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Zhytomyr Medical Institute
Khmelnytsky National University

# "Current Trends in Young Scientists' Research"

X All Ukrainian Scientific and Practical Conference

#### **Book of Papers**

**April 20, 2023** 



**Z**hytomyr

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

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# Session work No 1

### CURRENT RESEARCH IN THE FIELD OF HUMANITIES

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#### THE ROLE OF USING SILENT VIEWING TECHNIQUE

Learning a second/foreign language is of utmost importance for the learners in the current era, and being able to communicate with native speakers is the ultimate goal of it. To be able to communicate means to express thoughts, feelings, and information effectively through the four language skills [1].

Video material is a learning tool which can provide learners with visual, contextual, and non-verbal features and these features can help EFL learners compensate any lack of comprehension. If the students can mix the two ways of processing information, that is, bottom-up and top-down in the listening comprehension in watching the video materials, they can make learning a foreign language more effective and successfully comprehend the message which is the ultimate goal of language learning. Therefore, watching videos with special techniques should be taken into consideration as an important criterion in improving learners' listening comprehension skill to enhance learning outcomes.

One way to help students to improve their speaking is by using a video in language classes. Moreover, Cakir (2006) explained that most of the teachers liked the video because it could motivate the students, brought the real world into the classroom situation, contextualized language naturally, and enabled the students to experience authentic language learning. Thus, the video is a learning tool which can provide students with visual, contextual, and non-verbal features. These features can help the students to compensate any lack of comprehension [2].

Due to the impact of videos as powerful language learning tools and resources, numerous studies have been carried out on the impact of captions and subtitles on facilitating the comprehension of videos in language learning which date back to silent movies in the 1900s (Markham & Peter, 2003).

Several researchers revealed that videos can be a learning choice as they provide learners with contextualized and meaningful input (Herron, 1994; Hsu, Hwang, Chang, & Chang, 2013; Potosi et al., 2009).

Berk (2009) believes that video materials can draw on the learners' multiple intelligences and learning styles to maximize their understanding. He stated that when videos and multimedia learning are combined, an empirical basis is provided for the use of videos in teaching languages. He also mentioned that such courses enhance the students' comprehension and understanding and would be more beneficial for novice learners in their early stages.

There are also numerous studies considering the impact of different techniques of applying video in language classrooms and the effect of them on listening or other skills. Two common ways of applying video, as a beneficial pedagogical tool, are using captions, subtitles, and advance organizers that are argued to enhance listening comprehension. In the following section, some of the studies in this area have been mentioned.

With the emergence of videos as pedagogical tools, teaching English has become more challenging in recent years. The goal of teachers has changed to help learners master all language skills, understand the target language, and communicate effectively. Consequently, the language teachers provide learners with more up-to-date language materials that require learners to be more actively involved in language learning. In this regard, Canning-Wilson (2000), who investigated the effect of video in language learning, thinks that EFL learners' language achievement can be improved by using video material.

The present study, therefore, could pave the way for English language teachers to practice the effect of videos on listening skill of intermediate EFL learners. This study examined the effect of one viewing technique, namely, silent technique. In silent viewing, the teacher plays a film extract at normal speed but without the sound and the students have to guess what the characters are saying. The teacher can also play the extract with sound again to check the answers.

According to Shahani and Tahriri (2015), in silent viewing technique, the teacher plays a video with normal speed without the sound. Then, the students have to guess what the characters are saying. The teacher can also play the video with sound again to check the answers. Furthermore, Jenskin and Jhonson (2011) stated that silent viewing was an excellent way for stimulating speaking and writing. The students could sharpen their interpretations of the story, actress, and many actions depicted on the screen. Moreover, the students will predict the story in the video. They also have to retell the story that they have seen. It means that silent viewing video technique can increase student's ideas or imagination about the story. In this study, silent viewing is used to teach spoken narrative. It allows the students to think about some information which they get by watching a video in silence. To use this technique, the researcher adopts the technique from Stempleski and Tomalin (2001). It consists of several ways in its implementation. Those are pre-teaching, preparing the situation, giving questions, playing the sequence, discussing, playing the sequence again, and comparing the students' guesses [1].

Silent viewing technique may carry out many kinds of teaching technique to fulfill students' needs in speaking English. It also expected to be beneficial for the teachers. It is necessary to have a clear idea of how to use the appropriate technique in teaching process to make the learning process more interesting for the students.

Just as the name implies, silence is a key tool of the teacher in the Silent Way. Being silent moves the focus of the classroom from the teacher to the students, and can encourage cooperation among them. It also frees the teacher to observe the class. Silence can be used to help students correct their own errors. Teachers can remain silent when a student makes a mistake to give them time to self-correct; they can also help students with their pronunciation by mouthing words without vocalizing, and by using certain hand gestures. When teachers do speak, they tend to say things only once so that students learn to focus their attention on them [3].

A Silent Way classroom also makes extensive use of peer correction. Students are encouraged to help their classmates when they have trouble with any particular feature of the language. This help should be made in a cooperative fashion, not a competitive one. One of the teacher's tasks is to monitor these interactions, so that they are helpful and do not interfere with students' learning.

The method emphasizes the autonomy of the learner; the teacher's role is to monitor the students' efforts, and the students are encouraged to have an active role in learning the language.

Silent viewing is an effective technique which can be used in the video-based lesson with the right algorithm which starts by explaining the language feature and generic structure; showing the video; playing the video at normal speed and with lowest volume; stopping the video; stimulating students thinking by giving some questions related to the video (discussion), predicting what characters say or guessing what happen in the story; and playing the video again with sound. In the implementation of this technique, it makes teaching and learning process effectively.

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# THE EFFECTIVENESS OF USING INTERNET APPLICATIONS FOR LEARNING FOREIGN LANGUAGES

Currently the problem of learning foreign languages has become more acute than ever before, as the war has forced 6.9 million Ukrainians to leave their homes and go abroad. Most of them have poor or no knowledge of foreign languages. In this case, language learning apps come in handy, as language skills are needed immediately to address basic needs.

The problem of using electronical resources in educational process has been researched by K. Berzins, V. Bykov, A. Hudson, C. Lytvynova and others. The effectiveness of some learning apps has been studied by Roumen Vesselinov from Queens College, City University of New York and John Grego from University of South Carolina. However, little is known about the effectiveness of using internet applications for learning foreign languages.

In our research we have surveyed people who used at least one of the four language learning apps: Duolingo, Busuu, Quizlet, Moldy Languages. The total number of respondents has been 35 who rated at least one of the apps on a scale of 1 to 5, where 1 is ineffective and 5 is very effective.

The object of the study is the practicality and effectiveness of using various language learning applications. The subject is language learning applications.

The effectiveness of a particular app has been determined by a survey, as well as by the criteria of the language and learning components. Language component: grammar, vocabulary, listening, text comprehension. Learning component: motivation, updating basic knowledge, skills, experience, organizing the study of new educational material, improving previously learned material, determining learning outcomes, memorization methods used by the app [2].

*Busuu* is one of the apps for self-paced learning of foreign languages offering users to develop all four areas of learning: writing, listening, reading, and speaking. Before a person start, he or she can take a test or choose a level on his or her own without a knowledge test. Once a person has chosen his or her level, he or she will be offered lessons aimed at learning vocabulary and basic grammar topics.

To memorize vocabulary, the app uses images, audio tracks, and sometimes graphic images. If a learner wants, he or she can take the lessons again. At the end of a level a person can take a test on the material he or she has learned and even get a certificate. The app also allows a learner to communicate with other users, listen to native speakers, and help others learn his or her native language, find friends and likeminded people. The app tracks his or her activity and how much of the course a person has already completed. Busuu's effectiveness has been assessed by 30 people:

- 2 points of efficiency 4%;
- 3 points of efficiency 5%;

- 4 points of effectiveness 14%;
- 5 points of efficiency 77%.

*Duolingo* is the most popular app, primarily because of its interactivity, marketing campaign, recognizable logo, and ease of use. The app has many languages and a fairly large number of tasks focusing primarily on spoken language and life situations which are the most relevant now. Tasks are often presented along with various funny situations that may arise every day.

This is one of the best apps for quickly getting acquainted with a new language, but various experts do not recommend concentrating your language learning on Duolingo alone, as it almost lacks adequate explanations of certain language phenomena. Although there is a fairly strong and large community around Duolingo, many users agree that a learner may encounter serious and gross errors and their late correction which negatively affects his or her language comprehension [3].

According to our survey 25 people have been surveyed:

- 2 effectiveness points 15%;
- 3 effectiveness points 20%;
- 4 effectiveness points 27%;
- 5 effectiveness points 38%.

Quizlet is one of the applications that relies on communication between users. It is one of the most flexible applications from a technical point of view. A learner can practice anything from reading to listening, but it all depends on the quantity and quality of the material created by people for the world's main languages. This application is very popular among students because thanks to it, they have the opportunity to memorize a large volume of vocabulary structuring it as they like. Based on the words you enter, the program automatically creates a test that checks several types of vocabulary usage (from sound perception to direct translation or associative chains). A person can also learn words through an interactive game [4]. However, the application is best used for learning vocabulary, the audio track may be unclear, and the possibility of developing speaking skills is absent. We have analized Quizlet effectiveness according to the survey. 25 people have participated in the survey:

- 1 point of effectiveness − 2%;
- 2 points of effectiveness 7%;
- 3 points of effectiveness 14%;
- 4 points of effectiveness 49%;
- 5 points of effectiveness -28%.

*Moldy Languages*. This application allows a person to learn words by topics, fixed expressions, using audio accompaniment. Every day the application reminds a learner to take a lesson, there is a rating table that can affect external motivation. After learning six such lessons, a person can take a test. The program has a chatbot where a learner has to record voice messages and communicate with the robot – which is good for developing speaking skills, and can make his or her life easier when a learner

encounters situations proposed in the application in real life. A person can learn with friends. A rating is available among them, as well as among his or her fellow citizens and users from all over the world.

The application calculates the number of learned words and phrases, as well as the amount of time spent on learning them. However, all of this is very conditional, as the app lacks a level check and does not provide explanations for grammatical topics. Additionally, some phrases are used that are not commonly used in conversation. According to a survey 20 people have assessed the effectiveness of Moldy Languages:

- 1 point of effectiveness 25%;
- 2 points of effectiveness 15%;
- 3 points of effectiveness 17%;
- 4 points of effectiveness 15%;
- 5 points of effectiveness -28%.

To conclude, there are numerous language learning apps available today, and this article covers 4 of them. Each of them has different functionalities, purposes, advantages, and disadvantages. Therefore, the use of any app depends on the user's goals and language proficiency level. With the help of these apps everyone can learn basic words and phrases, grammatical structures for beginners, to express their desires and needs, and understand important announcements.

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# MOTIVATION FOR MILITARY ACTIVITY IN DIFFERENT COUNTRIES OF THE WORLD

Motivation for military activity is a complex phenomenon that includes a number of different social and psychological circumstances and, in turn, determines the whole complex of both positive and negative factors of military service. The relevance of this issue is due to the decisive influence of motivation on the success of military professional activities, the mental and functional states of servicemen, the desire for professional self-actualization in the military sphere, etc. Therefore, the problem of developing motivation for professional activity is one of the main ones in military psychology.

O. Georgadze, V. Grom, O. Kalyniak, and M. Prykhid point out the need to form a motivational system for servicemen of the Armed Forces of Ukraine in their studies. The researchers have found that the presence of military experience contributes to the formation of a more positive attitude to the professional activities of the military, enhances internal motivation, which increases the overall level of psychological readiness for military service. They identified the main motivations for military personnel to enlist in the military: self-realization, recognition, patriotism (desire to defend the Motherland) and solving personal problems.

The list of negative factors preventing the continuation of military service includes: a long stay in the area of the Joint Forces Operation (family circumstances, excessive service, physical and moral stress during combat operations, negative attitude to military service by family members), insufficient material (monetary, material, food) support, low level of social and legal protection of servicemen and their families, the state of military equipment and weapons, low level of professional and moral.

Let us consider the experience of forming motivation for military service in different countries. Through research, American educators have identified the main factors of motivation to serve in the army:

- 1) self-improvement. This factor includes components that determine personal development: responsibility, self-confidence, and physical fitness;
- 2) benefits. It includes everything related to the benefits received from military service and those that will be received after retirement. This includes financial support, the so-called "social package" and various benefits. A private in the US Army receives \$1568 from the first to the last day of service in this rank;
- 3) military service: desire to become a soldier, enjoyment of service. Patriotic commitment, traditions, and the desire to serve are referred to as institutional aspects as a set of formal and informal norms and rules;
  - 4) professional skills: increasing opportunities for future employment;

- 5) opportunity to see the world. This factor implies a desire to travel to other countries related to military service in order to see other life and have time to understand oneself, which is called a "time out";
- 6) money for education (educational benefits, education at the expense of the army). The US Army has a positive attitude towards military education. A student in uniform is provided with a laptop and \$4.5 thousand per year to pay for tuition.

The People's Republic of China has a completely different approach to motivating conscripts. Due to the large population and sufficient number of volunteers in China, conscription is not actually carried out. Chinese military researcher Qiao Taiyang believes that the system of motivation to serve in the army is determined by factors of tradition and culture:

- 1. The national flag as a symbol of honor and courage.
- 2. Role models. This factor contributes to the development of nobility and care for others. In recruitment centers and military units, photos of heroes are displayed as role models.
- 3. Non-monetary incentives. For example, staff who clean the premises best can receive a red flag for a week; recruits who study well are given the title of "role model"; units that perform tasks best are given an honorary title. Companies may be named after individuals who have performed heroic deeds.
- 4. The Chinese army attaches great importance to the culture of the military unit, which motivates the appropriate behavior of recruits.

In Israel, the developer of the system of motivation for military service was the Chief of the General Staff of the Israeli Defense Forces, Amnon Lipkin-Shahak. In the mid-1990s, he began intensive work with recruits and offered the generals regular meetings with schoolchildren. Surveys in 1980, 1984, and 1988 showed that approximately 90 percent of high school students were willing to volunteer for military service. Subsequent studies have shown that the number of such volunteers has dropped to 75%, and since 1992 it has been decreasing by 2% annually. Later, conscription became mandatory for both boys and girls and for some categories of disabled people. A system of alternative military service was developed for religious recruits. It has become almost impossible to avoid military service, especially when it is punishable by criminal liability and the possibility of working in the civil service in the future is excluded. Israel has developed its own system of motivation for military service, which is based on common social, ideological and religious values.

Different countries are searching for additional ways to solve the problem of motivating young people to military service in the following areas: raising the authority of the army and military service; forming a positive image of a serviceman and the army in the media, advertising, methodological recommendations, etc.; creating favorable conditions, benefits, social security, material and career interest; fostering in conscripts a sense of personal social significance, benefit and patriotism; moral, psychological, pedagogical, social and political education. Undoubtedly, the formation of a positive attitude towards the army and military service is a task not only for the military, but also for the entire society, state and public institutions.

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#### A FOREIGN LANGUAGE IN THE KINDERGARTEN

Foreign languages are increasingly becoming part of our lives integrating the Ukrainian society with the global cultural space. Learning at least one foreign language will not only develop a child's individual speech abilities, but will also create the prerequisites for mastering other languages in the future, and foster a tolerant attitude towards speakers of other cultures.

According to many researchers (V. Bukhbinder, H. Rogova, O. Sidelnikova, I. Vronska, etc.), preschool age is one of the conditions for improving the quality of education – developing children's speech activity. Early learning of a foreign language (in preschool age) is the most sensitive. In this context, mastering a foreign language is seen as one of the conditions for improving the quality of children's speech activity. This is especially true for teaching children of senior preschool age. U. Weinreich, M. Pavlovich and other scientists see the basis for successful teaching of a foreign language to preschoolers in the specifics of psychophysiological capabilities of children of this age. Thus, according to W. Penfield, the physiological reason for the success of language learning is that during this period the child's brain has a specialized ability to learn a language which decreases with age. Today it is important that foreign language classes not only provide children with new knowledge, but also contribute to the full development and education of a creative personality. The studies of Sh. Amonashvili, Z. Futerman, L. Vygotsky focus on the central problems of the

preschool age: mental and personal development, the process of language acquisition, involuntariness in the assimilation of social reality and culture. However, little research has been undertaken to study the problem of teaching a foreign language in the kindergarten.

Teaching preschoolers a foreign language is a variable component of the State Standard of Preschool Education. Children can be taught a foreign language both in the family and in an educational institution (preschool or out-of-school). The following prerequisite should be considered: only when the learning process is based on scientifically sound approaches, it will contribute to the timely socialization of the child's personality; the formation of his or her personal culture (through acquaintance with the language and culture of another people); the development of cognitive mental processes (thinking, memory, attention, imagination, sensations, perception). The key to successful learning of a foreign language by children is for teachers to take into account the anatomical, physiological and mental characteristics of children in their educational work with them. Moreover, it is impossible to correctly determine the most optimal time to start introducing a child to another language, to choose the most rational forms, methods, techniques and teaching aids, and to dose the material. That is why, it is extremely important that the formation of correct pronunciation skills begins at preschool age, and that teachers who teach children a foreign language are fluent in spoken language and have impeccable pronunciation and intonation [1].

Thus, we identified a number of positive results achieved by means of a foreign language:

- ensuring general mental development (in particular, language abilities);
- formation of purposefulness and activity;
- language development in the native and foreign languages.

Teaching a child a second language can start at different ages:

- 1. From birth. In this case, one of the parents, relatives, or a nanny should be a native speaker of the second language or know it perfectly, act on the principle of "one person one language", and constantly communicate with the child in that language without using another one.
- 2. From the age of three. A three-year-old child usually already speaks his or her native language, has a certain range of ideas about himself or herself and the world around him or her that he or she can rely on when learning a foreign language. He or she is also able to adequately perceive communication with a native speaker of another language or an educator (a tutor, a teacher, a governor, etc.) in the family, in a preschool or out-of-school institution, and learn to respond in a foreign language. The child can be involved in joint actions and movements with an adult, pantomime, and choral speaking. The work is based on simple speech games and game exercises of a sensory, motor, and communicative nature [2].

The key to successful learning of a foreign language by children is to take into account the anatomical, physiological and mental characteristics of children in educational work with them. Furthermore, it is impossible to correctly determine the start date of training, choose the most rational forms, methods, techniques, teaching aids, and dose the material. Children learn a foreign language practically through

imitation, exercises in certain playful and everyday situations, without knowing any grammatical rules.

Objectives in teaching preschoolers a foreign language:

- to form lexical skills of English competence;
- to promote the enrichment of active and passive vocabulary;
- to activate communication skills;
- to develop monologue and dialogic speech;
- to develop auditory and visual memory;
- to foster a desire to learn English.

Principles of education:

- compliance with age peculiarities, level of physical, intellectual, and mental development;
  - systematicity ensured by the thematic organization of educational material;
  - accessibility of understanding of the material presented;
- repeatability of the educational process which contributes to the deepening of knowledge;
  - motivational focus created by interest in learning.

All existing methods of teaching English can be divided into: the substitution method, the communicative method, the immersion method [1].

Therefore, lessons in the kindergarten should contain conversational topics, lexical items, and communicative functions that describe categories of preschooler behaviour and are repeated in foreign language lessons. The development of themes takes place with a consistent complication of communicative functions: first, the skills of greeting, acquaintance, and then handling objects, performing actions are formed. The topics of the spheres of communication correspond to the motives of children's communication.

To conclude, the article contains tasks, methodological recommendations, and requirements for organizing the educational process of learning a foreign language in the kindergarten. The article substantiates the creation of optimal conditions for the formation of a foreign language competence using various forms of work. We can admit that learning English from preschool age is quite relevant and even necessary. There is a wide variety of methods and techniques for teaching a foreign language to preschoolers to learn English easily in the kindergarten. It has also been determined that learning English from preschool age is less traumatic and difficult for a child than at an older age, so it is better to start learning a foreign language from preschool age.

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#### AIMS AND OBJECTIVES IN LESSON PLANNING

Much attention has been paid to aims and objectives in education as they clarify what students are to achieve. However, without any aims and objectives will not attain anything worthwhile.

Aims are general statements representing ideas and aspirations. They are used to indicate the overall purpose of a course or program. They can also describe the purpose of an individual session. They are predominantly long-term, difficult to assess, and expressed in general terms:

- to improve (facilitate) understanding, general skills, or physical coordination;
  - to modify attitudes, beliefs, and standards;
  - to impart information, knowledge, orideas;
  - to stimulate action;
  - to encourage changes in behavior.

Aims state what a particular course aims to achieve. Moreover, it is worth mentioning that course aims are broad brush strokes that do not provide details but rather say what a course hopes to achieve, e.g., "... The course helps participants to understand/achieve/respond to ...."

A general statement is needed at the next level of description, setting out the overall purpose of each session. Since it describes one session rather than a whole course, it must be written more specifically. Some teachers use the same language for session aims as for course aims. The others prefer to express the purpose of a session in terms of general student out comes.

On the contrary, objectives are specific action statements. They are viewed as achievable stepping stones which lead towards more generally expressed aims. They represent the most specific level of description used, and they state in some detail the hoped-for changes in the learner. Overall, objectives state what the student can do, think, feel, or say due to the planned learning and teaching event. Objectives are typically expressed using action verbs: identity, state, choose, select, criticize, show, move, perform, conclude, participate, compare, demonstrate, etc. They need to be written in ways that allow the teacher and the student to make some judgments as to whether or not they have been achieved.

Objectives realize three functions[Daines]:

- provide an overall structure for a learning and teaching event;
- help in detailed planning;
- actas a basis for appropriate assessment procedures.

Therefore, objectives describe the desired behavior, the conditions under which attainment is to be demonstrated, and the criteria for such success. Nevertheless, it is

worth outlining that some changes in behavior may only be observable sometimes after a lesson.

Objectives can be named differently, e.g., behavioral, learning, instructional, and teaching objectives. The main idea is to think out precisely what your students will achieve by the end of a lesson. Therefore, you should use behavioral terms and ensure that the statements you come up with are specific, limitedinscope, attainable, andobservable. Once you are clear about what they are, you can planthe lesson, which presupposes selecting the content, choosing the best methods, gathering the resources together, and working out how to monitor out comes.

To sum up, we must admit that time spent on clarifying lesson aims and objectives and discussing them with your learning group is beneficial for your planning and teaching, students' learning, and achievement and greatly contributes to a mutual feeling of success.

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### LINGUISTICAL POTENTIAL OF THE GENRE "PUBLIC SPEECH OF A POLITICIAN"

The speech genre is seen as a class of communicative events, the participants of which share the same communicative goals, which are recognized by members of the relevant discursive community and constitute the basis of the genre [3, p. 58]. A speech is a recognizable communicative event defined by an appropriate set of communicative goals recognized and mutually understood by members of a particular professional community where it is most often used.

A clear structure characterizes genres because genre conventions limit the possibility of variation in intent, positioning, form, and function. However, these

restrictions can be applied by members of the discursive community to achieve specific goals within the framework of socially recognized goals [2, p. 13].

The genre "public speech of a politician" is characterized by a particular phonetic embodiment, which serves mainly to attract the addressee's attention. Phonetic stylistic techniques consist of the use of sounds to create a specific acoustic effect and give expressiveness to the message [1, p. 51].

In V. Zelenskyi's speeches, we observe the use of alliteration. These phonetic means of expression attract the audience's attention and emphasize certain moments of the speech to influence the public consciousness: "...People who are forcibly deported to Russia daily are deprived of documents..." (4). "...Sanctions for the aggressor to feel that you are a force..." (2). "...We know our dream cannot be defeated and destroyed..." (8). "... brought trouble and war to our land..." (7).

Phonetic means of expression draw the audience's attention to the relevant aspects of the message and contribute to a better understanding of the message.

Graphic means of expressiveness are used for the visual expression of texts of this genre. Among the graphic means of strengthening the meaning of individual elements of the text, writing words or parts of the text in a different font, italics, bold, writing individual words with a capital letter or capital letters, changing the spelling of words, etc. can be used. This feature is characteristic of the "public speech of a politician" genre.

Graphic means of expressiveness in speeches are widely used to create the intensity of the message, particularly to draw the reader's attention to the corresponding element of the text, convey the author's emotions, etc. In particular, addressing the audience and concluding his speeches, V. Zelenskyi widely uses the iconic phrase "...Glory to great Ukraine!..." which is emphasized in bold italics. Bold highlighting shows the significance of this phrase not only for the people of Ukraine but also for representatives of other countries who tirelessly support Ukrainians in their struggle for freedom and independence.

It is worth noting that this genre is characterized by a stylistically marked embodiment, which is achieved through various figurative and tropeic means of expression. For the emotionality and imagery of the texts of the analyzed genre, lexical stylistic techniques are used, which involve the use of words and expressions in a figurative sense.

Linguistic analysis of the texts of the "public speech of a politician" genre indicates the use of various figurative and tropeic means, in particular, metaphors: "...our relationship was pretty cold, our attitude towards each other wasn't too warm. The path to warmth..." (8) and "...It threw tanks and planes against our freedom..." (5); metonymy: "...And we have to defeat the Kremlin on the battlefield..." (7). "... Ukraine did not fall. Ukraine is alive and kicking..." (7). "...Destroy the whole nation..." (2); synecdoche: "...I hope my words of respect and gratitude resonate in each American heart! ..." (7); epithets: "There is a lot to say, here are some of the most successful in our opinion: "terrible war, " "sincere people, " "full-scale war, " "eternal peace, " "brutal and cynical Russian invasion."

Tropes are also effective with linguistic turns such as repetitions and enumerations. "...Tell your politicians to close the sky over Ukraine from Russian missiles and planes. From those who killed 79 children and thousands of adults! Thousands in 17 days..." (1). "...On the fifth day, the terror against us has already become outright. Against cities, against small towns. Ruined districts. Bombs, bombs, bombs, again bomb on houses, schools, and hospitals. This is genocide..." (6), and "...Europe is going through a war, every day of which is full of war crimes of Russian troops..." (4).

The frequent use of epithets, repetitions, and separations in the speeches of the President of Ukraine also illustrates the following example: "... We are experiencing a terrible war in Ukraine ... \(\sigma\)... We did not start this war. This is a brutal and cynical Russian invasion of Ukrainian land. This is a war against the Ukrainian people – against peaceful and sincere people, whom I am sure you have known very well during the years of our independence. And you saw that we are very similar to you. We equally value freedom. We equally value equality. We equally want to live. We just want to live. We equally want only the best, the brightest for our children, for our families ... \(\sigma\)..." (1).

After analyzing the speeches of V. Zelenskyi, we discovered a large number of figurative and tropeic means of expression, in particular metaphor, metonymy, synecdoche, and epithets, which were used to describe certain phenomena and events comprehensively, reflect the emotions of the speaker and awaken empathy in the listener, which can play a crucial role in forming a picture of what is happening.

Syntactic and stylistic means of expression are essential in the "public speech of a politician." Syntactic techniques include changing the order of words in a sentence, the sequence of sentences in a text, etc. The sentence model, as the primary unit of the syntactic level of the language, can contain basic and additional information, enter into synonymous relations, form syntactic and stylistic paradigms, and form stylistically marked sentence models that give the expression dynamism, a sense of live speech, make speech relaxed and more comfortable for perception. This feature is manifested in many texts of the "public speech of a politician" genre.

In the analyzed speeches of V. Zelensky, such syntactic and stylistic means of expression are widely used, such as impersonal sentences ("...That saved people...\sigma...Kills children. Arranges blockades of cities..."), rhetorical questions ("...Why are they defending all this without your leadership? Without your strength? Why are overseas states closer to us than you are?..."), enumeration ("...without water, food, light, and heat..."), changing the order of words in a sentence, which strengthens the emotional connection the connection between the speaker and the audience, increases empathy, outlines the most critical and tragic theses of the entire speech: "...In 2019, after the beginning of the COVID-19 pandemic, our "Mriya" constantly delivered the most necessary medical supplies. That saved people. Adults, children - all. Indifferent countries on different continents. "Mriya" was bringing life. But now it is impossible..." (8) and "...It bombs and shells peaceful cities and villages, killing our peaceful people. Kills children. Arranges blockades of cities, holding hundreds of thousands of people hostage without water, food, light, and heat. Daily. It separates

thousands of children from their parents and takes them out, or rather kidnaps them, forcibly relocating them to its territory..." (8).

The use of repetition makes the message intense and emotional. It is by using repetitions and enumeration that the speeches of the President of Ukraine force the audience to project the situation in Ukraine onto themselves and their families, and therefore call the community to action: "... Ukraine did not strive for that. It did not seek greatness...", "...Ukraine that saves people despite the terror of the invaders. Defends freedom despite the blows of one of the world's largest armies. Defends despite the open sky." (6).

Similarly, the President of Ukraine often uses anaphora: "...Hear about Ukraine-79. About Ukraine-2022. About Ukraine, which seeks peace..." (1), which is designed to emphasize the importance of the message.

We discovered that such syntactic and stylistic means of expression are widely used in speeches, such as enumeration, comparison, contrast, repetition, and gradation. They are designed to heighten emotionality, more vividly illustrate the tragedy of the current situation, and encourage the world community to act. The use of syntactic and stylistic figures by V. Zelenskii is effective, because they help to emphasize the significance of the corresponding words, emphasize the most critical points for the audience, give the message emotionality and expressiveness, contribute to increasing the involvement of the listener, conveying to him the emotional state of the speaker and shaping the perception of the situation with a side of the speaker. Undoubtedly, the texts of the "public speech of a politician" genre are characterized by various means of expression.

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#### PECULIARITIES OF FILM DISCOURSE TRANSLATION

Translation of film discourse is a complex and multidimensional process that requires knowledge from various scientific fields. Translation has its own peculiarities related to linguistic, cultural and screen factors. One of the peculiarities of translating film discourse is to take into account cultural contexts, which include historical and social differences of the countries from which the films originate. Cultural differences affect the choice of vocabulary, the wording and structure of sentences, as well as the on-screen context that reflects cultural characteristics. Another feature of film discourse translation is the consideration of on-screen factors, such as images, sounds, and effects that accompany speech. The on-screen context may include a visual component such as framing, color and lighting, as well as music and sound effects. All these factors affect the viewers' perception and can be important for reproducing the author's original idea.

In addition, the translation of film discourse also involves linguistic factors, such as the choice of vocabulary, sentence structure, and grammatical constructions. The translator must have in-depth knowledge of the source and target languages to ensure the accuracy and reproduction of the original idea. Translation of film discourse also includes:

Cultural references: Cinema is an important part of a country's culture and identity, and often contains references to specific cultural aspects that may not be understood by other cultures. The translator must be aware of other cultures and have knowledge of local traditions and history in order to correctly convey the meaning of the film discourse. [1]

- Genre differences: Cinema contains different genres that have their own conventions and styles. A translator should know what genre features each movie has and translate dialogues and remarks accordingly.
- Audiovisual context: Cinema is a visual and sound experience, so a translator must take into account the audiovisual context. For example, if the movie features music of a certain genre, the translator can use terms from this genre to convey the atmosphere of the movie. [2]
- Idioms and slang: Film discourse often contains idioms and slang expressions that may not be understood by other cultures. The translator must be familiar with these idioms and slang, as well as know similar expressions in the other language, in order to convey the meaning of the dialog correctly.
- Adaptation to the local market: The translation of movie discourse should be adapted to the local market. For example, movie titles, characters, and locations may be changed to better suit the local audience.
- Difference between spoken and written language: Film discourse may contain colloquial expressions and informal language constructions that may be difficult to translate into written language. The translator must know the difference between spoken and written language to correctly reproduce the full meaning of the film discourse.
- Technical aspects: Movies contain a variety of technical aspects such as sound effects, subtitles, and voice-overs. The translator must take these aspects into account and translate dialogues and remarks accordingly.
- Cultural references: Film discourse may contain cultural references, such as references to popular cultural phenomena, traditions, history, etc. The translator must be aware of these references and ensure that they are correctly reproduced in the translation.
- Acting: It is important to take into account the acting and facial expressions of the characters when translating dialogues. The translator must know how to properly convey the emotions and feelings conveyed through acting."[4]
- Stylistics: Film discourse may contain a variety of stylistic devices such as metaphors, irony, humor, etc. The translator should be familiar with these devices and

be able to use them in translation to preserve the original style and mood of the movie."[5]

- Synchronization: In the case of a dubbed movie, the translation needs to be coordinated with the actors who provide the voice of the characters. The translator must ensure that the translation matches the lip movements and other movements of the actors to ensure accurate synchronization of speech.
- Terminology: Film discourse may contain specialized terminology, such as film industry terms, technical terms, and others. The translator must have sufficient knowledge of this terminology and use it correctly in the translation to ensure fidelity to the original.
- Audiovisual effects: Cinematic discourse may contain various audiovisual effects, such as music, sound effects, special effects, etc. The translator should take these effects into account and ensure that they are reproduced in the translation to preserve the full atmosphere of the movie."[6]
- Glossary: For more complex motion pictures, a glossary may be created that contains complex terms, names, and other features of the movie. The translator should take this glossary into account and use it to ensure fidelity to the original.

