality sleep then brain reduces cognitive performance and learning potential. [1, 5, 6]

Aim of the study: to identify the importance of sleep for students and to explore the connection between sleep, exercise and the learning potential during the outbreak of COVID-19. The research methods and material: The scientific literature and other sources relevant to a particular problem were examined and compared.

Sleep deprivation can impact various aspects of the mind and body, such as mood, energy, memory, efficiency, and importantly the ability to learn. That’s why it’s vital for those in the student accommodation sector to highlight and help educate students on the importance of a good night’s sleep. Ideally students should aim for at least nine hours of sleep per night in order to perform and flourish, both physically and mentally. In fact, even simply increasing sleep by just one hour a night is better for long-term wellbeing, mental and physical health, and will enable students to perform better in their studies. [2]

The brain is better than a smartphone, so it’s important to recharge it regularly for optimal performance and to allow students’ academic talent to shine. Rest and recovery are just as important as sleep – if students haven’t had a good night’s sleep, finding time in their day, whether its 10 minutes during lunch or between classes, to ignore technology and just relax, will help the body feel rested even without actually sleeping. [2]

Conclusions: Sleep is a vital, often neglected, component of every person's overall health and well-being. Sleep is important because it enables the body to repair and be fit and ready for another day. Getting adequate rest may also help prevent excess weight gain, heart disease, and increased illness duration. [3, 4]

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COLORTHERAPY AS AN ACTIVE TOOL OF TEACHING FUTURE NURSES

Introduction. Interest in the subject of color psychology is growing. The problem of color's influence on personal's mood, behavior and stress is actively investigated in medicine and psychology. It was proven color can significantly influence students' emotions and efficiency, as well as studying productivity. Color may affect individuals' mental or physical state, stimulates brain activity. Color's energy has a physical effect on body's biological clock, metabolism, appetite, body temperature.

Aim. The aim of the paper is to systemize the scientific approaches based on color therapy, to show how it helps to elaborate in individual perception of reality and environment. Isotherapy influences on attention, imagination, elements of logical thinking.

Material and methods. For achieving the aim of the paper we used psychological, medical and sociological research (a questionnaire) and involved into the research 20 patients and 50 students of Ivan Franko Zhytomyr State University, Zhytomyr Medical Institute, Vasyl Stefanyk Precarpathian National University. The fundamental of the questionnaire was made and carried out by the specialists on Zhytomyr Medical Institute and based on the theoretical and methodological, psychological approaches of Ukrainian and foreign scientists.

Results and discussions. Through collaboration with the other departments in Zhytomyr and Ivano-Frankivsk regions our results were able to establish an optional course of study (6 hours) “Role of Isotherapy in Formation of Psychological Personality Traits”, that increases student’s confidence, attention, productivity, improve skills and students’ performance in the classroom

Conclusions. Positive and negative psychological color effects on student’s mental and physical condition depend on individual personality type and the relationship within color combinations. Studies have also proved certain colors can have an impact on performance: For example, red color increases heart beating and adrenaline was pumped into the blood. Blue color causes exciting, friendly and stimulating emotions. Modern studying technologies allow use the Isotherapy as a tool to extent professional qualities of future experts.

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MEDICAL DETERMINANTS IN THE PUBLIC HEALTH SYSTEM

Abstract. *The article analyzes the essence of the concept of "medical and social determinants of health", highlights the problems of monitoring health indicators, highlights the research of modern scientists from different positions on medical and social problems.*

Key words: *medical and social determinants, access to medical care, urbanization, organization of the health care system.*

Relevance of the problem: The demographic crisis, impressive mortality and morbidity rates, especially of working age, the rapid spread of non-communicable diseases contribute to the reduction of the number of citizens of our country [2]. The current situation requires improvement of approaches to public health in Ukraine, taking into account the key provisions of the European policy "Health - 2020", the WHO strategy "Health for All", recommendations and key principles of other programs and strategic documents , including the Tallinn Charter "Health Systems for Health and Welfare", etc. [2].

Most indicators of the state and dynamics of health of the population of Ukraine in recent decades are significantly worse than European and some are even worse than the world average. That is why the Ukrainian healthcare system needs to be transformed. It should be based on a fundamentally new interpretation of the causal links between the environment (social and physical) and public health, ensuring the formation of qualitatively new approaches to health at both individual and national, regional levels. . The basis for this should be health, their systematization and structuring.

The purpose of the study: to analyze the medical and social health problems of children and adolescents.

Materials and methods: methods of theoretical analysis and generalization of scientific literature within the research issues are applied.

Results and discussion: Changing the strategy of public administration in the field of health care is a necessary prerequisite for the development of a new "healthy" society. It should be based on a fundamentally new interpretation of the causal links between the environment (social and physical) and public health, ensuring the formation of qualitatively new approaches to maintaining health at the individual and population (global, national, regional) levels. This is not possible without studying the determinants of health, their study and analysis depending on demographic, social, economic, environmental and other parameters.

The current state of health of the population of Ukraine is of great concern both to specialists in this field and to the public. The reason for this is the determinants of public health: the essence and features of systematization, analysis of indicators that characterize the health of the population, most of which are unsatisfactory and much worse than European ones. This applies, in particular, to indicators of life expectancy, including healthy; overall mortality rate; mortality rates of people aged 0–64 years, including from diseases of the circulatory and digestive organs, malignant neoplasms; mortality and incidence of tuberculosis, incidence of HIV / AIDS and other infectious diseases. Unfortunately, this list is incomplete, it can be extended. Many indicators that characterize health risks at the population and individual levels are unsatisfactory. At the population level, these are, first of all, indicators of corruption, inflation, which leads to impoverishment of the population, reduction of funding for the medical sector, etc. Individual health risks remain high: smoking, alcohol, drugs, etc. However, the consumption of fruit is insufficient, there is a lack of physical activity.

A number of scientific works and researches are devoted to medical and social aspects of public health, its assessment and protection in Ukraine: S.V. Dudnyk, N.M.

Levchuk, E.M. Libanova. A number of works related to the institutional provision of health care: A.M. Erina, I.V. Rozhkova and others. N.O. Ryngach examines public health through the prism of national security. T.O. Pidvysitska considers the health of the population in the context of the impact on economic growth. Methodical issues of public health assessment are researched in the works of I.V. Zhalinskaya. However, as already mentioned, the strategic direction of health research should be to find out the causal links between public health and the determinants that define it. There are not enough studies performed from this point of view in Ukraine. Among the recent foreign works in this direction are the works of J. Spijker, M. Marmot and R. Wilkinson, D. Raphael, R.R. Patil, D. Bradshaw, D. Kindig, and a study by the Commission on Social Determinants of the World Health Organization (WHO). At the same time, it is worth noting that there can be no unambiguous patterns of research on the determinants of health, as their structure, mechanism and degree of action differ both between countries and within them. Taking into account the radical changes in the political and socio-economic situation in Ukraine, the analysis of health determinants is relevant from the standpoint of improving health policy [3].

A review of research conducted by medical and social scientists to identify the conditions under which children reach optimal levels of health and development has shown that the first years of life are a critical period during which the trajectories of health vulnerabilities are determined by a complex relationship between biological, genetic and environmental conditions. Thus, there are fundamental principles of optimal child development that apply to all people, regardless of language and culture [4].

The health of the younger generation is significantly affected by social factors, both at the personal, family, community and national levels. As the health itself and health behaviors are instilled in adolescence, lifestyle, as well as social determinants, affect adolescent health and are critical to the health of the entire population and the economic development of nations [5]. During adolescence, the developmental consequences of puberty and brain development lead to new behaviors and opportunities that are transferred to family relationships and education, including health. These transitions are changing children's perceptions of health and well-being, as well as changing by economic and social factors within the country, leading to inequality. A review of existing data on the impact of social determinants on the health of young people aged 10-24 and data from 34 environmental analyzes at the country level indicates that the most important determinants of adolescent health worldwide are structural factors such as national wealth, income inequality and access to education [6]. According to R. M. Viner and co-authors, in addition, safe and supportive families, safe schools, along with a positive approach and like-minded peers, are crucial to enabling young people to develop their potential and achieve better health in adulthood. Improving the health of adolescents around the world requires improving the daily lives of young people in families and in relationships with peers and in schools, addressing risks and protective factors in the social environment at the population level and focusing on factors that protect against various medical consequences. The most effective, according to researchers, are interventions in structural changes aimed at improving young people's access to education, employment and reducing the risk of transport-related injuries.