Thus, using a comprehensive approach and knowledge from various scientific fields, the translation of film discourse can be done with high quality. It is extremely important that translators have not only a deep knowledge of languages, but also familiarity with the context and culture to ensure the highest quality of translation. Taking into account the peculiarities of translating film discourse will help to preserve the original idea and convey it properly.

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#### NATURAL LANGUAGE PROCESSING IN SENTIMENT ANALYSIS OF SOCIAL MEDIA DATA

In recent years social media platforms have become an important source of information for businesses, politicians, and researchers to understand public opinion and sentiment. Sentiment analysis is the process of determining the attitude, opinions and emotions of a speaker or writer with respect to some topic or the overall contextual polarity of a document [1]. The suggested study focuses on the role of Natural Language Processing (NLP) techniques in sentiment analysis of social media data.

NLP is a branch of computer science that studies how to enable the computers to understand written and spoken text in the way similar to human beings [2]. The main task for NLP is machine processing of the text. The most popular practical tasks of natural language machine processing include machine translation, spell checking, grammar, lexis and style of the text, speech recognition and answer search, summarization, sentiment analysis, text classification, relevant online advertising. A thorough literature review of the state-of-the-art techniques in NLP-based sentiment analysis revealed traditional rule-based approaches and more recent machine learning-based methods.

The research presents the development and evaluation of a novel NLP-based sentiment analysis model using a dataset of social media. Searching for negative texts in social media and highlighting the main complaints helps businessmen, marketers and politicians to change conceptions, improve products and advertising, as well as reduce the level of dissatisfaction. By automatically analyzing user behavior on the Internet, their pages in social networks and queries in search engines, NLP promotes the right advertising for them. NLP technologies are used in medicine to improve patient care, maintain medical records, and search for key terms in specialized literature. In law enforcement, machine data processing and prediction allow to prevent crimes. Using NLP, the police can analyze criminal activity, find the code words of criminals in advertising and react more quickly to avoid violence and human trafficking.

Furthermore, the ethical considerations and limitations of using social media data for sentiment analysis, such as privacy and bias are discussed. The results of the research demonstrate the potential of NLP-based sentiment analysis for gaining valuable insights from social media data, highlight the importance of careful consideration of ethical and practical issues in its implementation.

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#### SYMBOLS AND MEANINGS IN SELECTED ENGLISH SONGS

Main goals of my paperwork are to analyze and interpret the symbols, meanings and concepts present in selected English songs, explore how they shown and expressed through lyrics. Identifying common themes and motifs across different English songs.

To begin with, for better understanding and perception, I chose 10 songs from my personal playlist for review and analysis of symbols, meanings and concepts. For analyses I have chosen 10 songs: "Tolerate it" by Taylor Swift, "What He Wrote" by Laura Marling, "Chemtrails Over the Country" Club and "Ultraviolence" by Lana Del Rey, "The Dazzler" by Ex:Re, "Family line by Conan Grey, "Somewhere only we know" by Keane, "Ring", "Lose you to love me" and "People you know" by Selena Gomez.

<u>Symbolism</u> is a representation of an idea or a <u>theme</u> using symbols. They can be <u>objects</u>, colors, or general expressions. The music itself is symbolic of emotions, good and bad feelings, <u>dreams</u> and messages. It is to convey the specific meaning to the listener and reader. Through <u>symbolism</u>, a lyricist can depict his thoughts, abstract ideas, situation, event and the current issues prevailing in the society in a sugar quoted way. Layer by layer, lyricist takes the listener deeper into a person's thoughts [1].

#### "Tolerate It" by Taylor Swift

"Tolerate It is a song by Taylor Swift that was released in 2020 as part of her album "Evermore". The song is about a woman who feels trapped and unappreciated in a relationship where she constantly goes unnoticed and is taken for granted. There are several symbols, meanings, and concepts within the song. The title itself, "Tolerate It," suggests a sense of resignation and acceptance of a situation that is less than ideal. Throughout the song, there is a recurring image of the color blue, which represents sadness and loneliness. The lyrics also mention the concept of "playing a part" or putting on a facade to please others, which can be exhausting and emotionally draining. The repeated use of the phrase "I sit and watch you" highlights the narrator's feelings of invisibility and lack of agency in the relationship. The contrast between the narrator's inner turmoil and the seemingly mundane activities they engage in (such as setting the table) creates a powerful sense of emotional disconnect. Overall, "Tolerate It" is a poignant exploration of the complex emotions that can arise when one is trapped in a relationship where they feel undervalued and overlooked [5].

#### "What He Wrote" by Laura Marlin

"What He Wrote" is a song by Laura Marling released in 2011. The song tells the story of a woman who receives a letter from her lover who has gone away to war. The central symbol in the song is the letter itself. The letter represents the only connection the woman has with her lover and serves as a source of comfort and hope during his absence. The lyrics convey a sense of longing and desperation as the woman waits for news of her lover. This concept is reinforced by the repeated phrase "how

long?" throughout the song. The lyrics also touch on the theme of mortality, as the woman wonders what will become of her lover if he does not return from war. The line "I cannot bear the thought of him / Involved in this" speaks to the sense of helplessness and powerlessness that many people feel in times of crisis. The final lines of the song, "And I think I love him more / In death than I ever did in life," suggest that the woman has come to appreciate her lover's value and significance more fully in his absence. In conclusion, "What He Wrote" is a poignant meditation on the nature of love, loss, and separation, and explores the complex emotions that arise when one is forced to confront their own mortality or that of a loved one.

#### "Chemtrails Over the Country Club" by Lana Del Rey

This song was released in 2021. The song explores a range of symbols, meanings, and concepts, including the title itself, "Chemtrails Over the Country Club," refers to a controversial conspiracy theory that suggests that the trails left by airplanes in the sky are actually part of a sinister government plot. In the context of the song, the title could be interpreted as a metaphor for the ways in which society and government can be manipulative and deceptive. The lyrics touch on themes of isolation and loneliness, particularly in the lines "I'm not bored or unhappy, I'm still so strange and wild." This concept is reinforced by the haunting melody and atmospheric sound effects featured in the song. The lyrics also explore ideas of escape and transcendence, particularly in the lines "I'm doing my best to find / A way to escape the city lights / And watch them fade away." This suggests a desire to disconnect from the noise and chaos of modern life and seek out moments of clarity and peace. The repeated refrain "Don't ask if I'm happy, you know that I'm not" underscores the sense of emotional turmoil and instability present throughout the song. The song's music video features imagery of Del Rey and her friends gathered together, sparking nostalgia and a sense of community among its viewers. However, the innocence of this imagery is juxtaposed with darker imagery of snakes, suggesting that even in times of relative calm, there is always a lurking threat. To sum up, "Chemtrails Over the Country Club" is a complex and multi-layered exploration of the darker undercurrents of contemporary society, while also tapping into themes of hope, escape, and community.

#### "Ultraviolence" by Lana Del Rey

"Ultraviolence" is also the next song by Lana Del Rey that released in 2014. It is known for its haunting melody and poetic lyrics, which explore a range of symbols, and meanings. The title "Ultraviolence" itself is a reference to the term "ultra-violent" used in Anthony Burgess' novel "A Clockwork Orange." This suggests a connection between the song's themes of violence, exploitation, and darkness with the futuristic dystopian themes of the novel. The lyrics explore themes of toxic relationships and emotional abuse, particularly in the lines "He hit me and it felt like a kiss / I can hear violins, violins / Give me all of that ultraviolence." This suggests a desire for intensity and drama that threatens to consume the narrator. The repetition of the phrase "heaven is on earth" creates a sense of ambiguity and disorientation, suggesting that even in moments of pleasure or ecstasy, there is always a lurking sense of darkness and danger. The lyrics also touch on themes of power and control, particularly in the lines "He used to call me DN / That stood for deadly nightshade / 'Cause I was filled with poison / But

blessed with beauty and rage." This suggests a complex interplay between strength, femininity, and vulnerability. The song's haunting melody and atmospheric sound effects reinforce the sense of melancholy and desperation present throughout the lyrics, creating a moody and evocative tone. Overall, "Ultraviolence" is a powerful exploration of the darker corners of love and obsession, and a testament to Lana Del Rey's unique ability to tap into complex emotions and themes with her music [6].

#### "The Dazzler" by Ex:Re

"The Dazzler" is a song the solo project of Elena Tonra from the band Daughterthat was released in 2019. The song is known for its haunting melody and introspective lyrics. Title "The Dazzler" is a reference to a type of military technology used to confuse enemy radar during World War II. This suggests a connection between the song's themes of deception, manipulation, and surveillance with wartime tactics. The lyrics explore themes of emotional detachment and self-preservation, particularly in the lines "I'm always one step ahead / I keep my feelings in check." This suggests a desire to protect oneself from harm or vulnerability, even at the expense of one's own emotional well-being. The repeated refrain "it's not enough" creates a sense of restlessness and dissatisfaction, suggesting a longing for something more meaningful or fulfilling in life. The lyrics also touch on themes of power and control, particularly in the lines "I know the horses are restless / But it's all under control." This suggests a complex interplay between strength, confidence, and an underlying sense of anxiety or fear. The song's sparse instrumentation and subtle sound effects reinforce the sense of melancholy and introspection present throughout the lyrics, creating a moody and evocative tone. All in all, "The Dazzler" is a strong exploration of the complexities of human emotion and the ways in which we navigate our own vulnerabilities and desires.

#### "Family line" by Conan Grey

The next song that explores a range of symbols is "Family line" released in 2021. Title itself suggests a focus on the connections and legacies passed down through generations of a family. The lyrics explore themes of personal identity and the struggle to define oneself within the context of one's family, particularly in the lines "I don't wanna be a part of the family line / I don't wanna live inside another lie." This suggests a desire to break free from the expectations and limitations imposed by family ties. The repeated refrain "I'm not like them" creates a sense of alienation and difference, suggesting a longing to be seen as an individual separate from one's family. The lyrics also touch on themes of personal growth and self-discovery, particularly in the lines "I'm gonna find somebody, somebody just like me / And we'll be happy on our own." This suggests a desire to find a sense of belonging and acceptance outside of traditional family structures. The song's upbeat, pop-infused sound contrasts with its introspective lyrics, creating a tension between the dissatisfaction expressed in the words and the hopefulness suggested by the music. Lastly, "Family line" shows how many of us may suffered through traumatic childhoods, because most victims of such trauma don't tend to talk about it in public. In the grand scheme of things, it probably isn't good to keep all of that hurt in, and professional musicians like Conan Gray are in a unique position to really have their voices heard [2].

"Somewhere only we know" by Keane

This song by Keane was released in 2004. The title of the song suggests a focus on a personal, meaningful place that exists only for the individual or a small group of people who share it. The lyrics explore themes of escapism and the desire to retreat to a safe place away from the outside world, particularly in the lines "Oh simple thing where have you gone / I'm getting old and I need something to rely on." This suggests a longing for comfort and stability amidst the chaos and uncertainty of life. The repeated refrain "This could be the end of everything / So why don't we go somewhere only we know" creates a sense of urgency and a desire to seize the moment before it's too late. The lyrics also touch on themes of nostalgia and the bitter sweetness of memories, particularly in the lines "Is this the place we used to love? / Is this the place that I've been dreaming of?" This suggests a wistful yearning for a past that may never return. The song's gentle, piano-driven melody and soaring chorus reinforce the sense of hope and emotion present throughout the lyrics, creating a tender and uplifting tone. Overall, "Somewhere Only We Know" is a powerful exploration of the human experience of finding comfort, safety and warmth in the midst of life's challenges and uncertainties [4].

#### "Ring" by Selene Gomez

"Ring" was created in 2021. The title suggests a focus on communication and connection, particularly through the use of technology and social media. The lyrics explore themes of romantic longing and frustration, particularly in the lines "Wrapped 'round my finger like a ring, ring, ring / They just like puppets on my string, string, string." This suggests a desire for control and power in a relationship, as well as a sense of frustration with partners who do not meet her expectations. The repeated refrain "Are you, are you / Coming to the tree" creates a sense of mystery and intrigue, suggesting a hidden meaning or message that is not immediately clear. The lyrics also touch on themes of emotional vulnerability and the difficulty of trusting others, particularly in the lines "I don't trust nobody / Not even the ones who tell me they love me." This suggests a fear of being hurt or betrayed, as well as a deep-seated emotional turbulence. The song's sultry, atmospheric sound and haunting vocals reinforce the sense of mystery and longing present throughout the lyrics, creating a moody and evocative tone. In conclusion, "Ring" is an exploration of the complexities of modern romance and the ways in which technology can both connect and disconnect us [3].

#### "Lose you to love me" by Selena Gomez

The title "Lose You to Love Me" shows a focus on the painful but necessary process of letting go of someone or something in order to ultimately find self-love and inner peace. The lyrics explore themes of heartbreak and transformation, particularly in the lines "We'd always go into it blindly / I needed to lose you to find me." This suggests a realization that the end of a relationship may lead to personal growth and self-discovery. The repeated phrase "To love, love, yeah" creates a sense of hopefulness and resilience, suggesting a belief in the power of love to heal and transform. The lyrics also touch on themes of self-sabotage and learning from past mistakes, particularly in the lines "I saw the signs and I ignored it / Rose-colored glasses all distorted." This suggests a recognition of one's own faults and a desire to learn from them in order to move forward. The song's simple, stripped-down melody and emotive vocals reinforce

the poignant and introspective tone of the lyrics, creating a raw and vulnerable atmosphere. Summing up, "Lose You to Love Me" shows emotional complexities of heartbreak and self-discovery, as well as the resilience and hopefulness that can arise from these experiences [7].

#### "People you know" (Selena Gomez)

This song was released in 2020. The title "People You Know" suggests a focus on the relationships and connections we have with others, particularly those who are familiar to us. The lyrics explore themes of heartbreak and regret, particularly in the lines "I had a dream we were back to seventeen / Summer nights and the liberties." This suggests a longing for a past relationship or a simpler time, as well as a sense of loss and nostalgia. The repeated refrain "People you know, people you know" creates a sense of familiarity and repetition, suggesting a cycle of relationships and connections that may come and go. The lyrics also touch on themes of self-doubt and personal growth, particularly in the lines "And I don't wanna disappoint no one / But I've been alone too long." This suggests a struggle to find a balance between pleasing others and staying true to oneself, as well as a desire for companionship and connection. The song's upbeat, pop-infused sound contrasts with its introspective lyrics, creating a tension between the pain expressed in the words and the hopefulness suggested by the music. In conclusion, "People You Know" is a poignant exploration of the complex emotions and experiences that arise from our relationships with others.

To sum up, my paperwork examines the symbols and meanings present in a selection of English songs, and explores how concepts are expressed and conveyed through lyrics. My work also analyze how cultural context and societal norms influence the symbolism and meaning in English songs, and evaluate the effectiveness of using songs as a medium for conveying complex ideas and emotions.

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# PECULIARITIES OF PROFESSIONAL TRAINING OF FOREIGN LANGUAGE TEACHERS IN UKRAINE

The issue of teacher training, in particular, training of a philology teachers, often become the subject of research by scientists. Professional training of foreign language teachers in Ukraine is gaining special relevance.

The introduction of martial law in Ukraine actualized the problem of mastering a foreign language, in particular English, as a means of communication between people of different nationalities. This problem, in turn, is closely related to the training of specialists who are fluent in English, in particular, philology teachers. The reform of national higher education in the context of modern European integration processes dictates the need to take into account European and world standards during the organization of teacher professional training.

The study of the peculiarities of the professional and practical training of philology teachers in Ukraine is relevant, because currently philology specialties can be attributed to the group of the most promising.

The problem of foreign language teacher training in Ukraine was raised by many scientists, including M. Baida, O. Bigych, I. Haidai, O. Dupliichuk, S. Sysoieva, O. Misechko, S. Nikitchyna, and others.

**The aim** of this investigation is to analyze the peculiarities of the professional training of future teachers of English language and literature at the current stage in Ukraine.

The theoretical basis of the study consists of such basic categorical concepts as "training", "teacher training" (that is, "professional teacher training"), "philology teacher".

In modern scientific studies, the concept of "professional training" is quite common. Let us dwell on some interpretations of this concept. According to the Law of Ukraine on Higher Education, professional training is the acquisition of a qualification in a relevant field or specialty [4]. According to O. Misechko, the professional training of a foreign language teacher is a holistic, dynamic pedagogical system that is non-linear, functionally active, structurally ordered, capable of self-development and characterized by specific laws, unity of content, goals and means, aimed at the formation of professional competence, general and professional culture, creative thinking of the future teacher and his readiness for professional self-development [5, p. 95]. According to the definition of M. Baida, professional training is a specially organized process of acquiring professional knowledge, abilities and skills and the formation of professional competencies that contribute to the formation of readiness for activities within a certain specialty, in particular, a philology teacher [1, p. 55].

According to a number of scientists, "a teacher of philological specialties is a qualified specialist who has fully mastered the training program in the subject field "Philology" (English / German / Ukrainian language and literature) and fulfilled the requirements of the psychological-pedagogical, methodological and practical training programs, respectively to the industry standard of education" [1, p. 58]. In turn, O. Dupliichuk considers the professional-pedagogical training of a philology teacher in the unity of a competent subject specialist, a professional researcher and a culturallinguistic personality capable of working independently on the study of not only native, but also foreign languages [2, p. 33]. Thus, the researcher believes that a competent philology teacher, in addition to his native language, should know at least two foreign languages that would contribute to productive communicative integration, because a philology teacher must be able to participate in the dialogue of cultures. According to the researcher, in the professional and pedagogical training of a philology teacher as a culturally speaking individual, the leading idea is the multilingual approach, because it is used to describe general communicative competence and within its limits there is an interaction of different degrees and directions of competence in different languages [2, p. 34].

According to M. Radyshevska, the purpose of professional training of future teachers of humanitarian specialties is to prepare a competent specialist capable of carrying out professional activities based on the principles of humanism, a personoriented approach, interaction, multiculturalism, the unity of theoretical and practical knowledge, systematicity and integrity in the accumulation professional experience, continuous independent growth, professional and personal mobility, flexibility, adaptability, feedback and reflection on the level and quality of achieved results [6, p. 84]. The main characteristics of the personality of a multicultural teacher according to P.J. Larke are academic knowledge, interpersonal communication skills, a respectful and impartial attitude towards the student, regardless of ethnic, cultural or other affiliation and social status [3, p. 135].

Today, the training of philology teachers in Ukraine is carried out in almost every classical and pedagogical university in Ukraine. With the development of information and computer technologies in Ukraine, there was a need to train such specialists in philology (foreign language teachers, applied linguists, etc.) not only in classical universities.

Thus, among the higher education institutions that train philology teachers, namely specialists in specialty 014 "Secondary education. English language and literature", in 2021/2022 Zhytomyr Polytechnic State University joined.

We will analyze the training cycles of specialists in specialty 014 "Secondary education. English language and literature" in 2021/2022. at the Zhytomyr Polytechnic State University. Thus, the curriculum of the specialty is divided into three cycles: general, professional and practical training. The first 2 cycles are divided into 2 parts, respectively: normative and variable.

In the normative part of the cycle of general training, future teachers of English language and literature study such disciplines as general psychology, philosophy, pedagogy, the history of world literature, the Ukrainian language (for professional

purpose), foreign literature, introduction to general linguistics, literature of Great Britain and the United States, country studies, basics of informatics, basics of scientific research, ethics and image making. That is, both general scientific disciplines and those directly related to foreign philology are studied here. Currently, there is a need in Ukraine to train specialists in philology (teachers of foreign languages, applied linguists, etc.) not only in classical universities. Thus, among the higher education institutions that train philology teachers, namely specialists in specialty 014 "Secondary education. English language and literature", in 2021/2022. Zhytomyr Polytechnic State University joined, on the example of which an analysis of the professional and practical training of philology teachers was carried out.

Having analyzed the curriculum in detail, it was confirmed that the greatest attention is paid to the study of the basic discipline, because 1080 hours (27%) are allocated to the practical course of the main foreign language (English). Great attention is also paid to the training of philology teachers in a second foreign language (German). Therefore, the practical course of the second foreign language is 750 hours, that is, 18.8% of the study time. Further, the initial hours are distributed as follows: 180 hours (4.5%) are allocated to practical grammar of the main foreign language, 480 hours (12%) to practical phonetics of the main foreign language [7].

The leading role in the training of philology specialists is played by the methodical component. Therefore, the course of methods of teaching foreign languages is 180 hours (4.5%), methods of teaching literature – 90 hours (2.3%), the course "Integration of mobile technologies in the process of teaching foreign languages" – 150 hours (3.7%). Other professional training courses last mainly for 90 hours, which is 2.3% of the training time per cycle.

It is worth noting that studying at the university is aimed at meeting the individual needs of the student and comprehensively developing his abilities. Therefore, in the variable part of the professional training cycle, the student must choose 50 credits, taking into account the weekly workload. Elective subjects are calculated for 5 credits. Thus, a student can choose 10 disciplines.

In addition, some disciplines are taught to students in a foreign language already from the 1st year. The study of foreign languages by future teachers of English language and literature at the Zhytomyr Polytechnic State University is carried out according to authentic textbooks, as well as high-level teaching aids. The curriculum also provides for the study of authentic fiction, non-fiction, scientific literature, etc. It is worth noting that teachers with international teaching practice work with future philology teachers. All this in a complex contributes to the high-quality training of specialists in specialty 014 "Secondary education. English language and literature".

In addition, a total of 3,210 hours are allocated to the training of philology teachers in basic philological disciplines, which is 80.5% of the training time. Whereas 780 hours, or 19.5% of the training time, are provided for methodical training. In our opinion, such a distribution is fully justified, because this difference is balanced by pedagogical practice and selective disciplines that have a methodological direction. Thus, the combined study of these disciplines provides high-quality professional training of future philology teachers [7].

The analysis of the training of teachers-philologists made it possible to draw the following conclusions: a wide variability of the interpretation of the concept of "teacher-philologist" in pedagogical science was discovered. Along with the concept of "teacher-philologist", scientists use such terms as "teacher of philological specialties", "teacher of humanitarian specialties", "teacher of philology", etc. In our opinion, the training of a teacher-philologist, in particular in the specialty "Secondary Education. English Language and Literature" is very relevant and promising today, because future specialists are offered a wide range of career choices: foreign language teacher, applied linguist, translator, SMM manager, copywriter, etc.

The analysis of the curricula of the specialty proved that the language professional and practical training of teachers-philologists in Ukraine is quite thorough. In our opinion, the allocation of study time to the study of basic philological and methodical disciplines is quite justified. The curriculum is significantly balanced due to the variable part, according to which the student has the right to study academic disciplines of his choice.

We see the perspective of our further scientific research in the analysis of the formation and development of professional training of teachers-philologists in various specialties in Ukraine and abroad.

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## THE EFFECTIVENESS AND IMPORTANCE OF THE MBTI TEST IN HIRING PROCESS

#### I. Introduction

Myers-Briggs Type Indicator (MBTI) test is a popular personality assessment tool used by individuals and organizations to understand their own and others' personality traits.

The purpose of the MBTI test is to identify an individual's preferences in four different dichotomies, which result in 16 different personality types. The test is widely used in hiring and employee selection processes as a tool to predict job performance and organizational fit [1, p. 119].

The importance of employee selection and hiring process in organizations cannot be overstated. The success of an organization depends on its employees, and selecting the right candidate for a job is crucial for achieving organizational goals. Poorhiring decisions can result in decreased productivity, decreased job satisfaction, and increased turnover rates. Therefore, organizations are always on the lookout for effective selection tools, and the MBTI test is one of them [2, p. 187].

#### II. The effectiveness of the MBTI test in hiring

Theoretical basis of the MBTI test and its reliability and validity: The MBTI test is based on Carl Jung's theory of psychological types, which suggests that people have different preferences in how they perceive and judge information. The MBTI testmeasures these preferences in four different dichotomies: extraversion-introversion, sensing-intuition, thinking-feeling, and judging-perceiving [3, p. 22].

The reliability and validity of the MBTI test have been a topic of debate among researchers. While some studies suggest that the MBTI test has high reliability and validity, others suggest that it is not a reliable and valid tool for predicting job performance [4, p. 59].

Advantages and limitations of using the MBTI test in hiring: One advantage of using the MBTI test in hiring is that it can provide insight into an individual's personality preferences and help identify potential job-related strengths and weaknesses. It can also be used to promote team building and effective communication among employees [7, p. 82]. However, the MBTI test also has some limitations. It is a self-reported assessment, which means that the results may be influenced by an individual's self-perception or desire to present themselves in a positive light [8, p. 18]. Additionally, the MBTI test may not be suitable for predicting job performance in complex and dynamic work environments [9, p. 25].

III. The importance of the MBTI test in hiring. Role of personality traits in job performance and organizational fit.

Personality traits are considered to be important predictors of job performance and organizational fit [12, p. 58]. Research has shown that personality traits such as conscientiousness, agreeableness, and emotional stability are positively related to job performance [13, p. 123]. Additionally, personality traits such as extraversion and openness to experience have been found to be related to leadership potential [14, p. 12]. Therefore, using personality tests like the MBTI can help identify candidates who possess these desirable personality traits and are more likely to perform well in their job roles.

Contribution of MBTI in predicting job performance and organizational fit Research has found that the MBTI test can be useful in predicting job performance andorganizational fit [15, p. 256]. For example, a study conducted by Barrick and Mount (1991) found that personality tests were useful in predicting job performance across avariety of occupations and job types [16, p. 167]. Another study by Brown and Keeping(2005) found that the MBTI test was a valid measure of personality and could be usefulin identifying individuals who are likely to be successful in specific job roles [17, p. 379].

IV. Criticism and controversies Criticism of the MBTI test in terms of its validity and reliability

The MBTI test has been criticized for its validity and reliability. Some researchers have argued that the test lacks scientific evidence and is based on weak theoretical foundations [20, p. 267]. Others have pointed out that the test is too simplistic and fails to capture the complexity of human personality [21, p. 46]. Additionally, the test has been criticized for being too subjective and prone to bias [22, p. 75].

Controversies around the use of personality tests in hiring and employee selection There have been controversies around the use of personality tests in hiring and employee selection. Critics have argued that personality tests can be discriminatory and may unfairly disadvantage certain groups of individuals [23, p. 256]. Additionally, there are concerns that personality tests may not accurately predict job performance and may lead to incorrect hiring decisions [24, p. 76].

#### V. Conclusion

The MBTI test is a popular personality assessment tool used in hiring and employee selection processes. While the test has advantages in identifying an individual's personality traits and potential job-related strengths and weaknesses, it also has limitations in predicting job performance in complex and dynamic work environments. Additionally, there is ongoing debate regarding the use of personality tests in hiring and employee selection.

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## LANGUAGE ASPECT OF POLITICAL CORRECTNESS IN ENGLISH LANGUAGE CULTURE

It is well known that any language is closely linked to the culture and traditions of its speakers. Therefore, all the processes that take place in society are visibly reflected in the language and are the basis for changes in communicative norms. The linguistic norms of the English language, which is in the stage of dynamic development, are changing rapidly, and most of them are acquiring the status of international. Such norms include the phenomenon of "political correctness".

The phenomenon of political correctness is investigated by D. Adler, D. D'Souza, J. Leo, D. Ravitch, J Taylor, D Villa, S Schwarz, S. Walker [1; 2; 3; 4; 5; 6; 7] and others.

Political correctness is a term which denotes language, ideas, policies, and behavior seen as seeking to minimize social and institutional offense in occupational, gender, racial, cultural, sexual orientation, certain religions, beliefs or ideologies, disability, and age-related contexts, and, as purported by the term, doing so to an excessive extent. In other words, political correctness is a system of interrelated liberal beliefs designed to protect the equality of all members of society, regardless of their race, nationality, gender, class.

Political correctness is a discursive cultural and behavioral phenomenon that contains an ideological and normative attitude to overcome social conflicts and contradictions, which is realized through language.

The main means of realization of political correctness are euphemisms. Euphemism is a generally innocuous word or expression used instead of one that may be found offensive or suggest something unpleasant.

Politically correct euphemisms are euphemisms that include racial and ethnic discrimination (a *member of the African diaspora*, *indigenous person*), euphemisms created to enhance the status of women and eliminate sexism in language (a flight

attendant), those that exclude age and social status discrimination (a golden-ager, the low-income), euphemisms that are aimed against health discrimination and discrimination based on appearance (physically different, hair disadvantaged), those related to environmental protection (free-roaming animals), euphemisms which distract from negative economic factors (meaningful downturn, redundancy elimination) and are aimed at covering up the state's inhumane policies (air support).

When studying the concepts of political correctness and euphemisation, which at first sight seem to be identical, we came to the conclusion that when we talk about the category of political correctness, we emphasize the cultural and behavioral aspect. Euphemisms, on the other hand, are more related to the linguistic aspect and their purpose is to avoid communicative conflict and not to create a sense of communicative discomfort in the interlocutor.

The category of political correctness contains racial and ethnic political correctness, social political correctness, gender political correctness and the language etiquette in commercial sphere of life.

The racial and ethnic political correctness presupposes using neutral lexical units for defining or characterizing the representatives of different kinds of minorities and avoiding those lexical units which hurt their dignity. For example, the names of representatives of different ethnic groups have changed: the word *Indian* is considered incorrect, and the ethnonyms a Native American or an indigenous person prevail. The word Eskimo has come to be replaced by a Native Alaskan when referring to an indigenous Alaskan or an Inuit when referring to a Canadian Eskimo. One more example is the word Oriental — a native of the East, which reveals the true nature of the concept, indicating cultural affiliation. In relation to people of Asian descent, this ethnonym is incorrect and has been replaced by the politically correct unit an Asian American, which indicates geographic origin and has a broader concept.

The aim of gender political correctness is using politically correct lexical units to equal the rights of male and female halves of society by excluding the words and word-combinations with obvious gender marking. At the word-formation level, politically correct vocabulary is represented by words formed with the morpheme person (chairman > chairperson);, at the lexical level, the category of political correctness is represented by the form of address Ms (female, which does not indicate a marital status), and at the syntactic level, politically correct vocabulary is manifested in the form of replacing the pronoun he(his) in constructions where the identity of the noun is not specified: Everyone must do his work well > Everyone must do his/her work well. Everyone must do their work well, etc.

The usage of social politically correct language is necessary for protecting some socially defenseless population from offences which can be caused by speakers. For example, lexical units denoting physical and mental qualities of a person (*overweight people – large-than-average person, differently sized person; cerebrally challenged* instead of *stupid*; *emotionally different* – to avoid the word *crazy*).

The language etiquette in a commercial sphere of life refers to the feelings protection of real and potential customers who can be affected by incorrect formulations. For example, passengers of different types of transportation are divided

into first class passengers, which is very prestigious. Traveling the first class elevates a person both in their own and others' eyes. A business (dub) class is also prestigious, but the passengers are a little lower in rank, and the tickets are correspondingly cheaper. It's logical to assume that the next class would be second class. But it turns out that there is no such thing. The client doesn't like being a second-class person. It's like being a second-class citizen. Therefore, in order not to offend middle-class passengers, a second class was changed to an economy class. Being economical is sometimes even praiseworthy. Economical railway transportation passengers buy standard class tickets.

The usage of politically correct lexical units became a part of the English language and culture. Nowadays the category of political correctness by itself establishes certain language rules, introduces new vocabulary, limiting freedom of speech and thoughts.

The phenomenon of political correctness has both theoretical and practical grounds. In theory, political correctness is a system of theoretical beliefs. In practice, it is a desire to change the traditional norms of word usage in the contemporary English language, which allows us to consider this phenomenon from the point of view of its social importance. Political correctness makes it possible to avoid social aggravations and, in turn, contributes to a conflict-free atmosphere in society and facilitates communication between different social groups. The analysis of politically correct lexical units may be considered to be a certain contribution to the development of the problems of linguocultural studies and sociolinguistics.