Conclusions and prospects for further research. The study shows that:

• Determinants of health are conditions that determine differences in the health of individuals, groups or the population as a whole. The nature of the action of determinants on health in space and time is variable, so there is a need for their systematic study and analysis;

• There are lots of determinants of health. Therefore, they need systematization and structuring. Taking into account the magnitude of the impact on public health, three levels of determinants have been proposed: contextual, structural, and proximal. These levels are hierarchical. The highest level is contextual. It is a prerequisite for the formation of determinants of other levels. The lowest level is proximal, which actually determines the health of the individual under the influence of determinants of all levels. The essence of determinants of different levels does not change, only the form can change. However, some of them affect health indirectly, and others - directly. The main task is to find the most influential at the moment for a particular population determinants. Until recently, such studies in Ukraine were not comprehensive and were insufficiently taken into account during the formation of the health strategy;

• priority in determining health in modern conditions are socio-economic determinants: income and its distribution; employment; working conditions and unemployment; living conditions; social protection; social capital; social conflicts; early life; education, gender, etc. An analysis of recent publications shows that this group of determinants determines health by about 40%. However, this figure may vary depending on the country or territory for which the study is conducted. Therefore, the prospects for further research are to identify key indicators that characterize the determinants of health, to clarify the role of certain determinants in shaping the health of the population of Ukraine and its individual regions in the current socio-economic reality. Particular attention should be paid to socio-economic determinants: identifying correlations between them and determinants of public health: the essence and features of systematization of public health indicators in modern conditions in order to develop measures to improve public policy in the field of health, reducing mortality and morbidity, finding reserves to save financial resources spent on medicine.

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THE DANGER, RISKS, AND SAFETY OF NON-SURGICAL COSMETIC REJUVENATION IN UKRAINIAN COSMETIC CLINIC

Admission: The ability to perform nonsurgical facial treatments and procedures a core competency requirement for cosmetology residents. Every woman, regardless of age and status, always wants to look beautiful, well-groomed and young. However, limited research is done on training models to achieve competency in nonsurgical facial rejuvenation.

The aim of the study: to explain and evaluate patient-reported outcomes and safety of non-surgical rejuvenation procedure performed by cosmetologists.

The research methods and material: The scientific literature and other sources relevant to a particular problem were examined and compared. Based on the findings of the study, relevant interpretations were discussed and analyzed, some recommendations were suggested.

In this article we consider different new cosmetics procedure. Scientists distinguish the ability to competently and safely perform non-surgical facial treatment as an essential component of comprehensive aesthetic surgery training. [7, 5, 3]. Though many clinics in Ukraine allow cosmetologist perform nonsurgical facial rejuvenation procedures.

In our research we give a short description and characterization of the most popular Ukrainian nonsurgical facial rejuvenation procedures and treatments performed on both women and men of the age of 27-65.

A 3D facelift pulls tissue and fat from inside the lower part of the face to the cheekbones, adding volume without the more severe look of a traditional facelift. These types of facelifts are usually performed with local anesthesia. [1]

Rhino-sculpture is a modern “nose job” procedure that uses a probe emitting ultrasonic energy to reshape nasal bones without damaging cartilage or soft tissue. Rhino-sculpture is considered a safer, less traumatic alternative to traditional rhinoplasty, with shorter recovery time. [1]

Hybrid breast augmentation - this type of breast enlargement combines breast implants with liposuction, which is used to remove fat where it isn’t wanted so it can be injected into breast tissue. This cosmetic procedure results in a more natural looking breast and has fewer risks, with faster recovery, than a standard breast augmentation using implants alone. [1]

Lip lifts shorten the space between the top of the lip and bottom of the nose to raise the edges of the lips and give the mouth a more defined look. Lip lifts are a permanent plastic surgery procedure that can usually be performed in less than an hour under local anesthesia. [1]

EmSculpt body contouring - this body contouring procedure uses highly-focused electromagnetic energy to initiate muscle contractions that help to both build muscle tone and break down fat on the abdomen and buttocks. EmSculpt is ideal for people with lower body mass index who want to reduce fat in hard-to-target areas and improve muscle definition. [1]

Brow lamination is all the rage these days as this temporary, non-invasive alternative to microblading offers a great solution to brow concerns. The process is said to be like a perm for your brows — only instead of curls, there's a setting lotion that helps the lil hairs stay up (when brushed forward) — and lasts for about six weeks. Because this process does require rather harsh chemicals, folkx with eczema or skin sensitivities may want to consult with a professional before trying this trending beauty treatment. [3]

Trending up, lip blushing is essentially a semi-permanent lip stain — a cosmetic tattoo that is said to colour correct while enhancing the shape and size of your lips (some say it even helps with asymmetry). The results leave lips with a more natural look after the healing process is done — while still offering the aesthetic of fuller, plumper lips. [4]

Lip injections are ever popular for transforming, not just lips, but the way face look in general. Injectables can contain commercial fillers like Juvederm, or fat that is removed from ones own body. After a topical numbing agent is applied to the area, the filler is injected in and around the lips and normal activities can be resumed immediately. [4]

The essence of the procedure smile correction consists a few simple botox injections placed in strategic locations will prevent the upper lip from raising excessively high when you smile and thus exposing the gum. [2]

Facial cleansing is one of the most popular procedures in cosmetology. It is performed to clean the skin from the stratum corneum of the upper epithelium, comedones, blackheads, milia, dirt (cosmetics, foundations, powders, etc.).

Mechanical is deep, ultrasonic - more superficial. Often the skin condition requires a combination of these two techniques. [3]

Oxygen facials is the procedure in which used ehe high tech compression machine pushes oxygen and other small-moleculed skincare products (like hyaluronic acid, vitamin treatments and botanicals) into the skin via a pressurized stream of air. While these treatments are not as pampering as an ordinary facial, they are said to bring balance back to the skin, lessen the appearance of fine lines, make tone brighter and plump the skin. [3]

Botox continues to take the lead in non-invasive cosmetic treatments. This injectable treatment relaxes facial muscles with a subtle yet effective result. Considering this quick, relatively painless procedure can be done during your lunch break, and make you look instantly refreshed and well-rested, it's no wonder it's so popular. [3]

Mesotherapy is a broad term for a non-invasive cosmetic technique that involves multiple injections of pharmaceuticals, vitamins, homeopathics, hormones or enzymes to tighten the skin, treat hair loss, minimize cellulite, and lighten pigmented skin, among others. There is little research to back the use of mesotherapy and it is not FDA-approved. Despite this, many people take the chance and try mesotherapy making it very popular in the world of non-surgical cosmetic enhancements. [4]

Body contouring is a procedure using the Velashape III body contouring machine, which combines four anti-cellulite technologies and skin tightening. The machine heats up fat cells, connective tissue and collagen fibers, which with multiple treatments, can improve elasticity, minimize cellulite and improve skin texture. [3]

Finally, I want to report on a modern cosmetic procedure that helps to lose weight and is currently used in Ukraine

Cryolipolysis, commonly referred to as "CoolSculpting" by patients, uses cold temperature to break down fat cells. The fat cells are particularly susceptible to the effects of cold, unlike other types of cells. While the fat cells freeze, the skin and other structures are spared from injury. After an assessment of the dimensions and shape of the fatty bulge to be treated, an applicator of the appropriate size and curvature is chosen. The area of concern is marked to identify the site for applicator placement. A gel pad is placed to protect the skin. The applicator is applied and the bulge is vacuumed into the hollow of the applicator. The temperature inside the applicator drops, and as it does so, the area numbs. After the hour-long treatment, the vacuum turns off, the applicator is removed and the area is massaged, which may improve the final results. [6]

According to studied literature, the injured fat cells are gradually eliminated by the body over 4 to 6 months. During that time the fatty bulge decreases in size, with an average fat reduction of about 20 percent. [6]

Research results: Summary statistics were tabulated via established methods. The following diagram show the most popular cosmetic treatment and non-surgical rejuvenation procedures in Ukraine.