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#### MENTAL HEALTH CARE IN UKRAINE

Today our country is going through difficult times caused by the armed aggression of the neighbouring state – the Russian Federation. Martial law affected all spheres of human life without exception, changed our views, forced us to reconsider our values. The basic human need, the need for security, has been destroyed, and the stable picture of the world has been violated. We must find the strength not only to survive all the horrors of the war and cope with different stressful situations, but also influence everyone at their place. That is why we are talking so much about mental health, its factors and components, prevention and promotion. Although mental health has always been important. It gives us an opportunity to live a fulfilling life.

The World Health Organization (WHO) describes mental health as "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community" [2].

Mental health is a problem that needs to be solved in all spheres: communities, education, medicine, organizations, family life. And, of course, a lot of attention should be paid to the military men, their rehabilitation and people affected by the war. WHO estimates that up to 10 million people are at risk of some form of mental disorders, varying from anxiety and stress to more severe conditions. By the order of the Cabinet of Ministers of Ukraine dated 27<sup>th</sup> December 2017 the Concept of development of mental health care in Ukraine for the period until 2030 was approved. It states that "if the action plan is implemented, it is expected to create a holistic and effective system of mental health protection of the population which will provide for an increase in the level of mental health and an improvement in the quality of life" [1].

Along this way, we have to overcome a lot of stereotypes and stigmas about mental health, the culture of each in our society is very low. A great number of people distrust psychologists and the effectiveness of their work. The Modern Ukrainian mental health system as a whole inherited the organizational structure as well as strategies and practices of the Soviet System with all its advantages and disadvantages [1]. This system has to undergo changes and such changes should be implemented into different mental health programmes and projects.

One of them is Mental Health for Ukraine (MH4U) [3]. This is a four-year project, the goal of which is to improve the quality and availability of assistance and psychological support for people from Ukraine. The project is implemented with the support of Switzerland and embodies the approaches of the Concept of development of mental health care in Ukraine for the period until 2030. The MH4U site contains a great amount of different resources and will be useful for those who want to learn more,

look for help, help others, represent an organization or community or being mental health specialist.

Viktoriia Horbunova and Vitalii Klymchuk contribute to mental health care in Ukraine. Within the framework of the project their and other researchers' achievements are presented. Among them are Mental Health Media Guide, Universal Training in Mental Health and also The Concept of a Mental Health Sensitive School [3]. These are important and necessary steps towards mental health care in our country.

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#### **COFFEE TOURISM IN LVIV**

The main goal of this article is to explore the history of coffee in Lviv, proposing the best places of delicious drinks in this city. The article summarizes representative statistics, data on the state of the coffee tourism offer in Lviv.

In recent years, the interest of tourists in one of the forms of gastronomic (culinary) tourism – coffee tourism – has been growing in Lviv. The paper describes the stages of development of coffee tourism in Lviv from the nineteenth century to 2023.

Coffee traditions in Lviv are one of the oldest in Ukraine, and they are more than three hundred years old.

It develops on the basis of interesting recipes created over many decades, the traditions of making, serving and tasting of coffee, as well as famous coffee houses.

Among the varieties of gastronomic tourism, coffee tourism has been constantly showing one of the highest growth trends in the last two decades. In the world market coffee is one of the most common and favorite drinks in the world [4].

Nowadays, Lviv (one of the oldest cities in Ukraine, whose historical and architectural environment is included in the UNESCO World Heritage Site) aims to become one of such promising destinations for coffee tourism. Therefore, the aim of the paper is to analyze coffee tourism as a new direction of tourist activity as well as the rebranded specialization of hospitality infrastructure in Lviv, and thus to describe

the strategy of city appearance on the map of top destinations of coffee tourism in the world.

The highlight of coffee tour in Lviv, which attracts groups of tourists, is a coffee mine. Located in the heart of Lviv, on the Rynok square, Lviv Coffee Mining Manufacture is the first in Ukraine longest coffee shop-bookstore.

30 types of coffee beverages are prepared here, and at the same time, the cafe promotes Ukrainian books. But the main "trump card" of the coffee shop is the mine. And every visitor, wearing a helmet, can go down right in the cafe and see how they extract coffee, as according to the concept, coffee is a mineral that we can mine like coal or peat.

You can only see more coffee at Lviv Coffee Festival, which takes place in Lviv every year in late September. It is a big event for the city [2].

The popularity of coffee in Lviv is increasing at a breakneck speed. You can see people with a cup of coffee in the streets more and more often. But it wasn't always like that. Soviet authorities almost destroyed the traditions of coffee drinking.

However, there were coffee houses in Lviv during the reign of "Grandma Austria". And they were exquisite, with free newspapers. Those were places for wealthy and influential intellectuals and creative bohemians to gather. But nobody knows for sure what was the first coffee shop in the city.

Many people believe that it was "Videnska Kaviarnia" (1829) located at the same place as now – on Svoboda Avenue behind the monument to Taras Shevchenko. But there is a document which certifies the existence of Levanovskyi's coffee shop before that – in 1802.

But there is a person in history associated with one of the first coffee shops in Europe. And that is Yurii Kulchytskyi, a Ukrainian nobleman from Halychyna, a native of the village of Kulchytsi, (hence the name – Kulchytskyi), who opened one of the first coffee houses in Vienna in 1686. Yurii Kulchytskyi is considered to be the author of the "Vienna Coffee" recipe [1].

Before the coffee houses appeared in Lviv, Europe learned about coffee thanks to our countrymen -known Yuriy Frants Kulchyckyi. Even in his youth he came to Zaporizhzhia Cossacks, got to the Turkish captivity, where he learned the Turkish language and addicted to coffee. After liberation from captivity he opened his own commerce in Vienna. From a historical perspective, his figure is quite controversial.

The legendary coffee shop which has many regular customers and is famous for its delicious pastry and aromatic coffee is "Svit Kavy".

«Lviv Coffee Mine» (Lvivska kopalnia kavy) is a good place for romantic meetings, communication with friends, a real center of coffee culture. Lviv's biggest and most famous coffee house is the Coffee Museum in Lviv. This is the only place in the world where the coffee beans are carefully raised up from deep dark dungeons as precious minerals. And you can enjoy here an exclusive «flaming coffee».

In «Lviv Coffee Manufactory» you always get freshly roasted, fresh-milled and freshly brewed gourmet coffee! Here you can taste a wonderful elixir of cheerfulness by own unique recipes. And also – everyone selflessly share emotions and warm feelings.

If previously advanced coffee establishments appealed to drink coffee not only without sugar, but also without milk, today minimalistic attitude to coffee is no longer relevant. Baristas gave the will of imagination, and now they easily use to mix coffee-latte with olive oil or beetroot syrup, also they can add to the raf-coffee a nostalgic taste of «Prague» cake, and to the milk foam can add a little bit coal [3].

In Lviv, everyone can find a coffee shop to their taste. Of course, it is difficult to choose among such an enormous diversity.

Lviv today is not just a city where delicious coffee is made in coffee houses. This is a successful example of the rebranding of tradition and cultural heritage in the historic urban environment in accordance with the principles of sustainable development. In the context of globalization, simplification of tourist formalities and transport accessibility, Lviv is successfully consolidated on the map of world tourist destinations as the top destination of coffee tourism in Central and Eastern Europe.

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#### CARACTÉRISTIQUES LINGUISTIQUES ET EXTRALINGUISTIQUES DE LA BANDE DESSINÉ FRANCOPHONE «TINTIN ET LES PICAROS»

La communication moderne est définie par la transmission visuelle rapide de l'information. La structure textuelle complexe de la bande dessinée les place à michemin entre la littérature et les arts visuels, ce qui explique qu'elle soit souvent considérée comme un genre de la culture populaire. Compte tenu des mécanismes linguistiques et extralinguistiques qui soutiennent la bande dessinée, il n'est pas surprenant qu'elle ait attiré l'attention des linguistes.

L'objectif de la recherche est d'étudier la bande dessinée francophone afin de déterminer ses caractéristiques linguistiques et extralinguistiques: graphiques, phonétiques, syntaxiques.

La pertinence de l'étude réside dans le fait que ces derniers temps la bande dessinée francophone connaît un succès croissant auprès des lecteurs et chercheurs

francophones en raison de la variété des moyens linguistiques et extralinguistiques dont ce genre littéraire regorge.

L'objet de l'étude porte sur les moyens linguistiques et extralinguistiques de la bande dessinée «TINTIN ET LES PICAROS» de Georges Remi (Hergé).

Le dictionnaire français Larousse définit le terme «bande dessinée» comme «mode de narration utilisant une succession d'images dessinées, y compris, à l'intérieur de bulles, les paroles, sentiments ou pensées des protagonistes» [1].

La bande dessinée est l'une des plus anciennes traditions européennes de cette forme d'art. Les thèmes des bandes dessinées vont de l'héroïsme, de l'espionnage et de la guerre à la corruption, au racisme, aux problèmes de l'environnement etc. Le but principal de la bande dessinée est d'évoquer les émotions du lecteur. Ce dernier temps, les blogs de bandes dessinées et les bandes dessinées en ligne (webcomics) sont devenus un nouveau phénomène populaire sur l'Internet [3, p. 168]. Outre les bandes dessinées traditionnelles, il existe des bandes dessinées muettes avec un scénario intuitif qui ne doit pas nécessairement contenir le texte [3, p. 168].

Dans la linguistique moderne, il existe de différentes classifications des bandes dessinées. Les bandes dessinées sont le plus souvent classées en fonction du public auquel la bande dessinée est destinée, de sa fonction [4, p. 14] et du longueur [3, p. 168].

Georges Prosper Remi, plus connu sous le nom d'Hergé, est un auteur de bandes dessinées de renommée mondiale connu pour son travail sur la série «Les Aventures de Tintin». Le premier livre de cette série est «Les Aventures de Tintin, reporter du "Petit Vingtième", au pays des Soviets» est paru en 2019 aux éditions «Pinzel», traduit par Ivan Ryabchii. Tintin, le personnage principal, est un jeune journaliste qui lutte contre les criminels et protège la population autochtone. Les personnages d'Hergé ont un caractère positif et sont toujours au centre d'aventures passionnantes.

La visibilité de la bande dessinée lui accorde un avantage par rapport à d'autres formes littéraires. Cela permet d'utiliser un large éventail de moyens d'expression que les auteurs et les éditeurs utilisent habituellement. Les messages textuels des bandes dessinées ont souvent un aspect comique car ils n'ont pratiquement pas de limites graphiques et linguistiques.

Chaque bande dessinée a son propre ensemble d'encarts et de signes. La façon la plus courante d'exprimer graphiquement un texte est de mettre les mots en gras, en italique ou de les souligner en utilisant des majuscules et des couleurs. Cette façon est généralement utilisée pour mettre l'accent sur le point principal. Le panel, le bulle, le phylactère, le ballon, la vignette (la case), la planche, la cartouche de titre sont les caractéristiques principales de la mise en page de la bande dessinée [3, p. 169].

Plongé dans la bande dessinée, le lecteur doit non seulement visualiser, mais aussi entendre le déroulement de l'histoire. A l'aide des exclamations et des onomatopées qui donnent l'impression d'un langage parlé sur le papier, le lecteur «entend avec ses yeux».

Le dictionnaire français Larousse définit l'onomatopée comme «le processus permissif la création de mots dont le signifiant est étroitement lié à la perception acoustique des sons émis par des êtres animés ou des objets». [1] C'est un des éléments

stylistiques et linguistiques de la bande dessinée. A l'aide de l'imitation sonore, l'auteur peut attirer non seulement des sensations visuelles, mais aussi auditives, créer l'ambiance nécessaire. D'un point de vue stylistique, ils augmentent l'expressivité du texte et vous permettent également de transmettre plus d'informations et de clarifier ce qui est représenté.

Les onomatopées dans les bandes dessinées peuvent se rapporter à des aspects d'un paragraphe ou d'un mot. Ils font partie du visuel, donc parfois ils restent dans la langue d'origine ou sont traduits ci-dessous, derrière un panneau accompagné d'un son. L'utilisation d'effets sonores liés au thème de l'aventure des bandes dessinées comprend des batailles, des collisions, des impacts, etc.: *TACATACA* (éclatement automatique), *POF* (explosion de pétard), *PAN* (bruit de coup de feu), *BANG* (bruit d'explosion), *BONG* (bruit sourd).

Un autre élément clé c'est l'interjection «le mot invariable, isolé, formant une phrase à lui seul, et entraînant le plus souvent une réaction affective vive» [1], qui crée une tension émotionnelle, a une fonction d'influence, porte une certaine charge stylistique, visualise les réactions émotionnelles et rapproche ainsi le texte comique à la forme de la communication orale. Les interjections qui ont une fonction émotionnelle et expressive importante dans les bandes dessinées sont utilisées comme des mots isolés ou comme des éléments de phrases simples. Par exemple, Ah! Alors! Oh mon Dieu! Mmm! Oh! Hé-hé! Hmmm! Eh! Oh non! Hahaha! Opa! Ouf! Et hop!

Toute phrase dans la bande dessinée fait référence à un certain ensemble d'indicateurs linguistiques structurés sémantiquement et syntaxiquement. Les formes d'expression linguistique dans les bandes dessinées sont des mots, des phrases, des phrases, des textes. Les intrigues de bandes dessinées sont généralement orientées vers l'action. Il en résulte que les personnages sont toujouts en mouvement. Les héros discutent toujours quelque chose, affirment, informent, promettent, interdisent etc. Les dialogues portent la majeure partie de la charge linguistique du texte.



Au niveau syntaxique la BD francophone «TINTIN ET LES PICAROS» utilise tous les types de phrases. Après avoir analysé la structure des phrases de la partie textuelle de la bande dessinée on peut constater que:

- les phrases nominales prévalent sur les phrases complètes (Bien imaginé, non?...; Les journaux du soir, seňores...; Notre vie? En danger?; Un échec! Vous, mon colonel!; Un micro!... Ah! les bandits...);
- les phrases simples prévalent sur les phrases complexes (Mais le hasard fait parfois bien les choses.; Et demain, que va-t- on encore nous montrer?; Il reprendra son

service dans quelques jours.; Votre vie est en danger!; Il est inquiet d'être sans nouvelles du général Tapioca.);

• les phrases complexes à subordination prévalent sur les phrases complexes à coordination (Il arrive parfois que les Picaros fassent une incursion dans le quartier.; Je vous ai dit que j'irais l'acheter moi-même.; À peine accusé-vous partis que je me suis reproché de ne pas vous avoir accompagnés!; Oh! Vous avez là un disque que j'adore!; Et je suis sûr qu'il y a des caméras dissimulées dans tous les coins.; A deux cents mètres, droit devant vous, un camion d'Alcazar vous attendra et vous serez conduit en sûreté.; La pente est raide et beaucoup de gens y éprouvent le vertige.).

Nous avons remarqué que dans le texte de la bande dessinée il y a beaucoup plus de phrases complexes à subordination que de phrases complexes à coordination. Des phrases simples ou des phrases nominales sont utilisées à leur place. Le choix des éléments syntaxiques des textes graphiques est limité par la taille du cadre dans lequel se trouvent les personnages d'où l'utilisation de phrases courtes et impératives : *Ne tirez pas!... Haut les mains, tous!... Et jetez vos armes !* Tout cela s'explique par la forte émotivité des conversations, il est donc nécessaire de préserver le concept principal en utilisant des phrases impératives et impersonnelles.

Le langage de la bande dessinée «TINTIN ET LES PICAROS» a les caractéristiques du style parlé suivantes:

- l'utilisation des idiomes: couper bras et jambes laisser une personne sans voix, stupéfier; attrape-nigauds ruse pour tromper les personnes très naïves; faire la tête montrer du mécontentement tout en restant silencieux; peur bleue très grande frayeur; tête de mule personne têtue;
- la syntaxe est propre au style parlé: C'est à vous ça, oui? Pas de questions! Quel tabac? Quoi mon tabac? Et bien quoi?;
- l'utilisation des unités lexicales avec une violation de la norme phonétique: «Bonchour, Jef!» – au lieu de «Bonjour, Chef!»;
- les expressions utilisées au sens figuré: «Qu'est-ce que vous me chantez là?» signifiant «nonsens»;
- l'utilisation de vocabulaire non littéraire: zut = diable, marchand de guano, bande de empotés, espèce d'imbécile, espèce de cloporte, Chu!, Ouf!, Tonnerre de Brest!, mille millions de mille sabords, mille sabords! juron familier des marins.;
- l'emploie des phrases nominales: Bien imaginé, non?...;Les journaux du soir, seňores...; Notre vie? En danger?; Un échec! Vous, mon colonel!; Un micro!... Ah! les bandits...;
- l'utilisation des mots en langue étrangère. Dans notre cas c'est l'espagnol pour souligner la spécificité de l'environnement linguistique des personnages: buenos dias, buenas noches, por favor, señor, amigo, palomita.

Conclusion: L'étude de la bande dessinée francophone en tant que texte utilisant des moyens d'expression linguistiques et extralinguistiques est l'une des directions modernes de la recherche linguistique. Les bandes dessinées sont populaires en raison de leur langage accessible et de leurs dessins expressifs, ce qui rend ces textes compréhensibles par tous, quel que soit le niveau de la langue du lecteur. Dans la bande dessinée francophone, la composante verbale peut être réalisée par des procédés

phonétiques, syntaxiques et lexicaux. Dans ces textes, des éléments extralinguistiques tels que les caractères gras, les majuscules, la couleur et d'autres attirent l'attention du lecteur aux événements significatifs. La série de BD «Les Aventures de Tintin» étant traduite en ukrainien, peut être intéressante du point de vue de la réalisation d' une analyse scientifique comparative des moyens d'expression spécifiques en français et en ukrainien, ce qui détermine la perspective de recherches ultérieures de cette série de BD dans le domaine de la traduction.

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#### PARTICULARITÉS DE LA TRADUCTION DES UNITÉS PHRASÉOLOGIQUES QUI INCLUENT LES COLORONYMES EN FRANÇAIS ET EN ANGLAIS

Introduction: la mondialisation prend de l'ampleur dans le monde d'aujourd'hui. Les pays ouvrent leurs frontières, de sorte que leurs résidents ont beaucoup plus de possibilités de coopérer. Bien sûr, l'un des obstacles est la barrière de la langue, mais le large choix d'applications de traduction et la popularité croissante de la langue française aident à résoudre ce problème. Un obstacle beaucoup plus important dans la communication en langue étrangère est le niveau insuffisant de connaissance des caractéristiques socioculturelles. La méconnaissance des valeurs et coutumes d'un autre pays peut entraîner des malentendus, une mauvaise interprétation des intentions des personnes participant à cette communication. Par conséquent, maîtriser l'image culturelle des autres pays et son reflet dans le discours sont extrêmement important.

**Pertinence:** au stade actuel, la phraséologie est considérée en lien étroit avec les études linguistiques et culturelles. Les idiomes portant les noms de couleurs présentent

un intérêt pour la recherche dans le domaine de la phraséologie, notamment du point de vue de leur traduction dans la paire de langues français-anglais.

Nouveauté scientifique: après l'analyse des travaux scientifiques consacrés aux coloronymes en unités phraséologiques, nous avons remarqué une tendance à étudier le lien psycholinguistique entre les associations de couleurs différentes et leur reflet dans les unités phraséologiques. Étant donné que ce sujet est maintenant très populaire, nous avons décidé d'étudier les moyens de traduire les unités phraséologiques contenant des coloronymes pour la paire de langues français-anglais. Sur la base des idiomes analysés, nous avons compilé un tableau des unités phraséologiques correspondantes qui contiennent des coloronymes. Ce dictionnaire rend le processus de traduction beaucoup plus facile.

Matériel de recherche: la recherche a été réalisée sur la base d'unités phraséologiques placées dans le dictionnaire électronique Expressio.fr [3].

L'objectif de l'étude: rechercher les particularités de la traduction d'unités phraséologiques contenant des coloronymes, formaliser statistiquement les résultats de l'étude.

Il existe un grand nombre de phénomènes intéressants et uniques dans l'image linguistique de chaque pays. Un tel "point culminant" de chaque langue est les unités phraséologiques (idiomes) - "des combinaisons stables de deux mots ou plus qui créent un ensemble sémantique et sont reproduites dans le processus de la parole sous forme de formules verbales toutes faites" [2]. Les unités phraséologiques contenant un certain composant, comme un coloronyme, c'est-à-dire un lexème, dont le sens dénotatif est le signe de couleur [1], présentent un intérêt particulier pour la recherche linguistique moderne.

Il est évident que le contexte culturel de chaque nation est unique car il reflète l'histoire séculaire du peuple, ses valeurs et l'héritage de ses ancêtres. Cependant, certaines caractéristiques communes sont également présentes. Ils peuvent se refléter dans des traditions similaires, des fêtes communes et, bien sûr, dans un langage. Certains phénomènes sont propres aux nombreuses cultures, ils se reflètent donc dans la sagesse des ancêtres, dans les unités phraséologiques.

La traduction des tournures phraséologiques n'est pas une tâche facile. Afin de transmettre le contenu de l'énoncé, il est nécessaire non seulement de maîtriser la langue originale et la langue de la traduction, mais également de comprendre les caractéristiques socioculturelles des deux peuples. Il est évident qu'il est impossible de traduire toutes les unités phraséologiques de la même manière. Au cours de la recherche scientifique, nous avons identifié trois manières de traduire les unités phraséologiques qui contiennent des coloronymes :

✓ la traduction à l'aide d'un idiome avec le même nom de couleur ;

✓ la traduction à l'aide d'une unité phraséologique contenant un nom de couleur différent ;

✓ la traduction à l'aide d'une unité phraséologique qui ne contient pas de coloronyme.

Examinons quelques unités phraséologiques des langues française et anglaise pour illustrer ces trois manières de traduction.

L'idiome *être dans le rouge* qui signifie "être endetté" a un analogue exact dans la langue anglaise *be in the red*. Un autre exemple de ce phénomène avec le même nom de couleur est l'unité phraséologique *voir rouge* et son équivalent *see red* qui signifie "être très en colère". Parmi les autres on peut citer les unités phraséologiques cidessous : *une peur bleue* — *blue funk, donner le feu vert* — *give the green light, sang bleu* — *blue blood, un col blanc* — *white-coler, avoir des bleus* — *have the blues*.

Cependant, toutes les unités phraséologiques ne peuvent pas être traduites de cette manière. Parfois, elles sont très similaires, mais il n'y a pas de traduction littérale. Un bon exemple est les unités phraséologiques *avoir la main verte* et *avoir le pouce vert* qui sont utilisées pour désigner "savoir entretenir les plantes ; être doué pour le jardinage".

Parfois, il n'y a pas d'unité phraséologique dans la langue de la traduction qui contiendrait le même nom de couleur que dans la langue d'origine, tout en conservant une signification commune. Dans cette situation, les traducteurs choisissent généralement l'idiome qui correspond le mieux à la signification, même si le nom de la couleur est différent. Démontrons avec un exemple : le bleu/ le blanc bec sont des idiomes utilisés pour désigner une personne jeune et inexpérimentée. En anglais, il existe une unité phraséologique green as gooseberry qui a le même sens. D'autre part, il existe en français une expression la verte jeunesse, cependant, elle peut ne pas toujours correspondre au contexte puisque la phrase mentionnée précédemment agisse comme un adjectif et cette expression représente une collocation de noms. Un autre exemple est le mouton noir et son analogue white crow. Dans ce cas, les noms de couleurs sont des antonymes, bien que les idiomes dont ils font partie aient une signification commune.

Il arrive que dans la langue de la traduction il n'y a pas d'unité phraséologique contenant un coloronyme pour désigner le phénomène reflété dans la langue d'origine. Dans ce cas, le traducteur utilise une unité phraséologique sans le nom de couleur. Par exemple : comme l'équivalent de l'unité phraséologique française *manger son pain blanc* "vivre une période très heureuse de la vie" peut être utilisée l'expression anglaise *be on cloud nine*. Un autre exemple c'est l'expression *passer une nuit blanche* et son analogue *not sleep a wink*.

Un phénomène intéressant que les traducteurs rencontrent parfois est celui des "faux amis du traducteur". Ce phénomène consiste dans le fait qu'une unité lexicale peut sembler être une traduction exacte, mais elle a une signification complètement différente. Illustrons-le avec cet exemple. En anglais, il y a une expression *as white as snow*. Elle est utilisée pour désigner des objets blancs ou pour décrire une personne très pâle. En français, il existe une expression qui est sa traduction littérale *blanc comme neige*. On pourrait penser que ces expressions sont les équivalents exacts, mais en français cela signifie " une personne innocente". Un autre exemple est les idiomes *un mariage blanc* et *white wedding*. À première vue, ces expressions ont un sens approprié. Cette expression signifie "mariage d'arrangement" en français, mais en anglais elle est utilisée pour désigner "un mariage religieux".

Après avoir analysé 30 idiomes comprenant des coloronymes, nous avons déterminé que 70 % des unités phraséologiques sont traduites à l'aide d'une expression

contenant le même coloronyme, 20 % des phrases sont traduites à l'aide d'une unité phraséologique dont le coloronyme est différent. Cependant, il y a des idiomes qu'il est impossible de traduire à l'aide d'une unité phraséologique contenant un coloronyme, ce qui représente 10% des unités phraséologiques analysées.

Le tableau récapitulatif de la traduction des idiomes dans le couple linguistique français-anglais a été établi à partir des unités phraséologiques analysées (annexe 1).

Conclusion: Il est évident que les idiomes étant des expressions fixes qui reflètent les valeurs culturelles et historiques de chaque peuple n'ont pas toujours d'équivalent exact dans une autre langue. C'est pourquoi la traduction des idiomes nécessite non seulement une connaissance approfondie des langues cible et d'origine, mais également la connaissance de certaines caractéristiques culturelles. Après avoir analysé les idiomes français et anglais contenant des coloronymes, nous avons déterminé que la plupart d'entre eux sont traduits à l'aide des idiomes avec le même nom de couleur. Mais en même temps 10 % des unités phraséologiques sont traduites à l'aide des idiomes qui ne contiennent pas de coloronyme.

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Annexe 1

Phraséologismes traduits avec le même nom de couleur			
peur bleue	blue funk	сильний страх	
un cordon bleu	a blue cord	хороший кухар	
les diables bleus	the blue devils	смуток	
avoir des bleus	have the blues	хандрити	
avoir des bleus a l'âme	to be in the blues	нудьга, хандра	
sang bleu	blue blood	"блакитна кров"	

l`homme de bleu	the boy in blue	моряк	
un col blanc	white-collar	службовець	
avoir la main verte	green thumb	мати здібності до садівництва	
se mettre au vert	go green	поїхати "на природу"	
donner le feu vert	give the green light	давати дозвіл	
être dans le rouge	be in the red	бути в боргах	
voir rouge	see red	злитися	
agiter le chiffon rouge	like a red rag to a bull	дратувати	
le chapeau rouge	red hat	кардинал	
la nuit, tous les chats sont gris	all cats are gray in the dark	зовнішність не має значення	
voir la vie en rose	see the world through rose- colored glasses	дивитися на світ крізь рожеві окуляри	
c'est écrit noir sur blanc	put something down in black and white	чорним по білому написано	
l'or noir	black gold	нафта	
un marché noir	black market	чорний ринок	
broyer du noir	black as ink	безрадісний, похмурий	
Phraséologismes traduits avec un autre nom de couleur			
le blanc bec	green as gooseberry	молодий недосвідчений	
1	l .	1	

le mouton noir	white crow	"біла ворона"		
avoir un fun bleue	paint the town red	дебоширити		
Phraséologismes traduits sans nom de couleur				
passer une nuit blanche	not sleep a wink	безсонна ніч		
manger son pain blanc	be on cloud nine	бути дуже щасливим		
se faire avoir comme un bleu	to take for a ride/play a hoax on	надурити		
faire grise mine	pull a long face	виглядати засмученим		
avocat marron	ambulance chaser	корумпований адвокат		
être fleur bleue	get all mushy	бути дуже романтичним		

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## THE IMPORTANCE OF KNOWING ENGLISH AS THE SECOND LANGUAGE: HOW IT CAN OPEN DOORS TO OPPORTUNITIES

English has emerged as the global language of science, learning, business, and technology offering people countless opportunities to broaden their horizons. This is especially vital for people learning it as the second language as it provides a chance for career advancement, personal growth, and social connections allowing individuals to transform their lives in profound ways.

In recent years researchers have become increasingly interested in the importance of knowing English and the evidence for it. The importance of knowing the second language has been studied by O. Bereziuk, O. Oliynyk, H. Slichna, and John McWhorter. According to John McWhorter, English is on its way to becoming the predominant global language by the end of this century, thanks to its prevalence on the internet, and its use in the world of finance, diplomacy and air traffic control. And even though Mandarin is currently spoken by more people, far more Chinese speakers are learning English than the other way around [2]. H. Slichna considers that learning a

second foreign language is not some unusual innovation, about 80% of Lviv schools already taught a second foreign language as a variable component or as an additional educational service [1]. However, a few investigations have focused on the importance of knowing English as the second language and opportunities which it opens for learners.

Perhaps the most significant advantage for people learning English is the opportunity to communicate with people from all over the world. English is an official language in 53 countries, it is spoken by 1.5 billion people. It is the second most widely spoken language after Mandarin [4]. Little do we know how many people are still in doubt about learning it, or will do it in the future. This means that you can replenish your mindset, social circle, and with it – a diversity of interests, perspectives, and opportunities. Moreover, it can facilitate travel to foreign countries since many countries use English as the second language, making it easier to communicate with locals and navigate your way around.

In addition, English is the language of international commerce and business. A perfect knowledge of English is not only appreciated but also necessary for work in international companies. That is why, knowing English will only be useful and increase your chances of getting a job [3]. If you are a business owner, English will help you enter the world market and expand your business development opportunities.

Furthermore, if you plan on studying abroad, it is essential to have proficiency in English as it is a vital requirement for admission to your preferred institution. Numerous educational establishments offer study programs in the native language of the country and English. Additionally, it is worth mentioning that there is an abundance of resources available in English translation including textbooks, articles, and research materials making self-education and self-study more accessible and comprehensive [2].

Finally, having a command of English can provide personal advantages. It can widen your cultural perspective by introducing you to literature, films, and music from English-speaking nations [2]. You can read literature in the original, watch English films and listen to the original music.

In conclusion, this paper focuses on the importance of knowing English and proper use of it. Gaining proficiency in English as the second language can have a profound influence on both your personal and professional endeavors. It can give you a competitive advantage in the worldwide employment industry, open opportunities for education, and enable you to communicate with individuals from various parts of the globe. Whether you are a scholar, a working individual, or merely someone who desires to broaden their outlook acquiring proficiency in English, it can be a worthwhile investment in your forthcoming years.

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#### STEREOTYPESAND PREJUDICE THROUGH THE PRISM OF INTERCULTURAL COMMUNICATION

The language has an ability to influence the formation and development of folk culture, which, in its own turn, is personalized through an individual. In modern linguistics, the problem of interaction of languages, cultures and individuals in anintegrated world becomes topical, as it is with culture that the spiritual communication of people, their understanding and cooperation begins, and the dialogue of cultures is actualized in the communication of individuals.

Intercultural communication is defined is a science that studies the features of verbal and non-verbal communication of people belonging to different national and linguocultural communities [1, p. 9].

Theory of intercultural communication is important in the system of professional training of philologists, whose professional competence involves the formation of theoretical knowledge and practical skills of interaction with representatives of different linguistic cultures. Intercultural communication aims at forming the ideas about what is universal and unique in communication, providing the tools that help analyze the culturally specific routine and communicative behavior of communication participants. The anthropocentric paradigm of modern linguistics has led to the study of national and cultural identity of language. Linguistics turned to the human factor in language, to identifying how the subject of speech uses language depending on their communicative potential, on the background of general knowledge about the world. At the same time, the need to study issues of peoples' mutual understanding, a dialogue of national cultures is a fact generally accepted.

The general purpose of intercultural communication is to provide people with the studying and learning of basic concepts and categories of language as a means of communication between representatives of different communities and cultures. The task that arises in the process of intercultural communication is to develop cultural sensitivity, the ability to correctly interpret various types of communicative behavior, to form a tolerant acceptance of social and cultural differences of representatives of other linguistic and cultural communities, a caring attitude to historical heritage and cultural traditions of one's own and other nations.

Interaction between people is based on the models universally recognized in the appropriate culture, occurs according to the patterns of social perception. One of the manifestations and the results of social perception is stereotypes.

The notion of stereotype was introduced into the scientific usage by W. Lippman in the early XX century. The researcher explained the functioning of the stereotype through the analysis of socio-psychological aspects of human activity and considered the stereotype in the system of factors that cause its appearance and determine its functioning. Stereotypesare preconceived ideas that govern all processes of perception[2]. They mark certain objects, both familiar and unfamiliar, in such a way that the barely familiar seem familiar and the unfamiliar seem deeply alien.

Stereotypes, being generalizations of social experience of representatives of a certain linguistic culture, simplified schemes that help to orient in the world and in society, are present in various spheres of social interaction. However, in some cases, stereotypes are not necessarily based on the essential features of a particular phenomenon, they can prevent the establishment of understanding between communicants.

It is important to take into account the fact that although stereotypes are different in their characteristics and reasons, they are socio-culturally predetermined and complement each other. The scope of stereotypes is not limited exclusively to "other" culture; people in "their own" culture are also stereotyped in their social interaction. The traditional view is to distinguish between direct and figurative stereotypes, autostereotypes and heterostereotypes, neutral and evaluative stereotypes (positive or negative).

Stereotypes are opposed to prejudices. Unlike stereotypes, which can be either neutral, positive or negative, prejudices are always negatively colored.

Prejudice is over-generalized, oversimplified or exaggerated beliefs associated with a category or group of people, a process of unconscious or stereotypical prior (often negative) evaluation and attitude towards someone or something or expressing an opinion without direct experience or without critical thinking, also without sufficient grounds.

Thus, stereotypes are nationally marked mental and linguistic units that form some patterns of perception of certain groups of people, they can create significant obstacles in intercultural communication.

Successful intercultural communication requires a clear and conscious understanding of the values relevant to the corresponding linguoculture and the most typical ways and forms of their verbalization.

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#### ADAPTATION OF UKRAINIAN REALIA AS A SEPARATE CLASS OF NON-EQUIVALENT VOCABULARY IN ENGLISH TRANSLATIONS ON THE EXAMPLES OF MODERN MEDIA DISCOURSE

The paper aims to study the ways of rendering Ukrainian realia into English as target language in contemporary media discourse. The relevance of the research is determined by the dramatic rise of worldwide interest in our country, caused by the russian aggression, and a lack of a previously formed vocabulary database containing specific realia of Ukrainian culture, language, and lifestyle.

The work aims to collect and analyze the ways of translating Ukrainian realia into English. To achieve this goal, the following tasks were fulfilled: to clarify the meaning of the concept of realia as a separate group of non-equivalent vocabulary and establish the linguistic status of realia; to study the main approaches of the classification of realia; to consider the problems of translation of realia; to investigate and compare the ways of translating realia in articles of "Kyiv Post", "The Day", "The Guardian" and "The New York Times".

The object of the research is Ukrainian realia in Ukrainian and American media discourses.

The subject of the study is the translating methods and approaches, applied to rendering Ukrainian realia as a specific class of non-equivalent vocabulary.

In this study, 120 realia, taken from modern Ukrainian and American media discourse, were analyzed as the research material. In conducting our research, we used the following methods: continuous sampling method, analysis method, generalization method, and quantitative analysis.

The term "realia" is defined as a nominative unit, the core component of the lexical meaning of which is the national-cultural component, which is not characteristic of the realia of a certain linguistic society. Acquaintance with the terminological apparatus of onomastics and translation studies provides grounds to define the concept of realia, find out the degree of study of methods of reproduction of Ukrainian realia, and outline the problems of realia translation.

The linguistic picture of the world is defined as a set of ideas about the world recorded in the language of the people. It has expressed national and cultural characteristics, as it reflects a unique vision of realia inherent in a certain linguistic and cultural community.

At the current stage of the development of linguistics, language is understood as a system of landmarks that ensures human activity in the objective world. A comparison of the verbalized models of realia of different language communities reveals differences between them, which allows us to make conclusions about the ethno-specificity of the perception of the world by representatives of individual linguistic communities.

The term "realia" has traditionally been used to denote objects and phenomena related to the history, culture, economy, and daily life of certain people. At the same time, the trend of the development of polysemy of the term and its use both to name the referent itself and its linguistic counterpart is becoming more and more obvious.

As a linguistic phenomenon, the realia is classified as a non-equivalent vocabulary. They are of great interest in the study of language and cultural interaction.

When reproducing realia, translators usually face two main problems: the absence of an equivalent in the target language due to the fact that there is no object in the speakers of this language, which is indicated by this realia, and the need to convey its national and historical unique coloration, along with the objective meaning of realia. Also, it is believed that translation problems of realia arise due to the presence of lexical gaps in the target language or defects in the cultural and encyclopedic knowledge of the translator [3, p. 187].

According to the Ukrainian linguist I. V. Korunets, the translation of realia can be performed as follows: transcription or transliteration; a combination of transcription/transliteration with an explanation of the nationally specific meaning of realia; descriptive translation only; tracing with an explanation; literal translation (tracing); translation using semantic analogs [2, p. 157–168].

Another scientific approach to the translation of realia is offered by the Ukrainian researcher V.I. Caraban. According to his theory, three main techniques can be distinguished: transcoding (in which the sound and/or graphic form of the word of the source language is transmitted by means of the alphabet of the language of translation), literal translation, descriptive translation [1, p. 421].

As a result of the study, it was found that the reproduction of Ukrainian realia is performed accordingly: transcription/transliteration (22.5%), transliteration with a descriptive explanation (19.5%), tracing (30%), the method of semantic analog (14%) and mixed type (11%). Such options provide an opportunity to preserve the unique "flavor" of realia and at the same time provide the reader with comprehensive information necessary for understanding the text.

In the practical part, the methods of translating realia in American and Ukrainian editions were defined:

- 1. Transcription/transliteration, which is 29% in Ukrainian editions, and 22.5% in American ones (reproducing of realia "Борщ": «I'd go with *borshch*, but I never have enough time or anyone to cook a real *borshch* for me," said a police officer in the eastern city of Kramatorsk who did not provide his name for security reasons» [6] and realia "Києво-Печерська лавра": «Metropolitan Epiphanius led a Christmas service at the Holy Dormition Cathedral at the *Kyiv Pechersk Lavra* in the Ukrainian capital» [13]);
- 2. The combination of transcription/transliteration with an explanation of the nationally specific meaning of realia is 17% in Ukrainian editions and 22.5% in American ones (reproducing of realia "Bapeники": «As we talked, surrounded by diners tucking into galushki dumplings with meat and cherries from the Poltava region he dumped a trio of volumes on the table» [5] and realia "Леся Українка": «"There is so much anti-imperialist Ukrainian literature people don't know about. You

can start with Shevchenko and Lesya Ukrainka [the feminist writer and poet]," she said» [10]);

- 3. Tracing is the most often used method in Ukrainian (31%) and American (29%) editions (reproducing of realia "Софіївський собор": «The best known of these is Kyiv's golden-domed *Cathedral of St Sophia*, which remains intact» [8] and realia "Острів Зміїний": «The strike came a day after Russian forces vacated *Snake Island*, about 60 miles away in the Black Sea, following a persistent Ukrainian artillery bombardment» [14]);
- 4. The method of semantic analog accounts for 16% in Ukrainian editions and 13% in American editions (reproducing of realia "Український інтернаціональний легіон": «American Malcolm Nance, undoubtedly the best-known member of *the Ukrainian Foreign Legion*, announced in April 2022 that he was quitting his high-profile and high-paying career in New York City as a national security correspondent for MSNBC and as an author to come to Ukraine where he would put 40 years of U.S. intelligence and military experience to work to help the upstart foreign legion» [11] and realia "Мінські домовленості": «For many, it was a year of terrible sacrifice and loss, in spite of *the Minsk II peace agreement* signed in February»);
- 5. The mixed type is the least used when reproducing realities in Ukrainian (7%) and American editions (13%). It includes the following combinations:
- tracing + transliteration/transcription (reproducing of realia "колективне господарство" and "колгосп": «The confiscation of almost all the produce in *collective farms* forced peasants to refuse to work in *kolkhozes*, and, as a result, the bulk of the 1932 crop perished», realia "Андріївський узвіз", "Золоті ворота" and "Майдан Незалежності": «This Eastern Orthodox church was originally located in the Upper City the oldest area of Kyiv near *the Golden Gate*, *Andriyivsky Uzviz* and *Maidan Nezalezhnosti»* [7]):
- the method of semantic analog + tracing (reproducing of realia "куркульство" and "колективізація": «In spite of the terror, including "liquidation of *the kulaks* as a class," the state managed to carry out overall *collectivization* in the cooperative form only, i.e., to allow peasants to have a household plot», realia "Нацгвардія" and "Морська піхота": «Ukraine's forces inside the city, consisting mostly of *National Guard* and *Marine units*, this week have released videos saying they are stranded, running low on ammunition and essentials like access to potable water» [9]).

When reproducing Ukrainian realia in the American publications "The Guardian" and "The New York Times", the most common method is the use of tracing. The second most widely used methods are transcription/transliteration and transliteration with descriptive explanation. We believe that the above methods are often used since it is quite difficult to find the corresponding words for certain words and even reproduce them. The methods of semantic analog method and the mixed type are used less often.

Taking into account the Ukrainian editions "The Day" and "Kyiv Post", we have the following picture. Transcription/transliteration and tracing are most often used when translating non-equivalent vocabulary. Less often, Ukrainian realia are translated

using transliteration with a descriptive explanation, the method of the semantic analog, and the mixed type.

Considering the methods of reproduction of Ukrainian realia in Ukrainian and American publications, we can conclude that the common methods are used during translating the Ukrainian realia, but they are used with different goals. For example, American journalists use the method of a combination of transcription/transliteration with an explanation more frequently to immerse American society by using the original names of the specific items and explaining them. Otherwise, Ukrainian ones use the method of tracing instead to adapt the meaning of Ukrainian specific items, making it much easier to understand for foreigners.

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## FEATURES AND DIFFICULTIES OF TRANSLATING EMOTIVE AND EXPRESIVE VOCABULARY

Despite the growing popularity of online translation resources and the emergence of artificial intelligence, the work of a human translator is still relevant. There are several reasons for this. The first is the imperfection of machine translation (numerous grammatical and lexical errors, etc.). The next and main one is the literalness of the translation, which results in the loss of the text's style. To avoid this, certain properties that are characteristic of a living organism are necessary, such as emotionality, imagination, creativity, etc. They are particularly important when translating emotive and expressive vocabulary.

It is important to understand what emotive and expressive vocabulary is. According to the definition, these are stylistically colored lexemes characterized by the presence of additional connotative meanings (caressive-diminutive and coarse-incremental) and certain emotional connotations. This vocabulary can be used in all styles. However, it is most often used in works of fiction, journalism and in the sphere of everyday life [1 p.4; 4 p.346; 2].

Based on the field of application, it can be determined that the translation of works that use such expressions will have a number of features and cause certain difficulties. The translator must have a high level of language proficiency for

competent interpretation. The fact is that every language contains words that are quite difficult to translate into a foreign language while preserving the essence and emotional coloring. These include words that are religious or historical in nature. Also, in every language, any word can have a number of synonyms that have a slight difference in emotional coloring. The problem is that, for example, the word "walk" in Ukrainian has about 9 synonyms, in English - 8, in German - 4 [3; 5; 6].

It can be concluded that a person who translates such works will need to make considerable efforts to preserve the content and style of the text. To do a good job, you'll need an extensive vocabulary, attentiveness, and patience.

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### PERFORMANCES BASED ON SHAKESPEARE'S PLAYS IN ZHYTOMYR THEATRICAL HISTORY

#### The main idea

William Shakespeare is a genius playwright whose ideas are timeless and remain relevant to this day. His characters live in a world where different laws and ideologies prevail, but they are all united by the spirit of Shakespearean England and the desire for a better world. His works, translated into almost all languages of the world, have a

huge impact on the consciousness of modern man. For that reason, it is important to play this plays everywhere, especially in Ukraine, where are both alongside self-sacrifice, patriotism, loving hearts, and discord between clans, cynicism, and greed. However, most people become familiar with Shakespeare only through the pages of the school curriculum, which can sometimes be difficult to understand as classical literature is taught purely from a theoretical or historical perspective. Therefore, to immerse oneself in the essence of the problems raised by the Great Bard and the high spirit of the Renaissance era, the best solution is to recreate Shakespeare's plays on stage and attend performances.

#### **Scientific novelty**

During this research, we wanted to find as much information as possible about Shakespearean productions at the Ivan Kocherha Zhytomyr Ukrainian Academic Music and Drama Theatre and about the theatre itself. Were analysed the works of famous theatre researchers, both Ukrainian (including Vasyl Vrublevsky and Oleksandr Chirkov) and Polish (Jan Prusinowski and Jarosław Komarowski). However, as with diving deeper into the available information from books and the internet, it was realized that it was not sufficient to fully explore the topic. So were conducted interviews with actress and Honoured Artist of Poland Tetiana Solomiichuk, as well as with director and Honoured Artist of Ukraine Petro Avramenko. He shared his perspective on Shakespearean plays, described the challenges he faced during the production of "Love and hate in Verona" (it was a play based on the postmodern tragicomedy "The plague on both your houses" by H. Goren) and outlined his plans for future works. Furthermore, this work is not just a list of performances, but rather an emphasis on the changes in the reception of the works of the great playwright by the people of Zhytomyr and also the interpretation of the classics by the artists of the Zhytomyr Academic Ukrainian Music and Drama Theatre named after I. A. Kocherha. So speaking about the interpretation, it is well seeing from the interview with Petro Avramenko. He sees in Shakespeare's works elements of cinematographic framing, a kind of anticipation of cinema art. The director emphasizes that all conflict situations occur as they are outside of space and time. And in order to achieve full immersion in the play, the director made a very skilful move by dividing the audience into two families: Montagues and Capulets, only with the help of coffee. And today, the supporter of postmodern interpretation of classics Petro Avramenko speaks about plans to stage the comedy "Hey, Juliet" by Ephraim Kyshon on the Zhytomyr stage. Despite the fact that the today's performances are more postmodern, the original spirit of the classics can still be felt in them. As a great example there is the metaphorical use of a minimal amount of scenery on the stage, or the depiction of blood with the help of a red scarf, as it was in the production of "King Lear".

It should be noted that many productions of Shakespearean plays took place in the 19th and 20th centuries, and therefore, there is little information available online about them, such as photos from the shows, audience reviews, and so on. It was founded information about the performances of African American actor Ira Aldridge in Zhytomyr, who played Hamlet in 1865 and Othello in 1866 [7, 13]. Aldridge was closely connected to Shakespeare in his entire creative work. The actor did not just

love the playwright, but saw him as a great thinker who sympathized with the fate of humanity. Moreover, he emphasized his wilfulness, his search for justice, his protest against social laws and conventions that shackled human reason and will. However, this information is only preserved in the theatre's archives, and there has been no research specifically devoted to Shakespearean productions, making the materials presented in this work truly unique and important from a scholarly perspective on the city's theatrical life [5].

#### The practical significance

The purpose of the project is to collect statistical information on productions of William Shakespeare's plays and adaptations of his works that have been staged in the territory of Zhytomyr from the 1860s to the present day. It also aims to identify trends in modern interpretations of Shakespearean works in the contemporary development of theatre (since the arrival of director Petro Avramenko). Additionally, the goal was to emphasize the importance of studying the issues presented in these works and their contemporary interpretation, which helps expand the target audience. Moreover, during the analysis, was founded a close connection between the state of Ukraine and the quality of performances. In Soviet times, foreign productions had no success at all. Since the establishment of the theatre, mostly by Polish troupes [8], reviews of performances have not been preserved, and subsequent performances were rare and with long intervals, and mostly played during theatre tours. The original troupe of the Zhytomyr Theatre in 1985 staged "The Merry Wives of Windsor," which received a completely negative review. As the newspaper "Soviet Zhytomyrshchyna" wrote (September 30, 1985), "The Merry Wives of Windsor" is a "loose and unfinished production". [2, p. 351]. There were attempts to stage "The Taming of the Shrew" in 1945, but it remained only on paper. The renewed European perspective on the legacy of the great playwright came with the years of Independence. After all, there was complete access to cultural exchange with the West and a decline in all kinds of censorship. Thus, in 1993, under the direction of V. Tolok and V. Kulavina, the staging of "King Lear" was carried out, which to some extent determines all subsequent approaches to the interpretation of Shakespeare's heritage by Zhytomyr theatre artists. As the performer of the role of Cordelia, Tetiana Solomiichuk recalls, "despite the difficulties with understanding the classical English staging, the performance still inspires and conveys the spirit of that time, which passes to the actors and the audience.

#### The theoretical basis

The theoretical basis of the work combines theatre studies [3] and authentic archival sources [6]. The historiographical search for the development of theatre art in Zhytomyr was based on Vasyl Marcelovich Vrublevsky's monograph "Melpomene on Pushkinska" [2], essays on the history of the theatre in the book by M.D. Stanislavsky and L.A. Rubinstein "Theatre of Zhytomyr" [7], as well as a jubilee booklet by Tetiana Danchuk [3]. The book by Prof. O.S. Chirkov "Zhytomyr Theatre yesterday and today: essays" played a significant role in the research, as it is not only the view of an expert and researcher of drama, but also a response of an inspired theatre practitioner [8]. During the research, were used methods of searching for archival printed and video materials, as well as the method of interviews and live communication with the artists

who participated in the staging and performance of the plays. Based on recorded interviews, we obtained a basis for describing the plays themselves, the impressions they made on the audience, and the themes they presented.

#### **Conclusion**

The work contains a comprehensive list of plays performed on the Zhytomyr stage from the first quarter of the 19th century to the present day, intended for the formation of a corresponding article in the project "Ukrainian Shakespeare Encyclopedia". Analysis of audience reviews, reviews from theater experts, and interviews with artists from the Zhytomyr Ukrainian Academic Music and Drama Theatre named after Ivan Kocherha allows conclusions to be drawn about the attitude of modern audiences to the works of William Shakespeare, to determine the approaches of artists to the interpretation of the classics, and the prospects of Zhytomyr Shakespearean theatre. The project aims to popularize Shakespeare's plays in modern theatre, as well as emphasize the importance of contemporary interpretation of Shakespeare's works and their relevance. Information about the theatre's plans for future productions is provided.

And now we can proudly repeat the words of the leading theatre scholar Professor Chirkov, the head of the Scientific and Creative Complex "Dramaturgy" at Ivan Franko Zhytomyr State University, about how "the theatre has grown to Shakespeare" [8].

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#### EMOTIONAL BURNOUT SYNDROME

The aim of this study is to investigate the interdependence of the emotional burnout syndrome with the age, professional activity of the respondents, and the amount of time spent on rest and sleep.

Emotional burnout syndrome (further in the text EBS is a state of physical and emotional exhaustion, which is the result of excessive work, person's high self demands and constant stress[2]. The syndrome manifests itself both in the form of physical fatigue and in the feeling of psychological and emotional exhaustion.

There are many factors of emotional burnout and, mainly, they are related to the performance of professional duties: too much work without rest and communication with others, problems in relationships with loved ones, numerous duties, lack of sleep. In addition, certain character traits can contribute to the development of emotional burnout. For example, perfectionism, pessimism, the desire to control every aspect of work and life, reluctance to delegate responsibilities.

The characteristic symptoms of EBS are:

- a) Lack of motivation;
- b) Fatigue: a very bright sign;
- c) Frustration, cynicism and other negative emotions [3].

Burnout and chronic stress can interfere with person's ability to concentrate and remember information, which causes the cognitive problems, such as the lack of satisfaction with work and life along with decreasing quality of work and everyday life.

There are four stages of EBS:

- 1. Physical, mental and emotional exhaustion;
- 2. Shame and doubts:
- 3. Cynicism and brutality;
- 4. A feeling of helplessness [1;3].

During our research, 25 female respondents were interviewed. All in different professional fields: civil service, health care, IT, trade, law and security. Among the respondents there were students, a housewife, a confectioner, a psychologist, a nail designer, a store cashier etc.

To assess the of risk of developing the EBS, the following criterion was suggested: the amount of time allocated by a respondent for their rest and their usual leisure activity.

The results of the survey are:

- 36% of respondents allocate 1–2 hours for rest;
- 28% up to 1 hour;
- 20% more than 3 hours;
- 16% practically do not rest.

60% of respondents spend their free time watching TV and checking smartphones;

25% for reading books, chatting with friends, and going for a walk;

10% for gym or meditation;

4% for handmade;

1% do not spend their free time in any way.

The next task was to determine how long a person sleeps.

65% of the respondents sleep for 6–8 hours;

20% of them sleep for 6 hours;

12% of the respondents sleep for more than 8 hours;

3% of the respondents have sleep disorder.

The majority of the respondents (75%) are familiar with the term "Emotional Burnout Syndrome"; also, they have individual symptoms characteristic of this syndrome. Most often, it is irritability (80%), a constant feeling of over tiredness (60%), a feeling of anxiety and fear (44%), apathy (40), disorders of the gastrointestinal tract (20%), insomnia (28%).

Since the predominant symptoms were irritability and fatigue, a survey was conducted to find out how people cope with these symptoms. Most of the interviewees cope with fatigue by various methods (physical activity, listening to music, dancing, meditation, walking, watching movies, reading books), but 20% of the respondents claim that the syndrome does not affect them.

Having conducted the research, we come to the following conclusions:

There is no clear interdependence between a person's professional activity and emotional burnout syndrome, however, there is a direct dependence on how to properly organize time for work and rest, and how exactly you spend your rest, how much time you devote to sleep and how complete it is.

Due to the society's rapid development, progress of the information technology, lack of software security, people have become hostages of telephones and televisions, they lead inactive way of life. Moreover, the media space consists of mainly negative information and, of course, everyone is affected by the war. These are factors contributing to emotional exhaustion.

Therefore, the EBS is something that can happen to everyone, so you need to allocate time correctly, be engaged in physical activity, develop positive thinking, refuse to control everything around you. Relax and try to live here and now.

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## Session work № 2

# CURRENT RESEARCH IN THE FIELD OF LAW AND SECURITY

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# PRINCIPLES OF INTERNATIONAL HUMANITARIAN LAW VIOLATED BY THE AGGRESSOR DURING MILITARY OPERATIONS ON THE TERRITORY OF UKRAINE

The Constitution of Ukraine defines the main principle of state policy in the field of ensuring human and civil rights. According to Article 21 of the Constitution of Ukraine, "All people are free and equal in their dignity and rights. Human rights and freedoms are inalienable and inviolable"[1].

Human rights are valid in peacetime and during armed conflict, as well as in other emergency and special situations. Ukraine has become the country whose citizens suffer from the violation of their fundamental rights and freedoms as a result of a full-scale invasion of Russia - the aggressor country on its territory.

Human and civil rights should be ensured in any case, both in peacetime and during armed conflict. The first of the inalienable human rights is the right to life. The peculiarities of ensuring this right during the armed conflict are outlined in the special norms of a separate branch of international law – international humanitarian law [2].

The Instruction on the procedure for implementation of the norms of international humanitarian law in the Armed Forces of Ukraine contains the main provisions of international humanitarian law applicable in armed conflicts.

Accordingly, international humanitarian law (the law of armed conflict) is a system of internationally recognized legal norms and principles applied in armed conflicts, establishing the rights and obligations of subjects of international law to prohibit or restrict the use of certain means and methods of conducting armed struggle, ensuring the protection of victims of conflict and determining responsibility for violation of these norms [3].

Currently, Ukraine is in the state in which the principles and norms of international humanitarian law have turned from theoretical to vital. Russia's attack on Ukraine has become the most flagrant violation of international law, and its actions are unacceptable in the civilized modern world. So many civilian casualties would be impossible if the aggressor country adhered to the principles of international humanitarian law. The most important principles of international humanitarian law include the principle of humanity, the principle of international legal protection for victims of war, the principle of prohibition and restriction of belligerents in the means and methods of warfare, the principle of protection of civilian objects and cultural property, the principle of protecting the interests of neutral states, the principle of prohibiting damage to the enemy, which is incompatible with the purpose of war, the principle of responsibility of participants in armed conflicts for war crimes, etc [4].

All the above principles were violated by Russia in the war against Ukraine and the number of such violations is growing every day. The territory of our state is still subjected to rocket attacks, shells hit schools, hospitals, and streets of peaceful cities where civilians are. The civilian infrastructure of Ukrainian cities and humanitarian corridors are also being shelled and mass shootings are being carried out in the occupied territories. Cluster munitions related to prohibited weapons are used. Arbitrary abuse, rape, torture, and murder of civilians in the territories liberated from the occupation are also recorded. There is no water, food, medicine and electricity in the cities surrounded or captured by Russia. Entire regions are deprived of communication with the world and suffer a humanitarian catastrophe.

All these violations of international humanitarian law by the aggressor should be considered war crimes. War crimes are rather serious violations of international humanitarian law, for which international law provides for criminal liability of a country whose citizens are involved in such criminal acts. War crimes are serious violations of the Geneva Conventions for the Protection of War Victims [5].

Ukraine has been fighting Russia's large-scale armed aggression for a long time. The enemy attacks the civilians, destroys residential buildings and infrastructure, and causes huge losses, injuries, mutilations and deaths, for which it must bear the utmost responsibility. Russian Federation must inevitably be held to account for violations of international humanitarian law, crimes and atrocities committed within Ukrainian territory.

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# EXPLORING THE INTERSECTION OF TERRORISM AND SOCIAL VIOLENCE

Terrorism is a form of social violence that has become an integral part of political and economic processes in the world, posing a threat to public and national security. The increasing frequency and severity of terrorist attacks have made it a mass phenomenon that requires attention and action.

In studying terrorism, several Ukrainian and foreign scientists, including V. Antipenko, V. Lipkan, L. Moshkova, I. Shkurat, J. Dashkevich, V. Tymoshenko, Benjamin Jenkins, Ernst Arechaga, Raymond Aron, and Eugene Dinstein, have made significant contributions to the theoretical and methodological foundations of the field, as well as the study of certain aspects of countering terrorism.

Terrorism is a complex issue that can have multiple causes, including economic crises, political instability, and social factors such as a lack of education or spiritual development. The inability of society to regulate complex socio-political processes can also contribute to the growth of terrorism. As political and cultural systems change rapidly, some individuals or groups may resort to violence to achieve their goals. Additionally, involvement in active political life by those with low levels of education or political experience may contribute to the spread of terrorism.

In addition, terrorism is a socially dangerous activity that involves the conscious, purposeful use of violence to achieve criminal goals. This can include taking hostages, arson, murder, torture, intimidation of the population or authorities, or other forms of violence that encroach on the life or health of innocent people. Three mandatory elements of terrorism are the presence of armed violence or its threat, causing or threatening to cause harm to human health or material and moral damage, and

deprivation or threat of deprivation of people's lives. There are several varieties of modern terrorism, including state, international, domestic, religious, and point terrorism, which can target specific individuals, groups, or locations.

Terrorism can be categorized based on the target of the attack, such as elitist, functional, industrial, and transport terrorism. In Ukraine, criminal responsibility for terrorist acts is established in Article 258 of the Criminal Code. The law also holds individuals accountable for involvement in the planning or execution of terrorist activities, as well as for the creation of terrorist organizations, financing of terrorism, and incitement to commit terrorism.

The fight against terrorism involves preventing, detecting, stopping, and mitigating the impact of terrorist activities. It is guided by the principles of legality and respect for human and civil rights and freedoms, with penalties for those involved in terrorist activities. The protection of human life and the rights of those at risk is given top priority, and cooperation with foreign countries, law enforcement agencies, special services, and international organizations is essential.

In Ukraine, the Security Service, Ministry of Internal Affairs, Ministry of Defense, and central executive bodies are responsible for fighting terrorism within their respective areas of jurisdiction. By working together, these entities can effectively combat terrorism and safeguard the country's security and stability.

In conclusion, terrorism is a multifaceted problem that requires a comprehensive approach to address its root causes and prevent its occurrence. It is crucial to understand the various types of terrorism and their underlying motivations, as well as to develop effective strategies for countering them. The fight against terrorism must prioritize the protection of human life and respect for human rights and civil liberties, while also promoting international cooperation and collaboration among law enforcement agencies and governments. Ukraine has made significant strides in combatting terrorism through the efforts of various government entities, but continued vigilance and investment in resources are necessary to ensure the safety and security of its citizens. By working together with other nations and organizations, Ukraine can play a vital role in the global fight against terrorism.

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## PROTECTION OF HUMAN RIGHTS IN ACCORDANCE WITH UNIVERSAL INTERNATIONAL LAW

Immediately after the declaration of independence, certain legal acts aimed at protecting human rights from bureaucratic arbitrariness began to appear in Ukraine for the first time. As a result, dozens of civic organizations started their activities aimed at protecting human rights. A few years after the declaration of independence, Ukraine became a part of the international law system. On November 9, 1995, in Strasbourg, the European Convention for the Protection of Human Rights and Fundamental Freedoms and its five protocols were signed on behalf of Ukraine, and on July 17, 1997, the Verkhovna Rada of Ukraine ratified them. [1]

The main international legal acts that form the basis for the protection of human rights are as follows:

- ➤ The Universal Declaration of Human Rights 1948;
- ➤ The Convention for the Protection of Human Rights and Fundamental Freedoms (European Convention on Human Rights) 1950;
- ➤ International Covenant on Economic, Social and Cultural Rights 1966;
- ➤ The International Covenant on Civil and Political Rights 1966;
- ➤ The Optional Protocol to the International Covenant on Economic, Social and Cultural Rights 2008;
- > The Convention on the Rights of the Child 1989;

The Convention for the Protection of Human Rights and Fundamental Freedoms is now rightly regarded as one of the greatest achievements of the Council of Europe. It represents the fundamental basis of the entire complex of international legal regulation in the field of human rights and freedoms, as well as legitimate interests and needs. Since the Convention entered into force, 11 Protocols have been adopted and became its integral part. The Protocols have expanded the range of guaranteed human rights and freedoms and improved the mechanism for their protection. It is thanks to the effective protection of human rights that the Convention became the first international legal instrument aimed at protecting a wide range of civil and political rights. [2]

International law is often criticized for being weak, with slow or even ineffective consequences for violators. However, since the start of the full-scale invasion on February 24, 2022, the actions of the russian army have been an unprecedented violation of international law and human rights, to which the civilized world has reacted.

The best foreign lawyers represent Ukraine in international courts against russia free of charge, as well advise the President and the government on sanctions policy.

Since the first days of the war, Ukrainian lawyers and diplomats have been working to record all of russia's violations and their consequences in international courts. [3]

Another reason for engaging international lawyers from foreign countries was the horrific and atrocious consequences of the aggression in Bucha, Hostomel, Irpin and other towns and villages that were liberated after the temporary occupation.

Hundreds of civilians have been killed by the armed forces of the russian federation in situations unrelated to active hostilities. As of May 15, the Office of the High Commissioner for Human Rights was working to verify more than 300 allegations of such killings. The majority of victims were men, but also women and children have been confirmed killed. Civilians were shot while attempting to leave the area in their cars; russian soldiers summarily executed unarmed local civilian men if they suspected them of supporting Ukrainian forces or considered them as another possible future threat. [4]

According to the information provided by the Office of the Prosecutor General, as of 29.11.2022, there were 49,938 crimes of aggression and war crimes, 19,174 crimes against national security recorded in Ukraine; 440 innocent children were killed by racists and 851 children were injured in varying degrees of severity. The above number of crimes is growing every day.

The UN Human Rights Council has approved the Resolution "Deterioration of the human rights situation in Ukraine as a result of russian aggression." It was adopted following the debate at the 34th special session of the UN Human Rights Council, convened at the initiative of Ukraine in connection with the deterioration of the human rights situation in Ukraine as a result of russian aggression. The resolution was supported by 33 of the 47 member states of the Council. The Council members called on the russian federation to provide international human rights organizations and humanitarian institutions with immediate and unimpeded access to Ukrainians who have been deported and are being held in russia. [5]

Ukraine's proposal as a state is to establish a special international tribunal against the top military and political leadership of the russian federation to punish the crime of aggression on the basis of an international agreement. A relevant resolution is currently being prepared. This requires the political will of those countries that support us and know that the crime of aggression has been committed. It is important that these countries take the next step and join such an international agreement, on the basis of which such an international tribunal will be established. There are two possible ways to conduct a trial for the crime of aggression against Ukraine. In particular, such a tribunal could be established directly by the UN. It could be also created by Ukraine through an agreement with the UN or another organization at the international level, in particular, the Council of Europe, as well as through an agreement with other states.

Summarizing all of the above, we can conclude that absolutely everyone who is directly or indirectly responsible for the russian aggression on the territory of Ukraine must be brought before an international tribunal at the International Criminal Court in The Hague.