Nonsurgical facial rejuvenation procedures with neuromodulators and soft-tissue fillers remain the most requested and prevalent aesthetic procedures in Ukraine.

According our study, some procedures have a small percentage of popularity among Ukrainian citizens, this is due to the fact that they are quite expensive and people cannot afford it. Facial rejuvenation with non-surgical procedures, including neuromodulators and soft-tissue fillers, can be performed by cosmetologists and provide high levels of satisfaction and improvements in multiple domains of health-related quality of life without compromising patient safety.

Conclusion: Cosmetic procedures help to emphasize the beauty and hide flaws, you need always carefully study the procedure, do not succumb to discounts or cosmetic offers because you get what you pay for, and certainly don't want your health to end up paying for it.

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PREVENTIVE EXAMINATIONS OF BREAST CANCER IN THE PUBLIC HEALTH SYSTEM

Abstract. *The article analyzes the essence of the concept of "breast cancer", highlights the risk factors for cancer, identifies the principles of cancer prevention, highlights the research of modern scientists from different positions on the prevention of breast cancer.*

Key words*: breast cancer, risk factors for cancer, urbanization, organization of the health care system.*

Relevance of the problem: In 2018, 9.6 million people died from this disease in the world. Cancer is the cause of almost every sixth death in the world. About 70% of cancer deaths occur in low and middle income countries. Cancer ranks second in the structure of mortality in Ukraine and, together with cardiovascular disease, determines the level of health of the nation. A common problem is seeking medical attention in the later stages of the disease.

Cancer is a general term for a large group of diseases that can affect any part of the body. Other terms are used to denote them: malignant tumors and neoplasms. *A characteristic feature of cancer is the rapid formation of abnormal cells that grow beyond their normal boundaries and are able to penetrate other tissues of the body and spread to other organs;* the latter process is called metastasis. Metastases are one of the leading causes of death from cancer. The most common types of cancer are: lung cancer, breast cancer, colon and rectal cancer, prostate cancer, skin cancer (non-melanoma), stomach cancer.

Risk factors for cancer include: *heredity* (genetic predisposition), *viruses* (human papilloma virus, hepatitis B and C viruses, Epstein-Barr virus), *physical factors* (various types of radiation, such as ionizing, ultraviolet), *risk factors, related to lifestyle* (smoking, alcohol consumption, visiting solariums, eating junk food, overweight, insufficient physical activity), *risk factors related to the environment* (environmental pollution, pesticide treatment of agricultural products, etc.), *hormonal disorders, precancerous diseases* (adenomatous intestinal polyps, fibroids or endometriosis, pigmented keratosis, leukoplakia or skin horn, etc.), *aging*.

The purpose of the study: to analyze the negative trends in breast cancer and the basic principles of prevention.

Materials and methods: methods of theoretical analysis and generalization of scientific literature within the research issues are applied.

Results and discussion:

Among the leading localizations of the pathology were: *breast cancer* – the incidence of 38.1 per 100 thousand population; *malignant neoplasms of the skin* – the incidence of 31.9 per 100 thousand population; *melanoma of the skin* – the incidence of 7.6 per 100 thousand population; *cancer of the trachea, bronchi, lungs* – incidence of 30.4 per 100 thousand population; *colon and stomach cancer* – the incidence of 28.7 and 17.4, respectively, per 100 thousand population; *prostate cancer* – the incidence of 24.3 per 100 thousand population; *uterine cancer* – a incidence of 15.6 per 100 thousand population; *oncological diseases of other localization* – incidence 38.9 per 100 thousand population.

Breast cancer is the second most common cancer in women worldwide. About 1.7 million new cases of breast cancer are reported each year, and more than 522,000 women die from the disease each year worldwide.

In Ukraine, the incidence of breast cancer ranks first among all malignant tumors found in women, according to the Center for Public Health of the Ministry of Healthcare of Ukraine. However, this type of oncopathology affects not only women but also men.