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## THE ROLE OF STATE BODIES IN ENSURING UKRAINE'S ECONOMIC SECURITY

The active work of state institutions in the direction of protecting the country's economy is one of the important tasks of today. A special role is assigned to law enforcement agencies among all existing state structures that ensure the country's economic security.

The main law enforcement agencies that influence the economic security of the state include the National Police of Ukraine, the Security Service of Ukraine, the

Bureau of Economic Security, the Prosecutor's Office, the National Anti-Corruption Bureau of Ukraine, the State Bureau of Investigation, the State Tax Service, the State Customs Service of Ukraine, and the State Audit Service of Ukraine. Each of these bodies, if it operates effectively, can have a significant impact on the actual proper functioning of the economic component of state security.

As an example, the tasks of the Bureau of Economic Security in order to ensure the economic security of the state are the identification of risk zones in the economy through the analysis of structured and unstructured data, prevention, detection, termination, investigation of criminal offenses affecting the functioning of the state economy, assessment of risks and threats to the economic security of the state, and working out ways to minimize and eliminate them.

In the structure of the Security Service of Ukraine, some units are empowered to counter threats to the national economy. These include the Main Directorate for Combating Corruption and Organized Crime and the Main Directorate for Counterintelligence Protection of the State's Interests in the Field of Economic Security. The Main Directorate for Combating Corruption and Organized Crime should be active in combating organized crime and corruption offenses, i.e., those illegal actions, the consequences of which may negatively affect the course of certain economic processes with the participation of the state. The work of the Main Department of Counterintelligence Protection of the State's Interests in the Field of Economic Security is aimed at ensuring the normal functioning of the economic component of state security and is one of the priority directions of the entire service.

In summary, the role of state bodies in ensuring Ukraine's economic security cannot be overstated. With a range of law enforcement agencies focused on identifying risks, preventing criminal activities, and investigating offenses, the country can better protect its economic interests and ensure a stable, prosperous future. By working together and utilizing their respective strengths, these agencies can have a significant impact on the overall economic health of the nation. Ultimately, their efforts contribute to the well-being and stability of the entire country, making them an essential component of Ukraine's infrastructure.

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# CAN THE DEVELOPMENT OF ARTIFICIAL INTELLIGENCE (AI) AFFECT CLIMATE RESEARCH?

The development of AI (artificial intelligence) has the potential to significantly impact climate research through the use of advanced modelling, data research and optimization techniques.

As climate-related disasters become more frequent and destructive, there is a growing demand for advanced AI technologies to help scientists better understand and mitigate the impacts of climate change. One such technology is AI, which has the potential to revolutionize and improve the way we study and respond swiftly to climate issues we face.

With its ability to analyze large amounts of data, identify patterns and correlations, AI can help better understand complex climate systems and offer more accurate predictions about future climate trends.

For example, AI can analyze satellite data to track changes in sea levels and ocean temperatures, perform calculations and make accurate climate predictions in order to prevent damage caused by global warming. It can also be used to optimize climate models and simulations, showing the impact of climate change on different regions of the world.

Moreover, AI has a great potential to identify new solutions to climate-related problems. For example, the scientists are in the process of learning how to design and create exceptionally light and extraordinary strong materials that can sustain extreme weather conditions.

AI can be applied to optimize renewable energy, also called as "Green Energy", improving its efficiency. It offers the opportunity of developing new ways to help reduce carbon emissions and lower our carbon footprint.

Another important field of application is agriculture. AI can be used for more efficient irrigation of crops, optimal use of fertilizers and improving planting season schedule that can result in more productive harvests.

Although, one should not forget that everything costs money and human resources. AI is a very expensive tool and requires deep knowledge and talented workers to develop systems that can work efficiently. In addition, it should be simple to be used productively by people who do not work in the field of AI development.

Overall, the development of AI has the potential to significantly enhance our ability to study, research and respond to global warming. By using the power of advanced data analysis and optimization, AI can redirect resources where they are needed. AI can help us better understand the complex systems that rule our planet's climate and develop more effective strategies for mitigating the impacts of climate change. So, we need to develop and deploy artificial intelligence to meet our needs and protect the environment.

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#### LABOUR RELATIONS DURING THE STATE OF WAR

**Introduction** The state of war has changed the life of every Ukrainian and individual staying on the territory of Ukraine. This specific condition has affected many areas, including employment relations between employers and employees since some participants in labour relations have left the country or are unable to perform their work duties, as well as other aspects currently provided for by legislation.

The main objective of the study is to acquire knowledge regarding the Law of Ukraine that regulates labour relations during the state of war, as well as to determine the aspects of employment relations that have some differences from those specified in the Labour Code but are provided for and revised in the Law of Ukraine "On the organization of labour relations under conditions of martial law".

According to Articles 43 (concerning the right to work) and 45 (concerning the right to rest for workers) of the Constitution of Ukraine, certain labour rights are provided. However, it should be noted that the relevant rights may be violated during the introduction of martial law in Ukraine. That is why it is worth paying attention to some special regulatory acts that regulate and optimize labour legislation to the possibilities of the present [1, Articles 43-44].

The Law of Ukraine "On the organization of labour relations under conditions of martial law" was adopted on March 15, 2022. **It provides for certain changes regarding:** 

1. Conclusion and termination of employment contracts.

Therefore, it should be determined that the form of the contract can be agreed upon by the parties.

For employees who have just started working, an internship (trial period) can be applied without exceptions for certain categories of persons, as stated in Article 26 of the Labour Code of Ukraine [3, Article 26]. However, if for the period when a person, as a result of military actions by the aggressor country, obtained the status of a refugee or internally displaced person and moved to another place, then the head of the

enterprise, institution, or organization may temporarily conclude a contract with a new employee.

The initiator of the termination of the contract can be either an employee (if there is a threat to life and health; the workplace is located on the territory where active hostilities are carried out), or an employer (if the person is temporarily disabled to work, is on vacation or cannot perform the amount of work specified in the employment contract due to damage caused by hostilities) [2].

2. Transfer and changes of essential working conditions for employees.

According to the Law of Ukraine "On the Organization of Labour Relations under Martial Law," the employers may change the working conditions as well as transfer their employees to another locality, but the salary should not be less than the average from the previous work, there should be no active hostilities in that area, and the employee should not have any contraindications to perform these labour duties [2].

However, if hostilities are conducted in the area where the person is being transferred to, the employee can only be transferred only at will [5].

3. Establishment of working hours, rest time, and vacation.

During a state of war, the working hours are increased to 60 hours per week. Weekends, in turn, will be reduced and a person will have only 24 hours of rest per week (instead of 42 hours).

There is also the possibility of lifting the ban on working on weekends and holidays, shortening the day before a holiday or weekend, and rescheduling such days (in case they coincide with a working day).

The duration of paid vacation is reduced to 24 days per year [2].

4. It also reveals the issue of remuneration.

Of course, employers should pay for the work of their workers. If there is a delay due to hostilities, then this does not relieve the employer from the responsibility to pay the wages after the workplace resumes work [4].

**Conclusion** Thus, this kind of legislation is mandatory during a state of war, as many things in the daily lives of citizens and other individuals change, regulatory legal acts should be capable of rapid adjustments following the situation.

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## UNDERSTANDING THE CAUSES AND CONDITIONS OF CRIME: A CONCEPTUAL CLASSIFICATION

Crimes, like any human activity, are the result of the interaction of a person and the external objective situation in which an individual makes a specific decision. Therefore, the immediate causes of committing a specific crime are, on the one hand, the peculiarities of needs, interests, the system of value orientations and motivations of a person, an individual, and on the other hand, in a set of external circumstances that determine the formation and implementation of motives and determination to commit a crime. In other words, the causes and conditions of crime are reflected in the combination of a person's moral and psychological characteristics and the situation they find themselves in.

Analysis of the causes and conditions of the commission of a specific crime involves consideration of:

- 1. Socio-psychological mechanism of individual criminal behavior.
- 2. The formation of negative moral and psychological characteristics of a person, which manifests itself in criminal behavior and which causes it.
- 3. Conditions and specific life situations that cause, facilitate, or contribute to the commission of a crime.

External circumstances affect criminal behavior not only due to their certain objective content and meaning but also in accordance with their subjective perception and assessment of the individual, which in turn depend on the characteristics of the person. Individuals commit crimes for various reasons. For example, to obtain things they can't afford themselves, to stretch the family budget, for joy-riding or selling, to meet a personal emergency, intending to return the money, etc. The motives also vary in crimes of violence: to avoid detection, to obtain things or money, in a fit of rage during a quarrel, etc.

Biological and psychological explanations. Such studies involve differences in body type, the pattern of brain waves, and the formation of genes. None of them has been proven. Another research stresses personality differences resulting from experiences in childhood and later. It shows that many people who became criminals were neglected by their parents or were given harsh or uncertain discipline.

Social conditions. Sociologists have conducted crime studies that focus on the neighborhood and community rather than on the individual. For many young people, the excitement of the streets provides the principal escape from boredom and unsolvable problems. In addition, people fear the police and refuse to cooperate with them.

To summarise, modern criminology has discovered a new direction for the study of society's reaction to crime: it has turned to research on the victim (victim of crime) and mechanisms of social control. Now the causes of crime are approached not only

from the point of view of the characteristics of the criminal act and the characteristics of the criminal. The reasons are derived from the social process in which the criminal, the victim, and society are involved. In particular, the processes in society are investigated, due to which the behavior of people and the people themselves will be determined as criminal.

Such new areas of criminology await further development, such as the investigation of family dynamics in the context of crimes among family members (which is actively developed in the West), ecological, as well as traditional areas of criminological characteristics of youth and juvenile crime, and violent crime. In recent years, criminologists have been paying a lot of attention to the problem of serial sexually violent crimes.

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## PERMISSIBLE RESTRICTIONS OF HUMAN AND CIVIL RIGHTS DURING THE MILITARY STATE

**Relevance of the topic:** To know and understand what rights and freedoms of a person and citizen can be restricted during the period of martial law in Ukraine, how these limitations affect citizens, and to what new conditions it is necessary to adapt.

**Key concepts:** Martial law, human rights and civil rights, restriction limitations of human and civil rights.

Since the beginning of a full-scale war in Ukraine, this topic has not only been relevant but also mandatory for every citizen of Ukraine. Therefore, it was interested and studied by both scientists and lawyers and ordinary citizens.

With the beginning of a full-scale war, the life of every Ukrainian changed, not only factually, but legally as well. Military actions and constant threats require certain restrictions on the constitutional rights and freedoms of a person and citizen for the safety of the population.

Due to the military aggression of the Russian Federation against Ukraine, by the Decree of the President of Ukraine dated February 24, 2022, No. 64/2022 "On the Imposition of Martial Law in Ukraine," approved by the Law of Ukraine dated February 24, 2022, No. 2102-IX, martial law was introduced in Ukraine from 05:30 on February 24, 2022, for a period of 30 days.

By the Decree of the President of Ukraine dated March 14, 2022, No. 133/2022, the term of martial law in Ukraine was extended from 05:30 on March 26, 2022, for a period of 30 days.

By the Decree of the President of Ukraine dated April 18, 2022, No. 259/2022, the validity of martial law in Ukraine was extended from 05: 30 on April 25, 2022, for a period of 30 days.

The term of martial law in Ukraine was extended from 05:30 on November 21, 2022, for a period of 90 days, according to the Decree of the President of Ukraine No. 757/2022 dated November 7, 2022. [2]

Article 3 of the Decree defines that in connection with the imposition of martial law in Ukraine temporarily, for the period of the legal regime of martial law, constitutional rights and freedoms of individuals and citizens provided for by Articles 30-34, 38, 39, 41-44, 53 of the Constitution of Ukraine may be restricted, temporary restrictions on the rights and legitimate interests of legal entities are also imposed to ensure the measures and powers envisaged by the Law of Ukraine "On the Legal Regime of Martial Law" necessary to ensure Ukraine's defence, public safety and state interests.

The content of the legal regime of martial law, the procedure for its introduction and abolition, the legal principles of the activities of state authorities, military command, military administrations, local self-government bodies, enterprises, institutions, and organizations under conditions of martial law, guarantees of the rights and freedoms of individuals and citizens, and the rights and legitimate interests of legal entities are determined by the norms of the Law of Ukraine "On the Legal Regime of Martial Law".[3]

The military command under martial law is given the right together with the state administrations, military administrations, and local self-government bodies to introduce and implement measures of the martial law regime. For this purpose, military command is empowered to issue mandatory orders and directives on defence, public safety and order, and the implementation of measures of the martial law regime, which must be executed.

## What restrictions can be imposed during a state of war? Regarding individuals:

1. Introduce labour duty for certain categories of operable persons who are not involved in work related to ensuring the livelihood of the population, and the defence industry, and not reserved by enterprises, institutions, and organizations.

Thus, only operable individuals aged 16 and over who do not have health restrictions to work in conditions of a state of war may be involved in socially useful work, including unemployed persons; employees of enterprises operating under conditions of a state of war (with the agreement of their managers) - in the order of

transfer; individuals engaged in personal farming; students of higher educational institutions, pupils, and trainees of vocational schools; self-employed persons.

It is prohibited to involve minors; children aged fourteen to fifteen, women who have children less than three years of age, as well as pregnant women if such work may hurt their health.

- 2. Introduce curfew a ban on staying on the streets at a certain time of the day without special permits;
- 3. Establish a special regime for entry and exit, restrict the freedom of movement of citizens, foreigners, and persons without citizenship, as well as the movement of vehicles;
- 4. Check documents of individuals and, if necessary, inspect their belongings, vehicles, luggage and cargo, service premises, and housing of citizens, except for restrictions established by the Constitution of Ukraine.
- 5. Prohibit or restrict the choice of place of residence or place of stay for individuals on the territory where a state of war is in effect;
- 6. Prohibit the trade of alcoholic beverages and substances produced on an alcohol basis, as well as weapons, powerful chemicals and poisonous substances;
- 7. Introduce, if necessary, regulated provision of the population with basic food and non-food items;
- 8. Establish military quartering duty for physical and legal persons for the accommodation of military personnel, personnel of law enforcement agencies, civil defence personnel, evacuated population, and placement of military units, subdivisions, and institutions;
- 9. Conduct the evacuation of the population if there is a threat to their life or health, as well as material and cultural values, if there is a threat to their damage or destruction, according to the list approved by the Cabinet of Ministers of Ukraine. [4] *Regarding legal entities:*
- 1. Use the capacities and labour resources of enterprises, institutions, and organizations of all ownership forms for defence needs, change their working regime, make other changes in their production activities, as well as working conditions by the labour legislation;
- 2. Issue orders (directives) on the dismissal of managers of enterprises, institutions, and organizations without maintaining their wages for improper performance of duties determined by this Law, and orders (directives) on the appointment of performers of the duties of managers of the mentioned enterprises, institutions, and organizations during the period of the legal regime of martial law;
- 3. In case of violation of the requirements or failure to comply with the measures of the legal regime of martial law, confiscate electronic communication equipment, television, video, and audio equipment, computers, and, if necessary, other technical means of communication from enterprises, institutions, and organizations of all ownership forms, as well as from individual citizens;
- 4. Forcefully alienate property, including that which is in private or communal ownership, seize the property of state-owned enterprises, and state-owned economic associations for the needs of the state in the conditions of the legal regime of

martial law in the manner prescribed by law, and issue corresponding documents of the established form.

At the same time, if the value of the such property has not been previously compensated, its full value must be compensated subsequently in the manner determined by law.

After the cancellation of the legal regime of martial law, if the property that was forcibly alienated has been preserved, the former owner or their authorized person has the right to demand the return of such property through the courts. Additionally, the former owner of the forcibly alienated property may demand the provision of other property in exchange if possible. [5]

During the implementation of the legal regime of martial law, authorized bodies have the right to prohibit peaceful assemblies, demonstrations, marches, and other mass events, as well as to regulate the work of electronic communication networks and/or services providers, printing enterprises, publishers, broadcasting organizations, television and radio centres, and other enterprises, institutions, organizations, and cultural establishments and media, and to prohibit the transmission of information through computer networks.

In areas where hostilities are taking place, the introduction and implementation of such measures of the martial law regime are directly entrusted to the military command and military administrations.

Due to the imposition of martial law in Ukraine, during the period of the martial law regime, the constitutional rights and freedoms of individuals and citizens provided for in Articles 30-34, 38, 39, 41-44, and 53 of the Constitution of Ukraine will be restricted temporarily. Temporary restrictions on the rights and legitimate interests of legal entities to ensure the possibility of introducing and implementing measures of the martial law regime, provided for in the first part of Article 8 of the Law of Ukraine "On the legal regime of martial law" (paragraph 3 of the Decree of the President of Ukraine dated February 24, 2022 No. 64 "On the introduction of martial law in Ukraine"), may also be imposed. [2]

List of restrictions during martial law

Article 30 Everyone is guaranteed the inviolability of their dwelling.

Article 31 Everyone is guaranteed the privacy of their correspondence, telephone conversations, telegraph and other communications.

Article 32 No one may be subjected to interference in his private and family life, except when such interference is stipulated by the Constitution of Ukraine.

Article 33 Every person, legally staying in the territory of Ukraine is guaranteed freedom of movement, free choice of place of residence, and the right to freely leave the territory of Ukraine, except restrictions stipulated by law.

Article 34 Everyone is guaranteed the right to freedom of thought and speech, and the right to free expression of his views and beliefs.

Article 38 Citizens have the right to participate in the administration of state affairs, in All-Ukrainian and local referendums, freely elect and be elected to the bodies of State power and local self-government.

Article 39 Citizens have the right to assemble peacefully, without arms, and to hold meetings, rallies, processions and demonstrations, upon notifying the executive authorities or local self-government bodies in advance.

Article 41 Everyone has the right to own, use and dispose of his property, the results of his intellectual and creative activities.

Article 42 Everyone has the right to entrepreneurial activity not prohibited by law.

Article 43 Everyone has the right to work, including the possibility to earn a living by labour that he freely chooses or to which he freely agrees.

Article 44 Those who are employed have the right to strike to protect their economic and social interests.

Article 53 Everyone has the right to education. [1]

**Conclusion:** Thus, the Military Command, together with the other executive bodies and local self-government bodies, must ensure the measures and powers envisaged by the Law of Ukraine "On the Legal Regime of the Martial Law" necessary to ensure Ukraine's defence, public safety and state interests.

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#### PROTECTION OF CHILDREN'S RIGHTS UNDER MARTIAL LAW

During the war in our country, every Ukrainian child, without exception, in any case suffered violations of their legally enshrined rights. Even if the child is not physically harmed, the child has not been subjected to sexual violence, torture or other cruel, inhuman or degrading treatment or punishment, there is a violation of his fundamental rights. As a result of military aggression, every minor citizen of Ukraine has suffered violations of his basic rights enshrined in the Constitution of Ukraine and the norms of international law, such as: the right to have private life, the right to have healthcare, the right to have rest and leisure time, the right to have education and family. Therefore, it is important that the state adheres to international standards for the protection of children's rights in times of war. In particular, it is necessary: to ensure the ratification of the Statute of the International Criminal Court and to ensure the introduction of relevant changes to the Constitution of Ukraine, namely to Article 124; approve norms in the legislation of Ukraine that will clearly prohibit the recruitment and use of minors in armed conflicts; to make changes to the Law of Ukraine "On the Protection of Childhood", which must meet international standards. However, in the conditions of martial law, which has been introduced throughout the country, it is extremely difficult to implement the functions entrusted to the state to ensure the protection of children's rights.

One of the steps to ensure the protection of children's rights was the formation of the Coordination Headquarters for the Protection of Children's Rights in Martial Law. Resolution No. 302 of the Cabinet of Ministers of Ukraine entered into force on March 17, 2022. The coordination headquarters is a temporary consultative and advisory body of the Cabinet of Ministers of Ukraine, which was created to facilitate the coordination of activities of central and local bodies of executive power, other state bodies, local self-government bodies on issues of protection of children's rights under martial law. Thanks to the efforts of the representatives who were part of it, a significant amount of work was carried out, namely:

- agreed decisions were made regarding the definition of the tasks of state bodies involved in the implementation of the policy on the protection of children's rights;
- evacuation of children from dangerous areas and coordination of their safe transportation to places of temporary accommodation was carried out;
- coordinated the work of regional military administrations and local self-government bodies to prepare and organize safe places for temporary accommodation of evacuated children and meeting their needs;
- registration of children who left for the safe territory of Ukraine or outside of Ukraine is ensured.

Another significant step for the protection of children during martial law was the introduction of the nationwide program "The child is not alone". This program was

introduced by the Office of the President of Ukraine together with the United Nations Children's Fund UNICEF Ukraine and the Ministry of Social Policy. The program is a chatbot "The child is not alone" - a resource for helping children in wartime, the content of which can be found on the Internet. This resource contains a lot of useful information for people who are not familiar with how to protect the rights of children in martial law, namely:

- a number of norms and standards that form a legal framework for the protection of children's rights in conditions of armed conflict, consisting of Ukrainian legislation and norms of international law, are given;
- contacts of services and bodies for the protection and support of children are indicated depending on the situation (violation of children's rights, provision of psychological support to a child, etc.);
- the main questions and answers on the topic: "What to do and where to go if a child's rights have been violated in wartime" are covered.

Today, our state adequately implements the functions entrusted to it to ensure the protection of children's rights. At the same time, it is extremely difficult, therefore, in this difficult period for our country, every caring citizen of Ukraine should protect and realize the rights of the most unprotected category of people - children.

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### LEGAL CHANGES THAT SHOULD BE APPLIED IN UKRAINE AFTER THE WAR ENDS

Since February 24, 2022, Ukraine has been at war with the Russian Federation. Russians are destroying human lives, which is the greatest value. The destiny of thousands of people who could do a lot for the prosperity of our state is crippled. However, it gives us the impetus to move forward and achieve new successes.

The term war does not have a universally recognized meaning, although it has been going on for a long time. The situation in Ukraine does not leave anyone indifferent. This is the war of security with threats, of the past with the future. I am sure that after our victory we will value our lives and do everything to make them better for our descendants.

To assure security, prosperity and better life in our country, the Verkhovna Rada of Ukraine adopts laws. The laws must correspond to the situation that occurs on the territory of the state. These are the so-called legal changes.

The circumstances require amending the existing laws or creating new ones. For example, it would be appropriate to terminate the Agreement between the Government of Ukraine and the Government of the Russian Federation on scientific and technical cooperation. In fact, what kind of cooperation can be between our state and an aggressor country?

It is also necessary to protect the interests of innocent people whose homes were destroyed due to the armed aggression of the Russian Federation against Ukraine. In this case, changes should be made to the Budget Code of Ukraine; they should concern financing housing restoration.

And it is also worth exempting from payment for housing and communal services those persons (consumers) who lost their houses as a result of the armed aggression of the Russian Federation against Ukraine. That is, it is necessary to make changes to the Law of Ukraine "On Housing and Communal Services".

The government and parliament are working to develop mechanisms to compensate for losses incurred by citizens and businesses arising as a result of the armed aggression of the Russian Federation against Ukraine.

All persons whose property was damaged or destroyed as a result of hostilities, acts of terrorism, or sabotage caused by the military aggression of the Russian Federation have the right to compensation.

Also, persons who have suffered from the enemy's military aggression must be provided with all the means they need for rehabilitation. Not every person can purchase some things which they need, so the state should take care of it.

There must be changes to the Criminal Code of Ukraine and the Criminal Procedure Code of Ukraine regarding responsibility for the propaganda of the Russian neo-Nazi totalitarian regime, an act of aggression against Ukraine by the Russian Federation as a terrorist state.

The Russian Federation is committing genocide in Ukraine and should be responsible for its actions.

There must be no pro-Russian political parties in our government. It has had quite an impact.

And also, in my opinion, it is necessary to forcibly remove from Ukraine property of the Russian Federation, as well as persons who have citizenship of the Russian Federation but have been living on the territory of Ukraine for a long time (residents).

These are far from all the legal changes that should be applied in Ukraine after the war ends; it is only part of them. Our state cares about society that is why it will do everything so that citizens can continue living freely.

Because of the aggressor, we cannot live and work freely, and our rights are limited during martial law, but our nation is invincible. The Ukrainian people will not surrender under any conditions. Ukrainian society is united like never before. Every Ukrainian will help to do everything in his power to win, and after our victory, we will do everything to bring the Russian Federation to justice.

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#### MECHANISM OF THE STATE: CONCEPT AND STRUCTURE

"Mechanism of the state: concept, structure" remains relevant today, as it concerns the organization and functioning of the state system, which is a key factor in ensuring the efficiency and stability of any country.

The structure of the state mechanism includes such components as legislative, executive and judicial power, as well as other state bodies and structures responsible for ensuring law and order, national security, economic development, social protection of the population and other aspects of society.

The current events in Ukraine and in the world once again demonstrate the importance of the rule of law and the importance of the state mechanism for ensuring it. Therefore, understanding the concept and structure of the mechanism of the state remains important for students, politicians, public activists and citizens in general.

The mechanism of the state is a system of interconnected bodies, structures and procedures that ensure the functioning of the state and its performance of its functions[1].

The main concepts related to the mechanism of the state include:

1. Power - the ability to influence decision-making and exercise control over their implementation within the territory in which the state operates.

- 2. The Constitution is the basic law of the state, which defines the rights and obligations of citizens, the principles of the functioning of the state and its structure.
- 3. Legitimacy citizens' trust in the government and its legality, which gives the right to power.
- 4. Legislative power authorities that adopt laws regulating relations in the state.
- 5. Executive power bodies that ensure the implementation of laws and make decisions related to state management.
- 6. Judicial power bodies that consider cases and make decisions in accordance with laws.
- 7. Democracy is a form of government in which power belongs to citizens who elect their representatives to government bodies.
- 8. Federalism is a form of government in which power is divided between different levels of government central and local authorities.
- 9. Checks and balances of power a system that ensures balance between the legislative, executive and judicial powers and prevents abuse of power.

The functions of the state are the main directions of its activity in the management of society, including the mechanism of state influence on the development of social processes, in which its essence and social purpose are manifested[2]. So, it is possible to define the main functions of any state:

- 1. Ensuring national security and defense;
- 2. Protection of the rights and freedoms of citizens;
- 3. Ensuring law and order and compliance with the law;
- 4. Ensuring economic development and social welfare of the population;
- 5. Organization and control over the functioning of state institutions and services;
- 6. Ensuring interaction with other countries and international organizations.

We can make the following conclusions that the main mechanism of the state is the management system, which ensures the exercise of power and controls the actions of state bodies. This system includes various institutions, such as the legislative, executive and judicial authorities, as well as mechanisms for the realization of the rights and freedoms of citizens. In addition, an important mechanism of the state is the mechanism of social protection, such as the system of health care, education and social security. They ensure the maximum standard of living for citizens and contribute to social stability in the state.

Therefore, the main mechanism of the state is the management system, which ensures the functioning of legislation and other mechanisms that regulate life in the state, as well as ensures the social security of citizens.

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#### LEGAL REGULATION OF NEURAL NETWORKS

The main goal of our research is not only to explain the concept of neural networks and their functioning but also to analyze the regulation of these mechanisms from a legal point of view.

In the course of the research, we pay special attention to how international law affects the regulation of neural networks and provide examples of the integration of these legal norms into our legislation.

Neural networks can find their application in business, research, and education, as well as in other areas where the artificial intelligence is consistent with ethical and moral principles. Neural networks can be in various areas where automation or optimization of work processes is required, as well as in industries related to text and speech data processing. As an example, they can be applied in the following areas:

- 1. Communication with users: to answer questions and provide information to users;
- 2. Decision support: to analyze data and make recommendations in a particular field;
  - 3. Editing and preparation of texts;
- 4. Training and education: for training and education support, such as creating tests, knowledge control, and learning materials.
- 5. Medicine and science: for medical and other research when the analysis and processing of large amounts of data are required.
- 6. Rebuilding our state: if used correctly, neural networks can accelerate the rebuilding of the state in the economy and other areas to solve some issues, such as logistics.

That is, neural networks can be trained on large amounts of data and used for a variety of tasks, making them a very powerful tool for solving complex problems.

A neural network is a mathematical model that consists of connected neurons to solve a specific task. Neural networks are created based on the functioning of the biological brain, where they can receive, process, and analyze information.

Each neuron in a neural network receives input data, processes it using connections with other neurons, and produces output data. It allows a neural network to perform complex operations with data.

Therefore, neural networks cannot be equated to computer programs, which are regulated by the legislation of Ukraine. According to the Law of Ukraine "On Copyright and Related Rights", computer programs are subject to copyright. However, neural networks, which are complex mathematical models, are not currently regulated by the relevant legislative acts as a separate type of intellectual property.

The law defines copyright as the right to the result of creative work expressed in an original work. A computer program is considered a work from the moment it is created if it is original and is an expression of the intellectual creativity of its author. Neural networks may also contain copyrighted elements, so they are protected by copyright. In case of disputes regarding the legal protection of neural networks, additional research and consultations with legal and information technology experts are required. Legislation may regulate some aspects of the operation and use of neural networks, particularly concerning the content they generate if it contains the intellectual property of others.

In international law, the laws of other countries may require companies, such as Starlink, that create and use such technologies to comply with some rules and standards to ensure the safe and ethical use of such technologies. In addition, like any other Internet service, neural networks are subject to cybersecurity laws that aim to prevent cyberattacks, data theft, and other online crimes.

At the international level, the use of neural networks is regulated in different ways. One of them is legislative regulation, which requires compliance with certain standards and procedures. Such regulations include the Budapest Convention on Cybercrime of June 2001, the General European Convention for the Protection of Personal Data, and others.

There are also some initiatives and standards on the ethical use of artificial intelligence at the international level. For example, the European Commission's Artificial Intelligence Guidelines provide guidance on the ethical, legal, and technical use of artificial intelligence.

In addition, on an international scale, some organizations, such as the United Nations, are considering the ethical use of artificial intelligence and developing recommendations for its regulation.

The European Commission's Recommendations on Artificial Intelligence were published in April 2018 and guide on the ethical, legal and technical use of artificial intelligence. These guidelines were developed with the participation of a group of experts on artificial intelligence, including representatives of the public, academia and industry. The European Commission's recommendations consist of key principles that must be observed when using artificial intelligence:

Human controllability and safety - artificial intelligence should provide control over the technology and ensure safety for humans.

Regulation - artificial intelligence must comply with laws and regulations.

Ensuring privacy and personal data protection - artificial intelligence must ensure the protection of users' personal data.

Ethics - artificial intelligence should adhere to ethical principles and promote human well-being.

Work and society - artificial intelligence should contribute to work and society without harming people.

The guidelines also include recommendations on how companies should use artificial intelligence in various areas, including health, transportation, the legal system, finance, and energy. The Commission advises companies to assess the impact on

human rights and freedoms, as well as to evaluate the possible risks of using artificial intelligence in various areas.

The European Commission's recommendations on artificial intelligence are not legally binding, but they may become the basis for future legislative and regulatory initiatives. Currently, the European Commission is actively working on the development of legislation on artificial intelligence, which will be based on the principles of the recommendation.

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#### INFLIENCE OF THE TOTALITARIAN REGIME ON THE STATE

The aim of the study was to investigate the influence of totalitarian regime on the state and nation.

A totalitarian regime is a form of political regime in which the state has absolute control over the lives of its citizens, including the economic, cultural, religious, and ideological spheres. This regime seeks to establish complete unity and lead to the dominant control of the state over citizens, including their thoughts, feelings, behavior and cultural traditions.

Totalirism is flight, a system that seeks to establish complete (totalitarian) control over the society and citizens. The term comes from Italian. totalitarian is something that is completely covered. Origin of the term. For the first time, the term "totalitarianism" was introduced into circulation by a member of Italy. parliament and journalist J. Amendola 1923 for the purpose of critical evaluation of flights[1].

In totalitarian regimes, there is often one party that has complete power and the government tries to control all aspects of the nation's life, including the media and education.

Totalitarian regimes can use mass propaganda and information technology to shape the opinions and beliefs of the population.

Regimes are often accompanied by human rights violations and political repression. In a totalitarian regime, opponents of the government may be shot or imprisoned, and their rights to freedom of speech, assembly, and religion may be restricted or denied.

Some examples of totalitarian regimes in the world include Nazi Germany during World War II, the USSR during Stalin's rule, the People's Republic of China during the Cultural Revolution, and Cambodia during Pol Pot's regime.

In totalitarian regimes, in addition to political repression, economic discrimination and depletion of the nation's resources are also often used. The authorities can seize property from citizens, aimed at supporting the state, or introduce restrictions on entrepreneurship and trade, which leads to a decrease in economic growth and deterioration of the population's life.

In totalitarian regimes, the government may have an aggressive foreign policy and a strategy of violent expansion of its territories, using war as a means of consolidating its power. This can lead to large human casualties and the destruction of the material resources of the country that falls under the influence of such a regime.

Under a totalitarian regime, control over information and mass communication is another important element. Usually, this leads to censorship and manipulation of information, which allows the authorities to control public opinion and distort reality in their favor.

A totalitarian regime can use nationalist, class, racist and other ideological motives to manipulate national consciousness and divide the nation into groups. This can lead to violence and conflict between different ethnic, social and political groups in the country.

In addition, a totalitarian regime can cause environmental disasters and other negative consequences for the environment and natural resources. For example, the government can force the population into massive projects, such as industrial exploitation or the development of national parks, which leads to the destruction of wildlife and a decrease in the standard of living of the population.

The problem of the essence of such political regimes was considered in numerous works of researchers. H. Arendt, M. Dracht, M. Curtis, K. Friedrich, Z. Brzezinski, R. Aron, Zh. Zhelev, T. Adorno, and others are among the authors of works in which the features of both totalitarianism and authoritarianism are given[2].

In general, totalitarianism has a negative effect on the country and the nation as a whole. It leads to the restriction of freedom and human rights, the destruction of democracy, the spiritual and social degradation of the nation, affects the stability of the world order and threatens the peaceful coexistence of various nations and ethnic groups. Therefore, it is important to remember the danger of totalitarian regimes and protect your rights and freedoms.

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#### PROTECTION OF HUMAN RIGHTS IN MARTIAL LAW

**Introduction** Martial law affects the life of every Ukrainian as it entails certain restrictions on rights and freedoms provided for in legal acts. Additionally, it should be noted that the deprivation of certain rights (for example, the right to life) is due to the violation of the rules of warfare, and in such cases, it is necessary to contact certain organisations and establishments that can solve your problems.

**The main objective** is to study the features of the protection of human rights in the legal martial law regime since there are currently many restrictions provided for by this regime.

According to Article 1 of the Law of Ukraine "On the legal regime of martial law," martial law is a special legal regime that is imposed in Ukraine or certain areas in the event of armed aggression or threat of attack, danger to Ukraine's independence, territorial integrity, and authorise relevant state authorities, military command, military administrations, and local self-government bodies with the necessary powers to prevent threats, repel armed aggression, ensure national security, eliminate threats to Ukraine's independence, territorial integrity, and temporarily, due to the threat, limit constitutional rights and freedoms of humans and citizens, as well as rights and legitimate interests of legal entities, specifying the duration of these limitations [2, Article 1].

Human rights and the European Convention on Human Rights continue to operate in wartime, and therefore human rights remain relevant. States are obliged not to violate human rights during the war and armed conflict. Everyone can insist on the observance of his rights and can appeal to the European Court of Human Rights with a lawsuit about a possible violation of state obligations in war.

Under the conditions of war, certain rights are also not subject to violation, including the right to equality and respect for human dignity, the right to personal inviolability, the right to marry, the right to citizenship, the right to a fair trial, legal

assistance, and protection, the right to housing, part 2 of Article 64 of the Constitution of Ukraine [1, Article 64].

Ukrainians who have suffered from Russian aggression and want compensation from the European Court of Human Rights have four months to file a claim. The Court may award both moral and material damages depending on the circumstances of the case [3].

It should also be noted that individuals whose rights and freedoms have been violated can seek protection not only from the European Court of Human Rights but also from the following international institutions:

- International Criminal Court;
- United Nations:
- o Filing a complaint with the United Nations Human Rights Council;
- o Special procedures of the Human Rights Council (independent human rights experts);
- O Submitting complaints to the treaty bodies of the United Nations (there are currently 8 court bodies specialized in addressing specific human rights issues) [4].

**Conclusion** Everyone can protect his rights in time of war by appealing to international institutions for violation of their rights since a certain set of rights is provided by international conventions and treaties.

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### THEORETICAL AND METHODOLOGICAL PRINCIPLES OF STATE HISTORICAL POLICY RESEARCH: THE EXPERIENCE OF UKRAINE AND POLAND

The relevance of the work lies in the fact that recently Ukrainian-Polish relations are at the stage of transformation and active development. This requires the study of their dynamics with the help of event analysis, which allows us to show the nature, frequency and specificity of the actions of the Polish and Ukrainian sides. Turning to event analysis actualizes the issue of choosing a scale for measuring conflict. Therefore, the purpose of the work is a description of the main stages of the formation of historical politics in Ukraine and Poland, a demonstration of event analysis as one of the most effective methods of problem analysis, an analysis of conflict scales appearing in scientific literature and the selection of a scale possible for use in describing the actions of Polish-Ukrainian authorities.

- S. Sergienko singles out the following main stages of historical politics in Ukraine:1) 1991-2004: nationalization of the public sphere, symbols and educational system with the dominance of the Ukrainian national narrative;
- 2) 2005 early 2010: radical revision of memory policy in the direction of nationalism, anti-communism, creation of the Institute of National Memory, "places of memory", construction of memorials, commemorative practices; 3) from the beginning of 2010 to 2014, the combination of a national-patriotic version of Ukrainian history with a partially symbolic rehabilitation of the Soviet past [1]. The history of the formation of historical politics in Poland had similar features and chronological periodization. In particular, the Polish researcher Władysław Masiaż singles out the following stages of the formation of the historical policy of Poland:
- 1) 1989-1995 are the years when after the restoration of sovereignty and freedom of speech, there was an explosion in the media about the so-called white spots in recent history (Katynia and mass deportations of Polish citizens in 1939-1941 and 1944-1946).
  - 2) 1995-2000 at that time the period of relative stabilization came

interest in history, which allowed professional historians, political scientists, sociologists, museologists, journalists and people interested in the past to conduct and publish the results of their research.

3) 2001-2005 –after the opening of the Institute of National Remembrance in 2001, there was a revival of, according to Dudek, the "conservative model" of historical politics. This process began after the victory of the political party "Law and Justice" and the Kaczynski brothers in the 2005 elections [2].

Analyzing the issue of the historical policy of Poland in the external aspect, it is necessary to point out the supranational dimension of this phenomenon. In the literature, there is even a concept of cross-border politics of memory. Its presence can

be seen in international disputes, the creation of national identity, and the formation of the image of the state and its nation. Therefore, it is one of the elements that make up the image of not only the internal, but also the external policy of this center of power. Therefore, the historical policy of Poland can be considered as one of the tools for promoting the expected image of the state, the nation [3].

Event analysis as a method of research was created in 1960. Its essence lies in systematically formalizing the presentation of interactions between policy makers within a certain scale, which reflects the state of conflict / peace processes. The first systematic presentation of his methodology and tools is contained in the work of the American scientist C. McLeland, which, according to A. Akhremenka, can be considered the founder of the given direction. Event analysis uses the WEIS (World Event Interaction Survey), Goldstein, Azar and Olzak scales. Coding system WEIS was developed by C. McLeand.

The WEIS coding scheme classifies events into 63 specific categories; these are organized into 22 general categories such as "Consult", "Reward", "Protest" and "Force". Examples of WEIS event codes: 11. Reject: 111 Turn down proposal; reject protest demand; threat 112-Refuse; oppose; refuse to allow; 12. Accuse 121 Charge, criticize, blame, disapprove; 122 Denounce, denigrate, abuse; 13. Protest 131 Make complaint (not formal) 132 Make formal complaint or protest, 18. Demonstrate, 181 Non-military demonstration; walk out on 182 Armed force mobilization, exercise and/or display [4, p. 10].

The classic scale that transforms the values of codes into interval values is the Goldstein scale, which allows you to work with WEIs encodings at an interval level and apply complex statistical methods to work with event data [5].

Edward E. Azar, however, used a scaling approach to events study (where he assessed the intensity of the actions of specific nations when they had interactions with each another). Azar's 13-point measurement scale is based on evaluating data within the context of "... who does what to whom and/or with whom and when" and the scale rated from low to high the violence intensity between two nations. It is this measurement of intensity of violence that this thesis will concentrate on and in particular the use of Edward Azar's 13-point interval scaling approach for national event prediction [6, p. 15]. S. Olzak in the research "The Global Dynamics of Racial and Ethnic Mobilization" outlines the intensity of non-violent actions on a five-point scale [7, p. 80]. The scale of violent actions for Olzak: 1. Acts of sabotage. 2. 1-2 clashes. 3. Fighting in a limited area. 4. Collisions in different territories. 5. Localized efforts to achieve power [8]. Consequently, different types of scales are used in political research. The most well-known are WEIS (World Event Interaction Survey), Goldstein, Azar and Olzak. The Goldstein scale translates the values of codes into interval values. The Azar 13-point measurement scale is based on data evaluation in the context of "who does, who and / or with whom and when", and Olak defines the intensity of violent and non-violent actions on a five-point scale.

Comparing different scales for the event analysis it can be argued that in order to study the activity of the parliaments of Ukraine and Poland in shaping the historical policy concerning our countries, it is necessary to apply its own scale of events. This

will make it possible to simplify the coding system and make the charts more simple and accessible for analysis.

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# ENSURING THE RIGHT TO EDUCATION DURING ACTIVE MILITARY OPERATIONS IN UKRAINE

**Introduction** Ukraine has imposed martial law that brings about certain peculiarities for those staying in the zone of active military operations and trying to gain their education. This situation is challenging for educators and students, and these social relations need reforming to find the necessary balance.

The main goal is to analyze the accessibility of the right to education for individuals who seek to acquire quality knowledge and education, as well as to examine the issue of the right to education in the state of war in territories where active military operations are taking place.

According to Article 53 of the Constitution of Ukraine, everyone has the right to education [1, Article 53].

The functioning of the education system in the state of war is distinguished by an intensive search for new approaches to teaching, innovative forms of organizing the educational process, effective pedagogical and information technologies. Therefore, supporting the active implementation of innovations in the educational sector during the war has become one of the key areas of work for the Ministry of Education and Science of Ukraine and its subdivisions [2, p. 7].

Education in the state of martial law requires clear, prompt, and timely decisions, accessible explanations, the development of new normative and legislative acts, and amendments to existing ones [3].

The educational process can be conducted in several forms in Ukraine: blended, face-to-face, and distance learning. The form can change depending on the situation in the region.

In the territories where active hostilities are taking place, it is recommended to conduct classes in a distance mode, i.e. this form of learning is introduced in educational institutions in the territory of hostilities and temporarily occupied territories. This is established by the order (directive) of the founder of the educational institution, in agreement with the head of the administration (without the mandatory conclusion of a written contract for remote work, the main condition being the timely completion of tasks) [4].

That is why state policy on the digitalization of education and ensuring the quality of distance learning is actively developing:

- Introducing electronic document management and reporting in educational institutions and education management bodies, and promoting the development and connection of educational institutions to the Automated Information Complex of Educational Management (as stated by educational institution leaders and teachers);
- Supporting the expansion of free state electronic journals and diaries, as well as private services (the education ombudsman receives complaints from parents about collecting fees for using electronic diaries, which is problematic and unacceptable in the context of parents' financial difficulties);
- Continuing the development of video lessons for the All-Ukrainian School Online, developing lessons for grades 1-4, and continuing work on the development of all topics and subjects for grades 5-11 (parents, teachers, and students have requested the availability of all classes, subjects, and topics, as this will facilitate distance learning and compensate for educational losses);
- Providing participants in the educational process with access to textbooks for the New Ukrainian School in PDF format [5].

In conclusion, the urgent task nowadays is to adjust and plan the educational process clearly to be able to exercise the right to education for even those individuals who are in the territory of Ukraine where active combat operations are being carried out.

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# PROHIBITIONS AND RESTRICTIONS ON HUMAN RIGHTS AND FREEDOMS DURING MARTIAL LAW

According to Article 1 of the Law of Ukraine "On the Legal Regime of Martial Law", martial law is a special legal regime introduced in Ukraine or in some of its localities in the event of armed aggression or threat of attack, danger to the state independence of Ukraine, its territorial integrity; it provides the state authorities, military command, military administrations and local self-government bodies with powers necessary to avert the threat, repulse armed aggression and ensure national security, eliminate the threat of danger to the state independence of Ukraine, its territorial integrity, as well as imposes temporary, threat-induced restrictions of constitutional rights, human and citizen freedoms, the rights and legitimate interests of legal entities with an indication of the period of validity of these restrictions. The legal basis for the introduction of martial law is the Constitution of Ukraine, the Law of Ukraine "On the Legal Regime of Martial Law" and the decree of the President of Ukraine on the introduction of martial law in Ukraine or in some of its localities approved by the Parliament of Ukraine. In connection with the introduction of martial law in Ukraine, the constitutional rights and freedoms of a person and a citizen, provided in Articles 30 - 34, 38, 39, 41 - 44, 53 of the Constitution of Ukraine, may be temporarily limited for the period of the legal regime of martial law; temporary

restrictions on the rights and legal interests of legal entities within the limits and to the extent necessary to ensure the possibility of introducing and implementing the measures of the legal regime of martial law, which are provided by the first part of Article 8 of the Law of Ukraine "On the Legal Regime of Martial Law", may also be introduced.

According to Article 8 of the Law of Ukraine "On the Legal Regime of Martial Law", in Ukraine or in some of its localities, where martial law has been introduced, the military command together with military administrations (if they are formed) may implement the following measures of the legal regime of martial law:

- 1. to establish (strengthen) the protection of objects of state importance, objects of state importance of the national transport system of Ukraine, and objects that ensure the vital activities of the population and to introduce a special mode of their operation;
- 2. to introduce labor obligation for able-bodied persons who are not engaged in the defense sphere and the sphere of ensuring the livelihood of the population and are not reserved for enterprises, institutions or organizations during the period of martial law for the purpose of performing works of a defensive nature, as well as liquidation of the consequences of emergency situations, which arose during the period of martial law. Under martial law, such persons may be involved in socially beneficial works, which are performed to meet the needs of the Armed Forces of Ukraine, other military formations, law enforcement agencies and civil defense forces ensuring the functioning of the national economy and life support system and do not require, as a rule, special professional training of persons;
- 3. to use the capacities and labor resources of enterprises, institutions and organizations of all forms of ownership for the needs of defense, change their mode of operation, carry out other changes in production activity and working conditions in accordance with labor legislation;
- 4. forcibly expropriate property that is in private or communal ownership, seize property of state enterprises, state economic associations for the needs of the state in the conditions of the legal regime of martial law in accordance with the procedure established by law and issue relevant documents of the established model;
- 5. to introduce a curfew in accordance with the procedure determined by the Cabinet of Ministers of Ukraine (prohibition of being on the streets and other public places during a certain period of the day without specially issued passes and certificates), as well as to establish a special light masking regime;
- 6. to establish a special entry and exit regime, limit the freedom of movement of citizens, foreigners and stateless persons as well as vehicles in accordance with the procedure determined by the Cabinet of Ministers of Ukraine;
- 7. to check the documents of persons in accordance with the procedure determined by the Cabinet of Ministers of Ukraine and, in the case of need, to conduct an inspection of things, vehicles, baggage and cargo, office premises and citizens' homes, except for the restrictions established by the Constitution of Ukraine;
- 8. to prohibit the holding of peaceful meetings, rallies, marches and demonstrations, other mass events;

- 9. to raise, in accordance with the procedure established by the Constitution and laws of Ukraine, the issue of banning the activities of political parties and public associations if it is aimed at eliminating the independence of Ukraine, changing the constitutional order by violent means, violating the sovereignty and territorial integrity of the state, undermining its security, illegal seizure of state authorities, propaganda of war, violence, incitement of inter-ethnic, racial, religious enmity, encroachment on human rights and freedoms, public health;
- 10. to establish, in accordance with the procedure determined by the Cabinet of Ministers of Ukraine, a ban or restriction on the choice of the place of stay or the place of residence of persons in the territory where martial law is in force;
- 11. to regulate, in accordance with the procedure determined by the Cabinet of Ministers of Ukraine, the work of suppliers of electronic communication networks and/or services, printing enterprises, publishing houses, television and radio organizations, television and radio centers and other enterprises, organizations and institutions of culture and mass media, as well as use local radio stations, printing houses for military needs and for conducting explanatory work among the troops and the population; to prohibit the operation of receiving and transmitting radio stations for personal and collective use and the transmission of information via computer networks;
- 12. in case of violation of the requirements or non-fulfillment of measures of the legal regime of martial law, to seize electronic communication equipment, television, video and audio equipment, computers, as well as, if necessary, other technical means of communication from enterprises, institutions and organizations of all forms of ownership, individual citizens;
- 13. to prohibit, in accordance with the procedure determined by the Cabinet of Ministers of Ukraine, the trade in weapons, powerful chemical and poisonous substances, as well as alcoholic beverages and alcohol-based substances;
- 14.to establish a special regime in the field of production and sale of medicinal products containing narcotic drugs, psychotropic substances and precursors, other potent substances, the list of which is determined by the Cabinet of Ministers of Ukraine;
- 15. to seize educational and combat equipment, explosives, radioactive substances and materials, potent chemical and poisonous substances from enterprises, institutions and organizations;
- 16. to prohibit citizens who are on military or special registration at the Ministry of Defense of Ukraine, the Security Service of Ukraine or the Foreign Intelligence Service of Ukraine to change their place of residence (place of stay) without the permission of the military commissar or the head of the relevant body of the Security Service of Ukraine or the Foreign Intelligence Service of Ukraine; to limit alternative (non-military) service;

17.to establish for individuals and legal entities the military housing obligation for the accommodation of military personnel, members of the rank and file of law enforcement agencies, personnel of the Civil Protection Service, evacuated population and the accommodation of military units, subdivisions and institutions;

- 18. to establish the procedure for using the fund of protective structures of civil protection;
  - 19. to carry out evacuation of the population;
- 20. to introduce, if necessary, in accordance with the procedure determined by the Cabinet of Ministers of Ukraine, the standardized supply of basic food and non-food products to the population;
  - 21. take additional measures to strengthen the protection of state secrets;
- 22. to intern (forcibly resettle) citizens of a foreign state that threatens to attack or commits aggression against Ukraine;
- 23. to carry out, in accordance with the procedure determined by the Cabinet of Ministers of Ukraine, the mandatory evacuation of detained persons who are in temporary detention centers, evacuation of suspects, accused persons, in respect of whom a preventive measure has been applied detention, and who are in pre-trial detention centers, as well as evacuation of convicted persons serving sentences such as arrest, restriction of liberty, imprisonment for a term and life imprisonment from penitentiary institutions located in areas close to areas where hostilities are taking place to relevant institutions located in a safe area.

Temporary restrictions on the rights and legal interests of legal entities may also be introduced within the limits and scope necessary to ensure the possibility of introducing and implementing measures of the legal regime of martial law. In addition, the legislation of Ukraine provides for a whole list of rights that cannot be restricted, even in such difficult circumstances. According to Art.64 of the Constitution of Ukraine, the following rights and freedoms provided for by the Basic Law may not be limited under conditions of war or emergency: equality of constitutional rights and freedoms and equality before the law; the right to citizenship and to change citizenship; the right to life; the right to respect for dignity; the right to freedom and personal integrity; the right to send individual or collective written appeals and to receive a reasoned response to them; the right to housing; the right to have equal rights and obligations of spouses in marriage and family; equal rights of children regardless of origin, as well as whether they were born in or out of marriage; the right to judicial protection of human and citizen rights and freedoms; the right to compensation at the expense of the state or local self-government bodies for material and moral damage; the right to know one's rights and obligations; guarantee that laws and other regulatory acts do not have retroactive effect in time, except when they mitigate or eliminate the liability of a person; the right to legal aid; the right not to comply with clearly criminal commands or orders; not to be twice brought to legal responsibility of the same type for the same offense; presumption of innocence; a guarantee that a person is not liable for refusing to testify or explain about himself, family members or close relatives, whose circle is defined by law.

At the same time, the legislation of Ukraine provides for the possibility of limiting the rights and freedoms of citizens during the period of martial law only to the extent necessary to ensure the defense of the country and the security of the state, and within the limits required by the urgency of the situation. The measures adopted in this regard, taking into account international legal norms, should not cause any

discrimination of individuals or population groups exclusively on the basis of gender, race, nationality, language, origin, property and position, place of residence, relationship to religion, beliefs, affiliation to public associations, as well as on other grounds.

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#### COMPENSATION FOR DAMAGES CAUSED BY THE WAR

As a result of Russia's hostilities against Ukraine, enormous damage has been caused to the Ukrainian people. The victims are both citizens and businesses, including state-owned enterprises and the environment as well. At the moment, the war is not over yet, so it is difficult to calculate the final losses, but it should be understood that we are talking about trillions of dollars in direct losses, not including indirect ones and compensation for moral suffering.

It is worth noting that the mechanisms for compensation are still under development. In response to Russia's military aggression, the National Council for the Recovery of Ukraine from the War was established on April 21, 2022. This is an advisory body under the President of Ukraine aimed at the effective operation and recovery of Ukraine in the war and postwar periods. In addition, the Ministry of Justice of Ukraine is developing mechanisms for compensation for the damage caused.

Since the start of Russian aggression, Ukraine has been closely cooperating with the OSCE, the UN and the UNEP. Together with them, we are developing methods that are consistent with international principles and approaches. The aggressor country, namely the Russian Federation, should definitely reimburse the costs, and it is only a matter of time.

Our partners have already been dealing with the issue. During the 11 months of the war, the assets of the Central Bank of the Russian Federation were frozen in the amount of \$350 billion. Some estimates suggest that the frozen assets of Russian officials and businesses that sponsored the war in Ukraine amount to \$1 trillion, although the figure is still under assessment..

Despite the banking operations on freezing the assets, these funds still cannot be used to help Ukraine. The reason for this is the lack of clear legal grounds for simply seizing Russian bank assets and redirecting them to Ukraine. Amendments to the laws of different countries are already being developed to solve the problem. We should understand that amending legislation is not a quick process, because the very development of amendments requires dealing with large amounts of information and the process of adoption and approval can take years.

It is obvious that the frozen funds will never return to their previous owner. And the question of when these cash receipts will be in Ukraine is open.

At this stage of the war, we should not count on compensation and reparations from russia. But we should already consider possible options for their recovery. Such aggressive actions against other states cannot be justified and remain unpunished. The aggressor country must pay in full so that other countries understand the price of aggression and its consequences. The money paid will not heal the wounds of the Ukrainian people and will by no means be a reason for forgiveness, but it will allow us to rebuild the country for our descendants faster and provide them with a better life.

Financial support from Western partners is also worth mentioning. Countries in Europe, America and other parts of the world provide Ukraine not only with weapons but also make contributions to our country's budget. Thanks to this support, government agencies continue their functioning, and salaries are paid to the military, doctors, teachers, and other equally important employees.

As a result, from February 24 to December 14, Ukraine's budget received \$28.1 billion from international partners, according to the report of the Center for Economic Strategies. Approximately UAH 12 billion of these funds are grants.

International projects aimed at restoring social, critical, and industrial infrastructure have already been launched in Ukraine. The following countries will patronize the restoration of Ukrainian regions and cities affected by the war:



Italy - Rivne; Germany - Chernihiv; Canada - Sumy; USA and Turkey - Kharkiv; Czech Republic, Finland and Sweden - Luhansk; Belgium - Mykolaiv; Sweden and the Netherlands - Kherson; Switzerland - Odesa; Norway - Kirovohrad region; Latvia - Zaporizhzhia; Poland and Italy - Donetsk.

Patronage was approved at the International Conference in Lugano The recovery plan for Ukraine will be divided into three main stages:

- 1. immediate restoration of critical infrastructure;
- 2. restoration of schools and hospitals after the end of hostilities, construction of temporary housing;

3. long-term transformation in various sectors.

Confiscated Russian assets should become the main source of Ukraine's reconstruction.

The list of countries presented above is not final and may be updated. In addition, there are many voluntary initiatives from businesses and countries that are not on the list. Such initiatives are usually more targeted and related to a specific industry, settlement, etc. For example, the restoration of a road bridge across the Desna River in Chernihiv is funded by the Italian government, but the bridge structures are manufactured and provided by the French company Matière.

On January 12, 2023, the "Reconstruction of Ukraine" direction of the UNITED24 fundraising platform was presented in Irpin. Within its framework, 18 houses in Kyiv region will be the first to be restored: in Irpin, Borodyanka, Hostomel, as well as in the villages of Buzove and Myla. It will give an opportunity for 4,237 Ukrainians to return to their homes. The total amount needed to restore the houses is UAH 719 million. Thanks to UNITED24 donors from 110 countries, more than UAH 504 million has already been raised.

When it comes to specific reimbursements to individuals and legal entities, you should have no illusions about the timing. To be honest, in the near future you need to rely on your own strength, but in order to receive compensation in the future, you should take the following steps:

- 1. Fully document and describe the damage caused
- Ensuring the safety of documents
- Fixing the circumstances by the authorized bodies
- Independent fixation of the state of the property
- Drawing up an inspection report
- Obtaining testimony from witnesses and other evidence
- Preservation of the evidence obtained
- 2. Initiate and support criminal proceedings in Ukraine
- 3. Appeal to the prosecutor of the International Criminal Court
- 4. Submit applications to the created online resources

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## Session work № 3

# CURRENT RESEARCH IN THE FIELD OF ECONOMICS

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### THE ESSENCE OF EXPERIENCE MANAGEMENT UNDER CONTEMPORARY MANAGEMENT CONDITIONS

Given the over-production of commodities on the world market, the problem of choice becomes of primary importance for the consumer. In order to achieve high results, the business needs not only to produce a high-quality product at an affordable price but also to spiritually satisfy the consumer, giving the product extra consumer value.

The focus of attention is increasingly shifting from the consumer qualities of the product and its price to the formation of the most positive impressions from the process itself of the consumer's interaction with the brand. It is the customer experience that increasingly determines customer loyalty and, accordingly, brand competitiveness. This approach to doing business forms a new concept – managing the client's experience.

Customer experience management is a relatively new concept in management and is still in its development. Customer experience management was formed under the influence of the spread of the "experience economy" and as a result of the integration and evolutionary development of such concepts as customer orientation, relationship marketing, customer relationship management (CRM), and other marketing concepts aimed at interaction with the customer.

Customer experience management is a fundamental basis for effective marketing management and the formation of customer-oriented management, which involves building an ongoing process of effective interaction with the customer at all touchpoints. The maximum focus on meeting consumer needs, the formation of loyalty, and long-term partnership with the company are key factors in setting up a client-oriented business.

Customer experience can be viewed in two ways: as customers' feelings as a result of product consumption processes and as responses to managerial stimuli. Bernd Schmitt identified the key task of marketing as creating a "valuable customer"

experience". In his study of experiential marketing, he distinguishes five types of consumer experience: sensory (feeling), affective (feeling), cognitive (thinking), physical (action), and social (relationship) [1].

That is, customer experience is a consumer's response to a direct or indirect interaction with a company as a result of purchase, operation, service, or prior awareness of a product, including advertising and reviews.

From the customer's point of view relationship management, customer experience is the subjective impressions that arise in a customer during and after interacting with a company at all touchpoints. Customer experience can be positive, negative, or neutral. When analyzing the customer experience, a neutral experience is mostly defined as a negative form of interaction with the company. To build effective interaction with the client and create a positive experience, the concept of customer experience management (CEM) is used. Customer experience management helps you connect with the customer and identify their needs, values, and experiences.

Customer experience management is defined as a purposeful and ongoing process of implementing a set of activities aimed at studying and improving the customer experience in order to establish and develop a long-term partnership with the company.

Sytnyk N. I. notes that customer experience management organizes and puts in order the process of collecting, analyzing, and responding to customer feedback, in order to subsequently move to an active influence on customer experience at all stages of interaction with them [2]. That is, customer experience management is aimed at forming a strategy focused on improving impressions of goods and services at all touchpoints with the consumer.

Customer experience management is based on the management of the consumer's general impression of the company, i.e. the emotions and feelings that arise in the customer in the process of getting to know, purchasing, and using the company's products or services [3].

The value of a positive customer experience for a company lies in the fact that it is the basis of customer loyalty and, as a result, in the desire to keep on cooperation, willingness to recommend the brand to others, try new products, etc., which directly affects the company's income.

Thus, customer experience management is a complex activity aimed at improving the experience of interacting with customers, increasing their level of satisfaction, and building long-term relationships, which leads to an improvement in the company's financial and economic state and sustainable competitive advantage.

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#### FEATURES OF DAIRY PRODUCTS EXPORT DURING THE WAR

Dairy industry is one of the most important and promising components of the market of Ukrainian agro-industrial complex, which provides the population with the necessar dairy products. During the full-scale war, dairy farms in the country began to lose their position in the market due to infrastructure damage, reduction in the number of cattle and complexity of logistics, which led to a decrease in the production and sale of dairy products.

So, the most dairy processing enterprises see the main direction of life support in exporting their products. The main markets for Ukrainian dairy products in 2021 were the CIS countries (Kazakhstan, Belarus, Uzbekistan, Turkmenistan, Tajikistan, etc.) and Georgia, which together covered 53% of the total dairy exports. In second place was the Middle East and North Africa (MENA region) – 16%. Further, European countries with an export share of 14%, as well as Southeast and North Asia – 10% [3]. However, due to the blocking of Ukrainian ports, logistics capabilities have deteriorated significantly and have risen in price. Therefore, the main export directions have become the European Union.

Despite the war and the blockage of seaports in 2022, Ukraine exported dairy products for \$344.6 mln., which is 39% more than in 2021 (Chart 1).

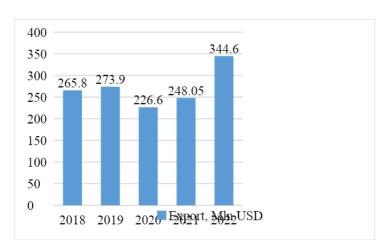


Chart 1. The dynamics of the dairy product export in monetary value [1] There were three main reasons for the increase of export of dairy products in 2022:

- promoting the European community in the liberalization of trade between Ukraine and the EU;
- high world prices for dairy products during the first three quarters of the year 2022;
- competitiveness of Ukrainian dairy products in the European market in the summer-autumn period.

The main market, as expected, was Europe (41.8%), due to logistical advantages, high prices, and the abolition of customs regulation. The structure of other countries importing dairy products is: the Eurasian Economic Union (EAEU) (17.4%), Asian countries (14.8%) and the Middle East (10.9%).

Instead, the main export categories (in monetary terms) were milk powder (26% of the total structure), butter (24%) and casein (21%) (Chart 2). Thus, exports of milk powder and condensed milk amounted to 26.7 thousand tons, bringing Ukraine \$90 mln. (+56,9%). Butter and casein sales increased in \$81.7 mln. (56.3%) and \$74.2 mln. (34.3%), respectively with the main market in Europe.

At the same time, in 2022 sales of condensed milk and cream amounted to \$16.4 mln. (+58%)., and sales of dairy products decreased in 44.5%, bringing \$4.7 mln. Due to the logistic blockade of seaports, exports of whey also decreased significantly by \$15.8 mln. (31,3%.). Ice cream sales decreased in 7.5% (6.9 thousand tons), but in monetary terms increased in 4.5% (\$19.5 mln.). Also, with the devaluation of the hryvnia, purchases of cheese, the main import category of dairy products, dropped significantly and domestic cheese makers began to increase production to meet the needs of the domestic market and for export. In 2022, 9 thousand tons of cheese (+29.8%) were delivered to foreign markets for a total value of \$42.3 mln. (+58,4%) [2].

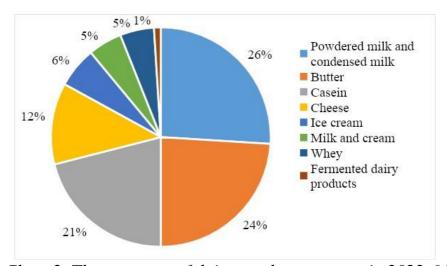


Chart 2. The structure of dairy products exports in 2022, %

The main objectives for increasing exports of milk and dairy products are to support the industry from the state, restore cattle farms, search and establish new international relations with countries for the export of products, ensure proper transportation of milk and dairy products.

Modernization of production capacities and global transition to high international dairy standards will help Ukrainian producers to integrate faster into international markets.

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#### THE BEST PLACES FOR DOMESTIC TOURISM DURING THE WAR

The aim of this study was to investigate and explore best places in Ukraine for domestic tourism during the war in order to please a recreational desire of people who wish to travel but are not able due to a raging conflict within our borders. On the basis of this research, a list of the most fascinating and available touristic attractions in Ukraine was made.