A characteristic feature of cancer is the absence of symptoms in the early stages of the disease. Symptoms at the onset of which it is strongly recommended to be examined for cancer: seals on the body; edema; tachycardia; hair loss; loss of appetite and weight loss; prolonged cough for no apparent reason; atypical discharge and bleeding; enlarged lymph nodes; frequent infectious diseases; the presence of wounds, ulcers, erosions that do not heal for a long time; chronic fatigue and deterioration of the general condition; constant irritability and nervousness; disorders of the digestive and/or urinary systems; change in the structure and number of moles, warts, papillomas; increase in body temperature, etc. Early detection of cancer and timely care can improve the prognosis and significantly improve the lives of patients!

1. Early diagnosis, which includes three stages carried out in a complex and timely:

- outreach and access to health care;
- clinical assessment, diagnosis and staging;
- access to treatment.

2. Screening. The purpose of screening is to identify people with the disorder, which allows you to diagnose certain cancers or precancerous lesions, and a quick referral for further diagnosis and treatment. Examples of screening methods: HPV testing for cervical cancer; cytological examination for cervical cancer in middle- and high-income countries; mammography to detect breast cancer.

An important diagnostic role is played by the definition of various tumor markers: prostate-specific antigen (prostate); cancer-embryonic antigen (breast and rectum); human beta-chorionic gonadotropin; CA-125 (gonads), etc.

Cancer prevention is a rather difficult task. Primary prevention of breast cancer is related to environmental and social aspects. In countries with traditionally high birth rates, the incidence of breast cancer is low. It gives us hope that increased fertility and prolonged breastfeeding may help reduce morbidity. Some positive changes can probably be achieved through a balanced diet: limiting the consumption of animal fats, fried foods, marinades, preservatives, smoked products, foods containing methylxanthines (coffee, tea, cocoa, chocolate), increase in the diet of vegetables and fruits, others products that contain plant fiber, vitamins (primarily C, beta-carotene). In the prevention of breast cancer, the most important is the timely detection and treatment of precancerous and background diseases (secondary prevention) and well-established screening for early breast cancer. The most informative method of screening is mammography. In women at high risk of breast cancer, chemoprophylaxis is possible by prescribing antiestrogenic drugs. In some countries, surgical prophylaxis (subcutaneous mastectomy with reconstruction of the gland with endoprostheses) is used in women with a genetically determined high risk of cancer.

Conclusions and prospects for further research.

The most reliable measure for the prevention of breast cancer is a regular examination of women by a mammologist, monitoring of the condition of the reproductive system, monthly self-examination. All women over the age of 35 should have a mammogram. Timely detection of pathologies of the genital organs, hormonal imbalances, metabolic diseases, avoidance of carcinogenic factors help reduce the risk of breast cancer.

Cancer prevention is aimed primarily at eliminating carcinogenesis – the process of origin and development of the tumor. *The most effective measures for the prevention of cancer are:* abstinence from alcohol and smoking; complete healthy nutrition and normalization of body weight; physical activity; timely medical examinations. Regarding the prevention of cancers caused by viruses, it is recommended to be vaccinated against infections caused by HPV and hepatitis B virus.22

Everyone can help the body stay as healthy as possible, balanced diet, healthy weight, smoking cessation, alcohol restrictions, regular exercise and sports are important. But it should be understood that a healthy lifestyle is not a guarantee of no cancer, but a way to reduce the risk of getting sick.

Some women are at high risk for breast cancer due to hereditary factors. For example, if several close relatives (women and men) have been diagnosed with breast cancer, especially at a young age, there is a high probability of a mutation in the BRCA1 or BRCA2 genes. Appropriate tests and research will determine if there is a mutation. When confirmed, it is necessary to identify the risks of breast cancer and help reduce them.

Regular examination by a doctor will allow you to detect the tumor in time and completely cure it. "Severe disease is easy to detect but difficult to cure, and mild disease is difficult to detect but easy to cure," Hippocrates said. Therefore, if the disease is detected at an early stage, it makes it possible to perform organ-sparing operations, to avoid chemotherapy and radiation therapy, to correct hormonal parameters, to eliminate risk factors. And it gives a woman a chance for a full, long and healthy life.

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