First, we need to look at domestic tourism before the war begun. Ukrainians were always keen on the sea tourism, and the beaches of Azov and the Black Sea were always filled with visitors. Unfortunately now the situation is different. The entirety Sea of Azov is occupied and is unreachable. The majority of Ukrainian Black Sea is under our government's control, but it is completely mined and thus not swimmable. A question arises:"what can people filled with a desire to enjoy sea tourism do?". The answer is not that difficult due to the fact that besides the two great seas, Ukraine has other waters that are more than fit for the purpose of recreational swimming. Some of them a vast amount of people have never even heard about.

Resorts and sanatoriums of Transcarpathia are considered to be a successful combination of budget recreation with European service. Also, in the summer, you can conquer the mountains here, get healthy in salt lakes and thermal pools, taste Transcarpathian Beaujolais and local craft cheeses. Here, almost every settlement has its own tourist attraction. So, considering many factors like cost of living, quality of service and quality of overall entertainment, one of the best options will be Solotvyno. It is a small town located in Zakarpattia Region, which makes it one of the safest places to go to during the war. Even though it is but a small town, it offers a huge variety of different resorts, hotels and rental houses for all tastes. The waters there are both man made and natural, more specifically the town is full of shallow salt lakes that make it very similar to the Sea of Azov, and people who enjoy peaceful and relaxing swims will definitely be satisfied. It is physically impossible to drown due to the vast amounts of natural salts in the water that make bodies literary float on top of the surface of the water, thus making it a perfect place for learning how to swim. The town is modernized, has its own markets and an amusement park for kids, also it is located relatively high

in the mountains, so the air there is very fresh. Also a vast amount of recreational bases located there like massage courses, salt and mud baths will ensure that spending time there will benefit your overall heath.

Food is not a problem at all. There is a big variety of restaurants in the town that offer local food. It will be especially interesting for the people from the south and east of the country due to a big difference in local cuisines. One of the most important aspects in tourism is the price of living. But do not to worry even though some hotels are really expensive there, the ones that are the kinds of reasonable and low prices (with fewer privileges of course) are still present and are very popular. In Solotvyno, hotel accommodation starts from UAH 500. You can rent a room from the local population for 100 UAH. Despite the fact that this town is built on or near salt waters it still has fresh water pools, so people who dislike being covered in salt after swimming will still be able to enjoy more traditional swimming that would be more comparable to the sea or the river. In addition to swimming in healing lakes in Transcarpathia and walking under age-old spruce trees, here you can visit wine cellars, medieval castles and ancient wooden churches: the Museum of Architecture and Life in Uzhgorod, the Uzhgorod Castle, the Palanok Mukachevo Castle. You can also visit the Kolochava museum village, climb the Synevyr lake, the Shipit waterfall and the romantic lavender mountain. Just in July, in the city of Perechyn, on ten hectares of mountain slopes, fragrant lavender grows and charms the eyes. So overall Solotvyno is a great place for traveling during or even before the war, beautiful mountainous sites fresh and salt water, health-improving resorts and activities, great food and top-notch safety in a country will definitely make the time of tourists there worth it.[1]

Shatsk lakes in Volyn are a famous for tourist magnet of Polissia, where thousands of Ukrainians come to rest every year. Transparent forest reservoirs could become a unique alternative to sea resorts this year. If it weren't for one problem - the proximity of the region to the border with another insidious neighbour - Belarus. In view of the recent events in Ukraine, there is an increased threat to the safety of travelers in this territory. Although the region is calm at the moment, few Ukrainians want to try their luck. It is worth noting that in 1983 the Shatsk National Natural Park was created here to protect rare natural complexes with an area of 32 thousand hectares. In total, the group of water bodies includes 30 lakes, of which the most famous for swimming and recreation is Svitiaz. Many sanatoriums, recreation centers and children's camps have been built around the lakes. Hotels that have shelters are present as well as rental houses of locals who offer that for a reasonable price. As for entertainment, Svitiaz offers swimming, sunbathing, bike rides, fishing, kayaking and paddleboarding. The water is incredibly clear and the bottom of the lakes is clearly visible. Since there is a ban on visiting the forest in certain regions of Volyn, it will not be possible to enjoy the beauty of the Polish forests this year. However, you can watch an incredible sunset lying on the beach in a hammock, catch a fish from a boat and just read your favorite book by the lake. And finally, you can take a beautiful photo to commemorate your vacation in the picturesque Ukrainian Polissia. It is a great place for a short 2 to 7 day visit with family and kids that will not cost a lot of money and will definitely satisfy recreational needs of tourists.[2]

And lastly, the so-called "Crimea of Podillia" - Bakota. It disappeared from the map in 1981, when the village was flooded to expand the Novodnistrovsk HPP. People were evicted to neighboring settlements, and the territory itself became the Ukrainian Atlantis. Now, the territory of the Bakota Bay is a part of the National Nature Park "Podilsk Tovtry", which resembles Yalta's landscapes with a unique microclimate. The picturesque, wooded and Rocky Mountains of Medobory, the warm waters of the Dniester, lush vegetation and healing springs make the Bakota Bay, closed from all winds, a magical place and attract more and more tourists and travelers. Among the entertainments on Bakota: swimming in clear waters of Dnister, sunbathing, fishing, riding boats and catamarans and viewing the breathtaking scenery of "Podilsk Tovtry". The good thing about Bakota is that it's great for all kinds of swimmers. The water there is both deep and shallow, so both learners and experienced swimmers will find the water to be pleasant. The shores of the Bakota Bay are an ideal place for rest, mostly romantic and wild. There are no modern resort attractions here yet, but housing is available in a form of a few resorts, wooden hotels and of course private sectors that are offered for renting by locals. The pricing here is not as cheap as in some other places but it is still worth it. Bakota is not a widely known place as of now, so there are not many people there, but thats one of the things that makes it special - a quiet calming atmosphere where people can relax alone or with their significant others.[3]

To sum up, even during the war there are still many places in Ukraine where people can relax, improve health, forget about problems and have a good time with being safe at the same time. These are by far not all of those places but in my opinion Bakota, Solotvyno and Shatsk lakes are one of the best combinations of variety of fun and recreation available in our hard times.

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### DEVELOPING CORPORATE CULTURE: A CASE STUDY OF ZHYTOMYR POLYTECHNIC STATE UNIVERSITY

Over the past decade, the importance of corporate culture has risen significantly as it serves as a regulator of personnel behavior through a system of values, norms, and

rules. Essentially, corporate culture can be viewed as a management ideology that aims to enhance employee productivity and form their corporate identity. Corporate culture is an important aspect of any organization, and this holds true for higher education institutions as well. A positive and effective corporate culture can significantly impact the success of universities and the students they serve. With the introduction of university autonomy in Ukraine, it is essential to shift innovative management practices towards developing the corporate culture of higher education institutions. This approach will enable employees to identify themselves as a professional community that distinguishes itself in the educational services market.

The field of corporate culture has been widely explored by experts in management, economics, sociology, psychology, and cultural studies. With the increasing competition between universities in the global education market, more domestic researchers in Ukraine have focused on studying the unique aspects of corporate culture within the context of higher education institutions. Among the scholars who have contributed to the study of corporate relations in education are N. Bilyk, O. Voronyanska, M. Gnezdilova, N. Horbenko, V. Kubko, L. Khizhnyak, and V. Shapolova, among others [1,4,6,7]. These researchers have emphasized various aspects of the research problem and proposed different approaches to addressing it, as evidenced by their published works.

The **aim** of this study is to deepen theoretical knowledge and propose ways to enhance the corporate culture development system at Zhytomyr Polytechnic State University.

The **object** of the study is the corporate culture of the university, while the **subject** is the specific features of corporate culture in the context of personnel management in higher education institutions.

The **objectives** of the study are as follows:

- 1. to explore the concept of corporate culture management and its significance in the management of higher education institutions;
- 2. to examine the importance of corporate culture in enhancing the performance of university employees;
- 3. to analyze the current corporate culture at Zhytomyr Polytechnic State University and identify areas for improvement.

The study will utilize both qualitative and quantitative research **methods**, including document analysis, surveys, and interviews with university staff and management. The data collected will be analyzed using statistical software and thematic analysis techniques to draw conclusions and make recommendations for the development of corporate culture at the university.

Corporate culture has emerged as a significant factor for enhancing competitiveness among enterprises, garnering increasing attention from managers. This complex phenomenon comprises norms, principles, values, company history, symbols, and forms of rewards and incentives. It represents the primary source of competitive advantage for enterprises. To adapt to market changes, enterprises have begun investing in their human resources, improving their competence, and enhancing their psychological and professional assets. By investing in individuals' human

potential and skills, enterprises can augment their personnel's capabilities and increase their human resource assets [1, P. 74-77].

The term "corporate culture" signifies a combination of the concept of "culture" and the qualitative sign of "corporate" [5, p. 89]. Given this complexity, researchers from different fields, including philosophers, culturologists, psychologists, linguists, managers, and sociologists, have devoted their attention to investigating corporate culture.

The concept of culture has been present since ancient times, with the Roman orator Marcus Tullius Cicero being among the first to define philosophy as "the culture of the mind." The term "culture" originated from the Latin word "cultura", which translates to care, education, upbringing, and development. Like any phenomenon, culture can be differentiated into its content, form, and carrier or subject [6, P. 89-93]. To gain a clear understanding of corporate culture, it is important to examine its historical development and formation. While the exact origins of the idea of corporate culture are difficult to pinpoint, V.V. Shkonda suggests that the concept emerged from the Hawthorne experiments conducted between 1925 and 1932 at a plant in Illinois. The anonymous survey of workers and employees revealed the existence of unofficial norms of behavior that sometimes hindered management's attempts to improve production. Thus, corporate culture can be defined as a set of rules and regulations for behavior that are based on material and spiritual values, cultural, ethical, and social needs of employees aimed at achieving the company's goals [8, p. 655].

Let's examine the establishment and administration of corporate culture at Zhytomyr Polytechnic University, which encompasses distinct symbols and attributes, including the university's anthem, flag, and emblems. The university's Academic Council outlines the procedures for utilizing these symbols and paraphernalia.

The official logo of the university contains the emphasis on its name, with design elements forming a frame to differentiate the university and its status. The graphic lines and elements signify upward movement, indicating development. This logo should be utilized on a light, uniform background. In instances where the colored logo is unsuitable for use on a dark or bright background, the white version can be utilized.

To foster the traditions of Zhytomyr Polytechnic, numerous events are organized, including university-wide events like Consecration to students, Freshman's Day, Space Tech Fest, Student's Day (Dance battle), Days of faculties, Days of Science, Days of Europe, Student Olympiad, Polytechnic Fest, Graduation of Bachelors, Graduation of Masters, Days of open doors and others. Additionally, faculty-based events are organized, such as Faculty Day, professional holidays in line with the faculties' specialties and the professional activities of employees, film days, charity and volunteer events, literary readings, quests, and others. As you see, the symbols of Zhytomyr Polytechnic State University may be used at all events, with ceremonial events opening with the university anthem or the national anthem of Ukraine.

The Code of Corporate Culture of the university reflects the moral principles, rules, and norms of communication and behavior, as well as the norms of professional ethics embraced by the university community [3]. The Code was created to document and reinforce the already established corporate culture of the university, defining its

fundamental views, values, and rules to build an ideal model. The corporate culture of Zhytomyr Polytechnic State University serves as a powerful strategic tool, aligning all structural units and members of the university community towards achieving common goals. The purpose of the Code is to foster honest and open relations among all participants of the educational and scientific process, aimed at improving the university's image, educational programs, and scientific research while promoting academic culture and integrity shared by all members of the university community.

Zhytomyr Polytechnic State University upholds a set of fundamental values and principles for academic integrity and ethics in academic relations. These principles include a commitment to integrity, honesty, decency, truthfulness, transparency, legality, respect, trust, consistent advocacy of decent behavior and ideas of spreading the principles of academic integrity in adverse conditions of external pressure, justice, self-improvement and improvement, responsibility, conscientiousness, and professionalism.

Participants in the educational and scientific process at the university are expected to uphold these principles and standards in their activities, ensuring that they operate within the confines of the law and promote a culture of honesty and openness [2]. The values of respect and trust are highly regarded, with individuals being encouraged to act with dignity towards one another and to trust each other's honesty and virtue.

Furthermore, the university encourages self-improvement and improvement of the educational system, and participants are expected to take responsibility for their actions and provide examples of decent behavior. Professionalism is also highly valued, with each participant expected to maintain a high level of competence in their respective areas of expertise. By promoting and adhering to these principles, Zhytomyr Polytechnic State University aims to create an environment that fosters academic integrity, and allows for the pursuit of knowledge and the advancement of scientific research with integrity and honesty.

The formation and continuous development of the corporate culture at Zhytomyr Polytechnic State University is a complex and ongoing process. The university community, including faculty, staff, and students, adhere to a set of moral principles, values, and norms of communication and behavior outlined in the university's Code of Corporate Culture. These principles include integrity, honesty, transparency, legality, respect, trust, justice, self-improvement, responsibility, conscientiousness, and professionalism.

Corporate culture is a powerful strategic tool that enables all structural units of the university to work together towards common goals, creating a competitive advantage and driving innovative development. Zhytomyr Polytechnic State University, as a modern institution of higher education, recognizes the importance of developing and promoting talented employees.

The university's commitment to corporate culture fosters self-development and harmonious relationships at all levels of the educational process. As such, Zhytomyr Polytechnic State University continues to evolve and innovate, meeting the needs of the labor market and providing its students with a high-quality education.

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### ACCOUNTING OF ENTERPRISES' ASSETS WHICH ARE IN THE TERRITORY OF ACTIVE COMBAT ACTIONS

**Introduction of the issue.** In connection with the hostilities that have been ongoing on the territory of Ukraine since 2014, and especially with the beginning of the full-scale invasion, many temporarily occupied territories have appeared, where many enterprises are trying to continue their operation in one way or another.

The aim of the research is to determine the specifics of the process of asset accounting at enterprises located in military territories where active hostilities are taking place.

The activity of the enterprise in the conditions of martial law (force majeure conditions) is significantly complicated, sometimes even impossible. However, an operating enterprise that continues to function due to martial law must adhere to the established processes, norms and rules of its activity. One of these processes is the asset accounting process. Under normal business conditions, asset accounting is a planned

process. Under conditions of martial law or a state of emergency, the accounting of the company's assets becomes a process that directly depends on the activity of conducting military operations. That is, if military actions caused a number of damages on the territory of the enterprise, then after the cessation of hostilities and before the resumption of operation of the enterprise, the process of inventorying or accounting of assets is mandatory, in order to find out the losses (destruction of premises, destruction of equipment and property). According to the conclusion of the inventory commission, the head of the enterprise makes decisions about the operation of the enterprise itself and ways to restore the material base. [1][2].

Given the circumstances of the state of war in the country, the Ministry of Finance has implemented a certain algorithm of actions regarding inventory processes at enterprises:

- The inventory is a mandatory process that occurs on the 1st of the following month, which occurs after the month when losses were caused to the enterprise and necessarily when the employees are safely at the enterprise;
- The manager issues an order to set the date and duration of the inventory, and also agrees on the composition of the inventory commission (the commission must include: chief accountant, materially responsible person, specialized specialist);
- Based on the results of the inventory, the commission draws up inventory documents and enters data into the accounts receivable report;
- On the basis of inventory documents, the manager makes a decision on liquidation of the consequences of damage (write-off, restoration of premises and equipment).
- If, according to the results of the inventory, it was found that the property is damaged, then: depending on the degree of damage, the enterprise decides to write off the property or reduce its usefulness (this procedure should be carried out taking into account the future plans of the enterprise for this or that property).
- If according to the results of the inventory it was found that the property was destroyed, then: in the case of sale, liquidation, free transfer or other reasons that directly indicate that the fixed asset is not recognized as an asset, then the destroyed asset is written off from the balance sheet. Property that does not meet the characteristics of an asset can be written off by the enterprise according to the order of its manager. Determining the perpetrators of the destruction of property will lead to the display of receivables and, accordingly, income in the reporting period for the amount of damage caused to the enterprise. In general, total amounts of shortages or losses are primarily reflected in off-balance sheet accounts.
- If, according to the results of the inventory, it was found that the information about the property is unknown, then: after the assessments, the company chooses to write off the property or its final depreciation. [3]

According to the rules of accounting, the estimated value of the lost property and correspondingly received losses will be reflected as part of the expenses (even taking

into account that the enterprise was in the temporarily occupied territory). In turn, this same value will affect the reduction of the subject of corporate income tax for the corresponding reporting period. [4]

Display of surpluses as a result of inventory results in accounting:

- Surplus fixed assets D 10 C 424; (D debit, C credit)
- Excess of low-value non-current assets D 112 C 424;
- Excess production stocks D 20 C 719;
- An excess of low-value perishable items D 22 C 719;
- Excess cash in the cash register D 30 C 718;

Display of the lack of a fixed asset due to the results of the inventory in the accounting:

- Depreciation of the amount of depreciation D 131 C 10;
- Write-off for costs of residual value D 947 C 10;
- Adjustment of tax credit D 644 C 641;
- The adjusted tax credit was written off D 947 C 644;
- Display of the amount of losses off the balance sheet D 072 C -;
- The guilty party was established and the amount of damages was displayed  $D-C\ 072$ ;

Display of cash shortages as a result of inventory results in accounting:

- The lack of cash for expenses was written off − D 947 C 30;
- Debt of the guilty party is shown D 375 C 716;

Display of cash shortages as a result of inventory results in accounting:

- The cost of lost powers of attorney was written off as expenses D 947 C 209;
- Adjusting the tax credit and writing it off for expenses D 947 C 641;
  - The cost of forms that are missing is written off -D C 08;

Reflecting the shortage of goods within the limits of the norms of natural loss due to the results of the inventory in the accounting:

- $\bullet$  The reflected shortage of goods (for example, fuel) within the norms of natural loss D 39 C 203;
- A shortage of goods (for example, fuel) within the limits of natural loss norms is written off D 947 C 39;
  - Expenses for the financial result were written off D 791 C 947;

Reflecting the lack of goods in excess of the natural loss rate as a result of inventory results in accounting:

- The reflected shortage of goods (for example, fuel) exceeding the norm of natural loss D 947 C 203;
  - Adjustment of tax credit D 641 C 644;
  - Adjusted tax credit for expenses was written off D 947 C 64;
- The amount of direct losses was transferred to an off-balance sheet account D 072 C -; [5]

**Conclusions.** Accounting is an important component of activity, without which it is impossible to control the processes of "life activity" of the enterprise. Taking into

account the situation inside the country, accounting in Ukraine changed and progressed, adapting to critical moments that appeared as a result of hostilities on the territory of our state. The mentioned algorithm and the conditions for accounting of the company's property indicate logically constructed rules for the actions of authorized persons in determining the economic condition of the company through accounting registers and journals. Security will remain the main condition for accounting at enterprises located on the territory of hostilities. After providing the necessary conditions for the activity of authorized persons in accordance with the established rules, it is quite simple to determine the accounting results that will become a support for the recovery of the enterprise.

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#### THE HISTORY OF THE FORGOTTEN STATE

Historical researchers have not contributed enough to the popularization of historical events of the past, which are forgotten by contemporaries. They did not attract general attention and did not arouse interest in learning about cultural heritage, social relations, and traditions. This encourages modern researchers to restore forgotten historical events and promote the popularization of little-known historical facts.

The purpose of the research is to acquaint readers with the history of the "Mynkivtsi State", to develop interest in the forgotten state, and to popularize interesting historical facts from the existence of the "Mynkivtsi State"

The history of the "Mynkivtsi State" begins in 1788, when Ignatius Marhotskyi became the owner of the town of Mynkivtsi after the death of his uncle Wojciech Marhotskyi. 19 villages were part of the "Mynkivtsi State". As a real state, it had its borders, marked by pillars with the inscription "Boundary of the Mynkivtsi State from the Russian Empire"

Yet in the first years of his ownership of these lands, on December 29, 1791, a small constitution "The Law of the City of Mynkivtsi" was drawn up, which became one of the most modern documents of this type in the world [2].

The most important thing of Marhotskyi was to liberate his peasants from serfdom and grant them freedom. This was discussed in a special act promulgated on January 2, 1801. After the abolition of the lordship in his lands, Ignatius Marhotskyi began to call himself a count.

In 1802, a printing house was opened in Mynkivtsy. Marhotskyi invited the famous printer Werner from Warsaw to work in the printing house. In Mynkivtsi, they printed forms for economic and commercial transactions, appeals to subordinates, as well as orders from other cities. The enterprise gave considerable profits. Translations from French and German into Polish were published in the printing house. Thus, Shakespeare's "Hamlet" was first translated from French into Polish in Mynkivtsi and printed there. It was claimed that the printing house produced 16 works by Marhotskyi himself. Homer's "Illiad" was the pearl of the printing press in Mynkivtsi. [3, p. 15]

Another important step of the count was the creation of a court "for the implementation of justice among the subjects". The following laws are known, which were issued by Marhotskyi: "Agreement of the lord with the subjects", "Laws of the city of Mynkivtsi", "Finance privileges", "Noble law", "Statutes of system of hereditary possessions", "Basic laws of the state". Separate laws and orders of Ignatius Marhotskyi testify to concern for people's health and hygienic culture. Thus, a commission was created to supervise the production of food products and the hygiene of taverns and other trade and food enterprises.

When mass diseases of people with the plague began, Marhotskyi quickly builds a hospital and invites two doctors, de Geronit and Stéphanie, and several paramedics, who begin treatment using the method invented by Baron d'Ache. His efforts to alleviate the fate of the families who died from the plague were energetic. According to the police orders in force at the time, the house in which a fatal case of the epidemic occurred and all the property in it were to be burned immediately. Orphans were literally left without a roof and food. Marhotskyi saved everyone by founding an orphanage in which orphans were not only fed and clothed, but also taught crafts. Doctors de Geronit and Stephanie later became extremely popular and famous, and the capital of the "Mynkivtsi State" became something like a resort, and people came here to be treated even from distant cities and villages. Marhotskyi built a hotel for visitors.[1, p. 51]

Marhotskyi liked to build. By his order, temples were built: the goddess of peace, Telemachus, Wilhelm Tell, even Jean-Jacques Rousseau. Marhotskyi also made sure that the town did not measure or weigh goods in shops, for which he ordered the

construction of a special building on the town square where accurate scales were installed. Ignatius also built a Roman Catholic church in Gothic style from hewn stone.

The lord of Mynkivtsi built four residences for himself and his family: for spring, summer, autumn and winter. The most luxurious was the summer residence in the Otroky manor, in the midst of the amazing beauty of the park, decorated with grottoes, columns, and statues. The Count's family and the entire court moved here every year for the summer. Marhotskyi built a house on the edge of the mountain, from where the most beautiful view of the surrounding area opened. A pagan temple was built, called the Hermitage, where the ruler took charge and chaired commissions, approved court verdicts, etc. A large park adjoined the house, which was named Bialowieza. Valuable trees are planted in the park. In Sivorogy, he built a spring residence on a huge rock, and he built the same autumn residence in Velyka Pobiyna near the gardens.

The Feast of the Slaughter was celebrated every year on August 15 in Mynkivtsi. It later turned into a celebration in honor of the goddess Ceres. The entire population and invited guests gathered at the capital square at the specified time. From there they went to the field. Harvesting began in the field. The ruler of the Mynkivtsi state visited the reapers and showered them with gold coins. He approached the ploughmen, preached a long sermon, and at the end drove a couple of oxen into a plowed field, and he was followed by priests, who baptized the field with holy water so that it would give birth abundantly next year. When all the fields were plowed, the peasants came to the table with their possessions. Preparations were made for that holiday in advance: beer was brewed, hopped honey was made, ceremonial bread was baked, a chicken, goose or piglet was baked. The villagers sang and danced until midnight.

Marhotskyi's beloved wife Eva Ruffo died in 1810. After some time, the old count fell in love with a poor orphan girl. But the count's son also fell in love with this girl, and one day the young people secretly got married in a local church. Taking offense at the priest for the secret wedding, the count ordered to take away all the cleinodes from the church. The priest addressed a letter to the Polish reverend Archbishop Ioanikyi, in which he strongly requested to put an end to pagan rituals and reminded about the celebration of the pagan festival of Ceres in the "Mynkivtsi State". This was also learned by Emperor Alexander I. In the end, Ignatius was arrested and sent by military escort to Kamianets-Podilskyi. He stayed there for two weeks. Then the count sent a request for pardon to the emperor, and he released the arrested Ignatius Marhotskyi.

Marhotsky learned about the unplanned arrival of Emperor Alexander I in Kamianets in 1818 and decided to seek an audience for himself. The Count Marhotskyi ordered a triumphal arch to be made at the entrance to Mynkivtsi, decorating it with garlands, flowers, and colorful lanterns. When the emperor's cortege approached, the carriage of Alexander I was stopped by the count's family and old Ignatius himself. The emperor's welcoming tributes were long. The townspeople rolled the emperor's carriage into the town. The procession entered the square, decorated with garlands, flowers, and lanterns. Alexander I was impressed by such a meeting and decided to inspect the "Mynkivtsi State". The king inspected the buildings of the town: temples, a hotel, a hospital, an inn, a carriage and cloth factory, a brick and tile factory, and a

brick factory. He was too impressed by everything he saw. When Markhotskyi asked for an audience, the emperor accepted him and they left together for Markhotskyi's residence. Alexander I talked with Markhotskyi for a long time, after which he ordered the old eccentric to rest. Since then, the authorities have not prevented either the celebration of the Cesera holiday or the delivery of sermons in churches [3].

In the last years of his life, Ignatius hands over the administration of the state to his son Karol, and he himself settles in a specially built house. He called this stage of his life "a reconciliation with nature and a return to the inherent state of a man." In September 1827, the seventy-three-year-old count died. Karol Marhotskyi, maintained ties with the Decembrists and participated in the Polish uprising. The tsarist government sent him into exile for this. The people of Mynkivtsi were passed to the tsarist state. Free peasants became serfs again.

So, local historians proved that neither the reforms nor the innovative and humane transformations of Ignatius Marhotskyi in the "Mynkivtsi State" could exist for a long time at that time. In the conditions of the autocratic-serf system, such a phenomenon as the "Mynkivtsi State" with its democratic system had no chance of survival. To popularize the "Mynkivtsi State" and its founder, we should start opening tourist routes Mynkivtsi-Prytulivka-Otrokiv and continue to acquaint people with the history of the forgotten state through the press, television, online publications, etc.

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#### **INTANGIBLE ASSETS**

The aim of the research is to reveal the concept of intangible assets, research and analysis of the relevant regulatory and legislative framework, the features of the application of approaches and methods for estimating the value of intangible assets.

An intangible asset is a non-monetary asset that has no material form and can be identified [1].

An intangible asset is a non-monetary asset that has no physical substance and can be identified [1].

In simple words, intangible assets are resources that do not have a physical form, it cannot be moved as equipment or used as premises.

Methodological principles of formation in accounting of information on intangible assets are regulated by ARS 8 "Intangible assets," approved by the order of the Ministry of Finance of Ukraine in 18.10.99. N 242 [1].

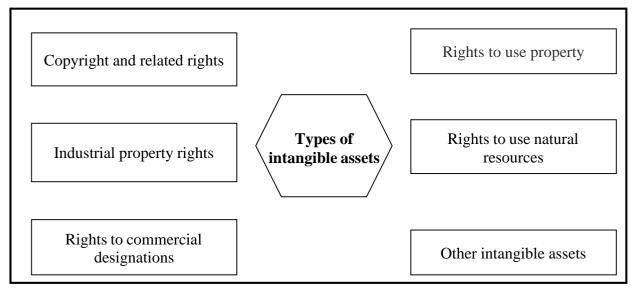


Fig. 1 Types of intangible assets [2].

Today we can distinguish different approaches to understanding the nature of intangible assets - legal, economic and accounting. Accounting methods are based on law and largely contradict more liberal economic methods that do not require full ownership of intangible assets. The current situation, together with the development of the post-industrial economy, has led to the fact that a significant part of the company's intangible resources is not reflected in accounting, and modern innovation-intensive enterprises and enterprises based on intellectual capital are not allowed. perform effective transactions based on accounting information.

Table 1. Comparative characteristics of IFRS 38 [2] and IAS 8 [1]

Compar ison method	IFRS 38	IAS 8
Definition	A non-monetary asset that has no physical substance and can be identified.	A non-monetary asset that has no material form and can be identified.
Valuation of intangible assets in exchange	The cost of a new asset is the carrying amount of the asset transferred (in exchange).	The initial value of an intangible asset is equal to the residual value of the transferred intangible asset.
Initial valuation of intangible assets	An entity may choose to initially recognise	The original cost is their fair value at the date of receipt, including costs.

	intangible assets at fair value.	
Revaluation of intangible assets	After initial recognition, an intangible asset should be recognised at its cost or at a revalued amount, which is its fair value at the date of revaluation.	Revaluation may be carried out at fair value at the balance sheet date. In case of revaluation of an individual intangible asset object, all other assets of the group should be revalued.
Depreciation calculation	Depreciation should begin when this asset is available for use.	Depreciation is accrued during their useful life.
Disclosure in reporting	The financial statements disclose information on: 1) carrying value of revalued intangible assets; 2) date of revaluation validity; 3) the carrying amount that would be included in the financial statements if the revalued intangible assets were recorded according to the basic approach.	Notes to the financial statements disclose information on:  1) initial and accumulated amortization of intangibleassets;  2) initial cost and accumulated depreciation of pledged intangible assets;  3) the total amount of research and development costs.

**Conclusions.** Summing up, we note that accounting for intangible assets is a very urgent problem in the practice of enterprises. This mainly concerns the issue of classification of intangible assets and their valuation, but do not focus only on foreign experience.

Today, special attention is paid to the issues of determining, evaluating and accounting for intangible assets in connection with the new market realities caused by technological changes, information technology, etc. The classification of intangible assets is explained in accordance with the accounting for unique objects of intangible assets in order to develop methods for their valuation in accounting. This is due to the need to cover all the factors affecting the formation of their value.

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### MAXIMIZING BUSINESS PERFORMANCE THROUGH EFFECTIVE TIME MANAGEMENT STRATEGIES

Effective time management is a critical tool for businesses seeking to maximize their performance and achieve their goals. By managing time effectively, businesses can improve productivity and efficiency, increase revenue and profitability, boost employee morale and job satisfaction, enhance customer satisfaction and loyalty, and improve decision-making. However, many businesses struggle with time management, often due to competing demands, unexpected interruptions, and a lack of clear priorities. In this article, we will explore the importance of time management as a business management tool and provide insights into effective time management strategies that businesses can implement to achieve their goals. We will also examine case studies of companies that have successfully implemented time management techniques and achieved positive results.

The **aim** of this article is to explore the importance of time management as a tool for maximizing business performance, and to provide insights into effective time management strategies that businesses can implement to achieve their goals.

The **subject** of this article is time management as a business management tool, with a focus on its role in improving productivity, efficiency, and decision-making, employee morale and job satisfaction, and customer satisfaction and loyalty.

The **methods** used in this article include literature review, case studies, and analysis of best practices and effective strategies for time management in business. These methods are aimed at providing a comprehensive overview of the topic and practical insights into how businesses can implement time management techniques in their operations.

The **objectives** of this article are to raise awareness of the importance of time management as a critical tool for maximizing business performance, to provide practical guidance and tips for implementing effective time management strategies, and to inspire business owners to prioritize it as a key part of their management strategy.

Time management is the process of planning, organizing, prioritizing, and controlling the time spent on various activities to increase productivity, efficiency, and effectiveness. It involves making the most of the time available by allocating the right amount of time to the right tasks, avoiding distractions and interruptions, and focusing on important and urgent tasks first [2, p.17]. Time management skills are essential for achieving personal and professional goals, meeting deadlines, and reducing stress levels. Effective time management enables individuals to balance their work and personal life, increase their productivity, and achieve a better work-life balance.

According to research conducted by the Project Management Institute (PMI), poor time management is a major cause of project failure in business, with nearly 25% of projects failing due to poor time management [5]. In contrast, effective time management can lead to a range of benefits for businesses, including improved productivity, better decision-making, and increased employee job satisfaction and engagement. In order to maximize business performance, time management must be integrated into the overall management strategy of the organization. This includes setting clear expectations, providing training and resources, and supporting employees in their efforts to manage their time effectively.

There are several types of time management techniques that individuals can use to

manage their time effectively. Here are some of the most common types:

- 1. *Prioritization*. This involves identifying and ranking tasks based on their importance and urgency.
- 2. *Time blocking*. This involves scheduling blocks of time for specific tasks or activities to ensure that they get completed.
- 3. *Pomodoro technique*. This technique involves working on a task for a set amount of time (typically 25 minutes), followed by a short break, and then repeating the cycle.
- 4. *Eisenhower matrix*. This involves categorizing tasks based on their urgency and importance, and then prioritizing them accordingly.
- 5. *Getting Things Done (GTD)*. This technique involves breaking down tasks into smaller, actionable steps and organizing them into a system to ensure that nothing falls through the cracks.
- 6. 80/20 rule. This involves focusing on the 20% of tasks that will yield 80% of the results, and prioritizing them accordingly [1].

These are just a few examples of the different types of time management techniquesthat individuals can use to manage their time effectively. The key is to find the techniques that work best for you and to use them consistently to maximize your productivity and achieve your goals. By implementing these techniques and methods, businesses can improve their time management and achieve better results. Time management literally means "to manage time". But time cannot becontrolled, since the ego is a category independent of the subject, it cannot be stopped or forced to move in the right direction. A person can only use time rationally and productively. Productivity refers not to the process, but to the result, and the main secret of personal effectiveness is proper planning and time allocation. Therefore, the most accurate definition of time management, which reflects all its aspects, is effective time planning to achieve set goals, competent allocation of time resources, prioritization in solving tasks and control of planned execution [9].

Time management is an effective tool for organizing business processes because it

helps businesses to use their time efficiently and effectively. Here are some reasons why:

- 1. Increases productivity: Effective time management enables businesses to get more done in less time, which leads to increased productivity and efficiency.
- 2. Improves focus: Time management helps businesses to focus on the most important tasks, reducing distractions and improving concentration.
- 3. Reduces stress: Managing time effectively can reduce stress levels and prevent burnout, which can have a positive impact on employee morale and performance.

Enhances planning: Time management helps businesses to plan and prioritize tasks, ensuring that resources are allocated effectively.

Improves customer service: Time management enables businesses to respond to customer needs and requests more quickly and efficiently, leading to improved customer satisfaction.

Increases profitability: Effective time management can lead to cost savings, increased revenue, and improved profitability.

Encourages innovation: By managing their time effectively, businesses can free up time to focus on innovation and creative problem-solving [3, P. 256-259].

That's why, time management is an essential tool for organizing business processes as it helps businesses to maximize productivity, reduce stress, improve customer service, and increase profitability. By implementing effective time management practices, businesses can optimize their operations and achieve greater success.

There are many businesses that have implemented effective time management strategies and seen positive results. Here are some examples:

- 1. The Ritz-Carlton: The Ritz-Carlton is a luxury hotel chain that is known for its high standards of service. One of the ways that the company maintains these standards is by implementing effective time management strategies. For example, employees are trained to manage their time effectively so that they can provide prompt and efficient service to guests.
- 2. UPS: UPS is a global logistics company that delivers packages to customers around the world. To ensure that packages are delivered on time, UPS has implemented a number of effective time management strategies. For example, the company uses a GPS tracking system to optimize delivery routes and to minimize the amount of time that drivers spend on the road.
- 3. McDonald's: McDonald's is a fast-food restaurant chain that is known for its efficient service. To maintain this efficiency, McDonald's has implemented a number of effective time management strategies. For example, the company uses a system called "QSCV" (quality, service, cleanliness, and value) to ensure that each customer receives prompt and efficient service [6].
- 4. Google: Google encourages employees to use a technique called "timeboxing" where they set aside specific periods of time to work on specific tasks. This technique helps employees to focus on completing their tasks within the allocated time, leading to increased productivity.
- 5. Amazon: Amazon uses a technique called "two-pizza teams," where teams are kept small enough that they can be fed with just two pizzas. This technique helps to

keep teams lean and focused, ensuring that everyone has a clear role and responsibilities.

- 6, Apple: Apple's former CEO, Steve Jobs, was known for his effective time management practices, including setting clear priorities, using concise communication, and keeping meetings short and to the point.
- 7, Toyota: Toyota uses a production system called "lean manufacturing" that emphasizes eliminating waste and maximizing efficiency. This approach has helped the company to become one of the most successful and efficient car manufacturers in the world [8].

In conclusion, we can say effective time management is a critical tool for maximizing business performance. By implementing time management strategies, businesses can improve productivity and efficiency, increase revenue and profitability, boost employee morale and job satisfaction, enhance customer satisfaction and loyalty, and improve decision-making. Several companies, that have been mentioned above, have successfully implemented time management techniques and have seen positive results. It is clear that prioritizing time management as a key part of the management strategy is essential for businesses to remain competitive and achieve long-term success.

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### THE NEED TO AVOID BLUEWASHING TO IMPROVE THE EFFICIENCY OF COMPANY MANAGEMENT

The reputation of companies that position themselves as supporters of sustainable development and the principles of the UN Global Compact for businesses suffers from cases of inconsistency between signals about their «correct» views and their actual practice.

Types of deceptive marketing can be tangential to the spheres of environmental or social company activity. In particular, the broadcast of content in the public space regarding the company's environmentally responsible activities provided that the stated principles of environmental sustainability are not followed leads to greenwashing. At the same time, a similar practice regarding the declared social responsibility of business provided that human rights are not observed and adequate working conditions are not ensured leads to bluewashing.

The focus of our research is on the phenomenon of bluewashing. The use of blue for the name of the bluewashing is explained by the color of the United Nations (UN) flag, which is blue. According to T.J. McClimon, the term bluewashing was first used to refer to companies who signed the United Nations Global Compact and its principles but did not make any actual policy reforms. Bluewashing came to mean that some participating companies were using the Global Compact to improve the public perception of their values, social programs, and governance practices without introducing any real changes or reforms [6].

Unlike greenwashing, the problem of which is given more attention by ecoactivists and researchers, the practice of bluewashing is discussed less but is still more widespread on English-language web resources.

To understand the specifics of the desired direction of the development of socially responsible business, it is necessary to learn the Sustainable Development Goals [9] and the ten principles of the UN Global Compact [10]. Also, a necessary step is to learn the practice of compiling reports in the ESG format that stands for:

- E (Environmental). A company that is environmentally friendly has a more favorable image, improved customer connections, and increased talent acquisition potential (reduced carbon emissions; improved resource efficiency; reduced water consumption);
- S (Social). Companies that integrate social goals into their business model engage their stakeholders and open themselves to innovative thinking that pays off (improved employee engagement/retention; enhanced customer satisfaction; reduced business risks);
- G (Governance). Governance is the processes, people, and systems whereby senior management is held accountable for establishing and maintaining sustainable practices (improved board effectiveness; reduced corruption risks; greater shareholder engagement) [8].

In the public space of the network, it appears to emerge news about violations or non-observance of the principles of ensuring human rights and proper working conditions by the world's leading companies. For example, Apple has been positioning itself as the socially conscious alternative, because it claims to care deeply about privacy, and has been taking specific actions targeted at LGBTQ and racial justice movements [5]. This is confirmed by information from the company's website [7]. Although occasionally it appears to emerge news about facts that confirm the company has a not entirely transparent policy regarding its own socially responsible position towards employees [1, 2, 3].

Timely detection and prevention of bluewashing practices is necessary for the development of any business: both for one's own and for tracking similar practices among competitors, partners, suppliers, and other companies with which cooperation is ongoing or planned.

The process of avoiding bluewashing can be internal and checked by internal or external executors who will have access to the company's confidential information. For instance, for corporate lawyers, there's also an inevitable overlap here between newer ESG due diligence and more traditional due diligence, e.g. ahead of mergers and acquisitions, on internal corporate or investment portfolio social criteria. Such due diligence covers a range of areas, such as screening out child labour, the management of harassment complaints, human rights, social diversity, staff training, well-being, and a positive working atmosphere for employees [4].

The need to avoid bluewashing in order to improve the efficiency of the company management is a derivative prerequisite for the company's transparent adherence to the values it publishes and strives to adhere to. Based on having studied the peculiarities of the practice, mostly actualized for developed countries and, accordingly, a higher level of social responsibility, recommendations for the management of Ukrainian companies that seek to adopt positive management practices based on already existing experience have been summarized. The algorithm for recognizing companies that resort to bluewashing practices involves the following sequence of actions or answers to questions:

- 1. Are there signs of socially responsible company activity? For example, whether the company is involved in the UN Global Network. Currently, 114 Ukrainian companies have joined this network [12]. A similar proof can be a certificate from specialized organizations that assess the level of business in terms of its social responsibility. An analysis of the company's official website can provide information about its mission, vision, and values, among which postulates can be declared to respect people's rights and ensure decent working conditions for its employees. This, among other things, will be an official signal about the socially responsible position of the company.
- 2. If there are no such signals, then there is no point in the further process of recognizing bluewashing. Of course, this conclusion should be preceded by a thorough analysis of the digital space (business website, pages in social networks, specialized authoritative channels of information, etc.) and already conducted research or the presence of officially confirmed violations or lawsuits.

- 3. In the case of at least one signal, it is necessary to continue the study of initiatives.
- 4. Comparison of the number of signals about the socially responsible position of the company and the number of confirmed facts of violations related to issues of ensuring people's rights and maintaining proper working conditions. When detecting violations, certain filters should be turned on, because the presence of a lawsuit is not always recognized as a violation, here we are talking about its probability.

Sites that specialize in collecting, processing, systematizing, and presenting data about companies can be a valuable information base. On the website «YouControl» [11] you can familiarize yourself not only with the reporting of companies registered in Ukraine but also learn about such information about them as analysis of connections (analysis of information about connections between business entities that may affect the conditions or economic results); sanctions (checking sanctions lists); reputation in the media (specification of cases when the company is involved in the investigation, is negatively mentioned in the investigation or when it is simply mentioned in the investigation); inspections (planned and archival inspections by state services); official notices (e.g., about a change in share capital); executive implementations (both in the role of a debt collector and in the role of the debtor); courts (judgments scheduled for review).

The proposed algorithm for identifying practices of bluewashing to improve company management can be refined in view of the executor's ability to access larger sets of analytical information.

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### THE CURRENT STATE AND PROSPECTS FOR THE DEVELOPMENT OF SMALL AND MEDIUM-SIZED BUSINESSES IN UKRAINE

Everyone knows that due to the beginning of a full-scale invasion by Russia, everything stopped working for a certain time. Including the economic sphere of life in Ukraine. Thanks to our soldiers of the Armed Forces, entrepreneurs were able to resume their work relatively quickly to boost the economy, which also speeds up our victory.

During the month of the war, Ukrainian business lost more than during the two years of the pandemic. The extent of all the damage and the long-term consequences of the war are difficult to assess, because the hostilities in the country are still ongoing.

According to a survey conducted by the European Business Association, only 17% of companies are operating at full capacity, and one in three is not operating. A third of enterprises plan to resume operations.

The total direct losses of small and medium-sized businesses in Ukraine during the full-scale Russian invasion are estimated at 64-85 billion US dollars.

The development of small and medium entrepreneurship is important and necessary of Ukraine. This is the basis of our country's economy. Small and medium-sized enterprises perform important functions: they contribute to the creation of new jobs, the growth of the gross domestic product, additionally stimulate the development of competitiveness and innovative potential of the economy.

In modern realities, small and medium-sized business entities (legal entities and individual entrepreneurs) face many problems. The biggest obstacle to doing business in Ukraine is the unstable political situation. It is difficult for SMEs to operate and plan their operations in an environment where government policy is often complex and unpredictable, and business requirements are constantly changing. Such a situation exhausts small and medium-sized enterprises, as well as restrains their growth.

Another big problem faced by small and medium-sized businesses is the unfavorable economic situation in Ukraine. In the conditions of martial law and economic recession, the purchasing power of the population of Ukraine decreased and, as a result, the demand for goods and services from small and medium-sized businesses decreased. As a result, their profits fall, and with it - the chances of the business to survive in the market.

As of November 2022, the UBI (Ukrainian Business Index) business activity index was 30 (out of a possible 100). If we compare with the summer months, we can see that the trend has improved, but compared to September, it has deteriorated somewhat. A positive finding is that businesses are bringing back laid-off workers. Therefore, managers are gradually restoring business processes, thus creating new jobs, but still cannot return to the usual ways of planning and managing their own projects.

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#### EXPORTS OF UKRAINE IN CONDITIONS OF FULL-SCALE WAR

**Introduction of the issue.** Export is an important element of international trade, as it allows countries to attract additional resources to their economic potential and stimulates economic development.

The aim of the research is to analyze the export of Ukraine in the conditions of a full-scale war, to compare it with the previous year, to find out which categories were strongly affected by the war, and to determine what the strategy of Ukraine's foreign economic activity should be aimed at at the current stage.

The war definitely affects the level of economic security of the state, regions, industries, companies, households. The Russian-Ukrainian war led to economic decline. The Russian invasion began on February 24, and the WTO said that the most immediate consequence of the war was a sharp rise in commodity prices. The war became a significant factor in the gradual changes in Ukraine's development model: deindustrialization and the growth of agrarianization of production and exports, the loss of Ukraine's technological and innovative potential, the reduction of key export positions, caused by the shutdown of enterprises strategic for domestic exports and the reduction of production. As a result of military operations, disruption of logistics, blockade of sea ports caused a sharp reduction in export supplies from Ukraine, and therefore, a gradual loss of "traditional" leadership positions on the world market, primarily metallurgy and agricultural products [3].

Russia's full-scale invasion of Ukraine affected both the domestic economic situation in our country and the supply of Ukrainian products abroad. In January and February 2022, Ukrainian exports demonstrated very positive dynamics — growth compared to the same period last year was 34%. However, already in March there was a collapse of exports - the reduction was 50%. For 2022, Ukrainian exports amount to 29 million dollars. USA. This is a third less than the result of the same period last year (–35.1%). In natural terms, Ukrainian exports amount to 63 million tons, which is 59% less than last year. A slow recovery of exports began in May, and the largest volume of exports since the beginning of the full-scale war was recorded in August due to the unblocking of Ukrainian Black Sea ports (\$3.4 million) [1].

The largest export direction for Ukrainian business is the EU countries — the share of this region is 67.2% (or 17,838.7 million US dollars) [1], [2].

In 2021, the EU was also the largest partner of Ukraine, but its share was 41%. Instead, the share of Asia is 18.9%, the CIS is 2.4%, Africa is 4.2%, America is 2.7%. That is, there was a reduction in the shares of all other regions of the world in favor of the EU countries [1], [2].

Among the countries of the European Union, Ukraine exported the most to Poland (US\$4.7 million), Romania (US\$2.5 million), Hungary (US\$1.5 million), Germany (US\$1.4 million) and Slovakia (\$1.1 million) [1], [2].

Asia is the second largest region of the world for Ukrainian exports — its share in 2022 will be 18.9%. The key countries — Ukraine's export partners among Asian countries — are Turkey (\$1.7 million) and China (\$1.1 million) [1], [2].

The share of CIS countries in the total export of Ukraine in 2022 is only 2.4%. The main direction of Ukrainian exports in the region was Moldova (US\$ 658 million) [1], [2].

African countries account for only 4.2% of Ukrainian exports, and Ukraine's largest export partners in Africa are Egypt (\$495 million), Algeria (\$122 million), and Libya (\$118 million) [1], [2].

The largest export destinations in the Americas region are the USA (US\$521 million) and Canada (US\$78 million). It is interesting that, compared to Canada, the Dominican Republic is not far behind, where Ukraine exported products worth 64 million dollars. USA in 2021. Among the countries of Central and South America, the largest exports fell to Costa Rica (US\$16 million), Colombia (US\$12 million) and Mexico (US\$13 million) [1], [2].

The list of leading countries by the volume of Ukrainian exports for 2022 has changed. In 2021, China took first place (now in 7th place). Also, India did not enter the top 10, instead Bulgaria, the Netherlands and the Czech Republic appeared. In general, the top 10 countries by the volume of Ukrainian exports changed in favor of EU countries thanks to Asian countries [1], [2].

Despite the overall reduction in exports, Ukrainian exports to the EU increased by 1.7% in 2022. Deliveries to neighboring countries increased the most, in particular Poland (+27.6%), Romania (+136.8%), Hungary (43.5%), Slovakia (51.6%). On the other hand, exports to the countries of Western Europe decreased, in particular to Germany (-19.5%), the Netherlands (-34.8%), Italy (-61.9%) [1], [2].

Ukraine's exports to Asia fell by more than half (-66.1%), in particular, Ukrainian businesses exported 80.3% less to China than last year. Among the CIS countries, Ukraine increased its exports to only one country — Moldova (+14.0%), with a decrease in other countries. The reduction of export deliveries to African countries is 64.7%, to American countries - 66.6% [1], [2].

Thus, the nearest EU member states have become the key direction of Ukrainian exports in 2022 [1].

The largest categories of Ukrainian exports in 2022 were grain crops (USD 9.1 million), fats and oils (USD 5.9 million), and ferrous metals (USD 4.5 million). However, among the leaders are also the categories "seeds and fruits of oil plants" (3.7 million USD), "ores, slag and ash" (3.0 million USD), "electrical machines and equipment" (2.5 million USD), "wood and wood products" (1.8 million USD), "reactors, boilers, machines" (1.1 million USD), etc [1], [2].

The three largest categories of Ukrainian exports (cereals, ferrous metals and oils) together make up 45% of total exports (for the same period last year — 46%). Of these categories, the export of ferrous metals has the worst result. The fall in its volumes for 2022 is 67.5%. Among the main reasons are the location of the largest metallurgical enterprises traditionally in the East of Ukraine in the zone of active hostilities and complicated logistics [1], [2].

Instead, the reduction in the export of grain crops for 2022 is 67.5%, oils - 15.3%, and grain crops - 26.2%. Among the reasons for this result, the obvious ones are that agricultural and food enterprises are located throughout the territory of Ukraine quite evenly. The more positive result was also influenced by the fact that the first two months of the year were very successful for grain exporters.

The unblocking of Ukrainian Black Sea ports began in August 2022, the first positive results of the increase in the export of grain and oil crops can already be seen in the dynamics. The current state of foreign trade of the agricultural sector in terms of transport can be found on the dashboard on the export of agricultural crops, which was developed by the Ministry of Agrarian Policy and Food of Ukraine, the Office for Entrepreneurship and Export Development, and the Ministry of Infrastructure of Ukraine.

In general, the "heavy industries" — metallurgy and the chemical industry (reduction by 56% and 54%, respectively) have the worst indicators of export reduction in monetary terms. Instead, the reduction in the export of agro-industrial and food products for 2022 is 20.5%, and that of machine-building products - 19.4%. The export of light industry products (clothing and footwear) decreased by 14.1%, furniture — by 20.5% [1], [2].

In natural terms, the reduction of agricultural and agro-industrial production is 27%, machine building - 90%, metallurgy - 66%, chemical products - 90%, light industry products - 85%, furniture - 43% [1], [2].

**Conclusions.** At the current stage, the foreign and regional policy of the state, as well as the strategy of foreign economic activity of Ukrainian business entities, should be aimed at restoring the export potential, strengthening the position of Ukraine in the system of the international division of labor, increasing the competitiveness of

the products of domestic enterprises and expanding sales markets, improving the structure of exports and achieving sustainable economic growth. Ukraine's interest is in strengthening cooperative ties with the EU, because our state has all the opportunities for a mutually beneficial partnership in industry thanks to the preservation of significant scientific and technical potential to ensure the development of high-tech industries with a high share of added value [3].

Therefore, regardless of the difficult situation that is currently ongoing in Ukraine, our state continues its economic development and invests as much as possible in strengthening foreign economic ties. In the future, Ukraine will increasingly stabilize its position and adjust its economic system. And all this indicates that our state cannot be defeated.

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#### FROM THE ZONE OF ALIENATION TO THE ZONE OF REVIVAL

The purpose of the study is to introduce and popularize the tourist route to the Chernobyl zone. To prove to tourists that Chernobyl is safe for tourist trips.

37 years have passed since the day of the tragedy at the Chornobyl NPP. During this period, Chernobyl and Pripiat went from a zone of complete exclusion to the status of the most popular tourist destination in Ukraine. Despite its popularity and tourist flow, the Chernobyl zone remains a place of remembrance of the greatest man-made tragedy in the history of mankind, an open-air memorial. People consider Chernobyl "dangerous tourism", but this is a myth.

The Chernobyl tragedy happened in 1986. The first tourists in the Zone appeared a few years after the accident, in the early 90s. In 1995, the Information Agency "Chornobylinterinform" was established, one of the goals of which was the

organization of trips to Chernobyl. After that, various companies that organized trips to the Zone began to appear. After the release of the UN report in 2002, which stated that it was now possible to stay in most of the Zone without harm to health, the number of tourists in Chernobyl began to grow by approximately 1-1.5 thousand people every year. Now anyone can visit the Zone, but must be accompanied by a guide. Excursion programs usually take place along approved routes or locations. Staying in the Chernobyl zone is completely safe, the level of radiation exposure is lower than when flying by plane. Some tour organizers provide participants with special devices that help monitor the amount of radiation received. However, in several places the level of radiation remains high, even dangerous, mainly in the wake of the most powerful western and northern emissions from the reactor, and in some places on the territory of the NPP itself.

Foreigners visit Chornobyl the most - this is 80% of the total flow of tourists in 2019. It was then that Chernobyl entered the TOP 50 places that foreign tourists dream of visiting, in total, by the end of 2019, 107,000 people had visited the zone. Most tourists come from Great Britain, Poland and Germany. The boom among foreigners occurred after the release of the TV series "Chernobyl" in the same year. In addition to walking sightseeing routes, all-terrain vehicle and bicycle routes have appeared in the area in recent years. Another option to see the exclusion zone from an unusual angle is a rafting excursion on the Pripiat and Uzh rivers. This format allows you to see the birds and animals of the Chernobyl radiation-ecological biosphere reserve. There are several hotels in Chernobyl where you can stay for the night - "Polissia" and "Desiatka". Since a curfew applies in the city after 20:00, tourists are not allowed to leave the hotel premises.

If anywhere nature has recovered, it is in Chernobyl. A population of wolves, deer, eagles, beavers, foxes and other animals thrives here. Also, brown bears appeared here again. River routes from Kyiv to Chernobyl may appear in the future. Such a transport connection existed even before the accident, and now it is planned to restore it as a tourist attraction [1].

The Chernobyl zone should become a powerful magnet for tourism both from Ukraine and from around the world. And the zone of exclusion should become a zone of revival. And at first glance, this idea is not devoid of logic, because the peculiarity and uniqueness of tourism in the Zone has been noted by many world authoritative publications.

According to the editors of Forbes magazine, in 2009, the Chernobyl nuclear power plant became the most exotic and extreme object for tourism on the Earth, and in the rating of the brightest tourist places in the world according to CNN Travel, the Chernobyl exclusion zone entered the first fifteen, and this list of regalia can be continued long [2].

Having seen Chernobyl at least once, you look at the so-called "ordinary life" in a completely different way, including on your own.

So, the exclusion zone has long become a place of extreme recreation for tourists. Even radiation does not frighten thrill-seekers - they are ready to give a significant amount and even a piece of their own health for new emotions. Now the 30-kilometer

zone around the reactor has become a kind of dead museum in the open sky, which every year attracts more and more people willing to visit it. We, Ukrainians, are a nation of Chernobyl winners, we were able to survive this catastrophe. Chernobyl should be a positive tourist brand of Ukraine, and the Chernobyl zone should become a UNESCO world heritage site. Tourists from all over the world are already coming here.

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#### THE LABOR MARKET

The aim of this study was to analyze the state of labor market in Ukraine and its elements, to distinguish the signs of a segmented market, types of the demand and types of market economic situation.

Historically the labor market appeared in that moment when the separation of workers from means of production happened. After this the worker was free, but without the production means, so he started to sell his ability to work i.e., the workforce.

Naturally, one of the most important elements of the market economy is a labor market. Labor market is the science, that study the quantitative side of the mass events and occasions, that appear at the job market. The main reason is detection of the qualitative features, interconnections and characteristics of selling the workforce [1, p. 7].

To put it simply, the labor market, also well known as the job market is the place, where the supply and the demand for jobs meet, with the workers or labor providing the services that employers demand. The worker is then comparable to a seller while the employer is the buyer [2].

The main subjects of the labor market are an employer and an employee. The employer is a man, who is searching for people that will work for him. The employer has many versions i.e., state enterprise, joint stock company, private company and so on. The employee is a free man, for which his salary is the main source of the income. Maybe the most important condition of a labor market existence is when the worker has as qualification as an employer needs. [1, p. 7]

Job market has these elements:

- product that is offered;
- demand;
- supply;
- price.

There is not the one opinion about what is the product at the labor market: workforce, a work or the labor service. But the most part of authors is sure that the product of the labor market is an individual workforce. Individual workforce is a combination of the physical and moral qualities of people, which they use in production process [3].

With regard to the work, we can divide all the population of our country into two categories: [4]

- People that form a labor market. There are two subtypes: employed and unemployed.
- People that are outside the labor market. There are four subtypes: unemployed that lost a hope to find a job, incapacitated person, people that can't work due to age, people that don't want to work.

The modern labor market is divided into separate parts - target markets, which called segments.

Segmentation of the labor market is the division of workers and workplaces into stable and closed sectors, zones, by highlighting the mobility of the labor force with their boundaries.

The signs of a segmented market are: [1, c. 10]

- territorial position region, city, district;
- demographic characteristics gender-age, family composition population;
- socio-economic characteristics level of education, vocational training;
- economic criteria the distribution of buyers by forms of ownership, by their financial condition;
  - psychological indicators personal qualities employees;
  - behavioral characteristics motivation of employment.

There are some basic segments of the market:

The primary labor market is a market that is characterized by a stable level of employment and high level of wages, as well as the possibility of professional promotion, progressive production technology, system management.

The secondary labor market is a market that is characterized by a staff turnover and unstable employment, low wages, limited in the growth of qualifications, outdated techniques and technologies. [1, c. 11]

The internal labor market is a system of social and labor relations that is limited to one enterprise.

The external labor market is a system of social and labor relations between employers and employees throughout the country, region, industry.

The open market represents the working population. Two parts are distinguished: the official part of the population, which is registered with the state employment service, the unofficial part consists of people who try to get a job through direct contacts with enterprises or with non-state employment structures [1, c. 11].

The hidden market includes workers who are employed at enterprises and organizations, but have a high probability of being without work. [1, c. 11]

There are two types of the demand: individual and total.

Total demand is a market demand of all companies, organizations etc., which exist in the market. [3]

Individual demand is the demand of an individual businessperson or a company. Individual demand depends on:

- demand for the company's products, because workforce is needed as production resource for the production of other goods and services.
- state of production (features of the technological process, the size and efficiency of the capital, methods of organizing production and labor, etc.);
- quality of work (important influence factors are the level of education, professionalism, productivity of the employee);
  - a salary that an employer can offer to employees.

An increase of the demand can be stimulated by creation of new working places, the development of non-standard forms of employment, direct investment in the creation and reconstruction of jobs [3].

The market economic situation is the ratio of labor supply and demand for a certain period, which determines the amount of wages for certain types of work and the level of employment [4].

There are 3 types of market economic situation:

- labor deficit, when there is a deficit of labor supply in the labor market;
- labor-intensive, when there is a large number of unemployed and so an excess of labor supply;
  - balanced, when demand for labor amounts to its supply [4].

Each type depends on the region or field of work, by forming the common labor market in Ukraine.

So, the labor market is a leading subsystem of the national market, that creates the sphere of movement of the most important resource – labor.

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# NFT'S LATEST DIGITAL ASSETS AND PROSPECTS FOR THEIR DEVELOPMENT

The development of modern society is inextricably linked to the development of information technology. Digital assets have developed tremendously in recent decades and have taken a significant share of the financial market. According to coinmarketcap.com, the global capitalization of cryptocurrencies is over USD 919.55 billion. The market for cryptocurrencies, which were created as an alternative to fiat currencies, has become an object of investment and speculation. For the time being,

there are several types of crypto assets, including unsecured cryptocurrencies, stablecoins backed by real assets, central bank digital currencies (CBDCs), and NFTs.

Non-fungible tokens (NFTs) are a special type of crypto asset that is irreplaceable, unlike most cryptocurrencies and many network or service tokens. They are assets that exist only in their own cryptosystems. NFT is a unique, one-of-a-kind digital asset. This asset is registered in the network, where its name and what it is (a picture, a song, a pattern, etc.) are displayed.

The development of the NFT market is associated with the emergence of Color Coin in 2012, which works with Bitcoin and is proof of ownership. However, the project was not further developed as Bitcoin developers abandoned the idea.

In 2014, Counterparty was launched, a Bitcoin-related platform that allowed the creation of digital assets. Three years later, the frog Pepe appeared on it. Later, famous characters, such as Homer Simpson, would be stylized as him. It will be sold first for \$500, and then for \$38 thousand. 2017, NFT smart contracts are created on the Ethereum cryptocurrency blockchain. At the same time, the CryptoKitties game appeared – a kind of virtual cat farm. Users buy or select digital kittens on their own. By the end of the year, users spend more than \$1 million on this game, which draws even more attention to NFTs.

In February 2021, a person with the pseudonym Flying Falcon buys 9 plots of land in the Axie Infinity blockchain game for USD 1.5 million, and an anonymous buyer buys a gif of a cat with a cake body for USD 590 thousand. A token representing a collage by digital artist Beeple was sold for a record \$69 million at Christie's. No matter how irrational such acquisitions may seem, they do take place, and thus create demand for the further development of NFTs.

The study, conducted in conjunction with BNP Paribas-owned research firm L'Atelier, states that NFT trading reached \$17.6 billion in 2021, reflecting a staggering 21,000 % increase from \$82 million in 2020.

The NFT crypto asset itself was not developed for settlement operations, so today it has found application in various areas: art NFTs; collectible NFTs; financial NFTs; gaming NFTs; music NFTs; real assets NFTs; logistics NFTs.

Depending on the field, there are different types of non-fungible tokens, but the vast majority still belong to the art field: In general, the following main types of NFTs are distinguished: art (sculpture, canvas, doodle art); PFP collections (regular avatar); virtual land (virtual real estate); games; subscriptions/memberships (on Patreon); music; brands; technical DeFi tokens, domain names, and others.

Traditionally, digital assets are associated with financial innovations, as the development of the first cryptocurrencies was intended to simplify the settlement sector, reduce transaction costs, and protect the payment system from unauthorized interference. However, most regulators, both national and international, were skeptical of the idea of recognizing cryptocurrencies as legal tender. Based on the nature of NFT, which is unique and non-fungible, it cannot claim to be a general equivalent, and therefore cannot be used in payments. However, the digitalization of art and other objects in the form of NFTs has good prospects for copyright registration and circulation.

Like any digital asset, NFTs have their advantages, which include high liquidity through trading on special platforms, copyright protection, and protection against counterfeiting. Among the disadvantages of NFTs are the need to understand the functioning of blockchain technologies in order to use the assets and high commissions.

Thus, NFTs can be used to certify copyright for unique objects, which will simplify the sale of these rights or their transfer for use. In addition, NFTs can be considered as an investment object, since the NFT market is quite liquid, shows positive growth dynamics, and allows determining the market price for each unique NFT. The above examples of NFT sales show that over time, their value can increase by several dozen and sometimes hundreds of times. Therefore, such a crypto asset can be held for resale at a higher price.

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### THE SVIATOHIRSK LAVRA: A TOURIST GUIDE TO DONETSK REGION

The aim of this study was to investigate and explore Donetsk Region in eastern Ukraine that boasts a rich cultural and historical heritage. One of the most notable attractions in the region is the Sviatohirsk Lavra, a complex of historical and religious buildings located in the town of Sviatohirsk. This paper serves as a tourist guide to the Sviatohirsk Lavra, providing information on its history, architecture, and cultural significance.

History. The Sviatohirsk Lavra was founded in the 16th century by the monk Jonah, who established a monastery on the site of a former pagan temple. Over the centuries, the Lavra grew in size and significance, attracting pilgrims from all over Ukraine and beyond. During the Soviet era, the Lavra was closed and used for various secular purposes, but it was returned to the Ukrainian Orthodox Church in the 1990s and has since been restored to its former glory. During the 17th and 18th centuries, the Lavra became one of the most important religious and cultural centers in Ukraine. It was a place of pilgrimage for Orthodox believers and served as a center of education and scholarship. The Lavra's monks were known for their knowledge of theology, philosophy, and the arts, and they produced many valuable manuscripts and books.

During the Soviet era, the Lavra was closed in 1935 and used for various secular purposes, including a prison and a military base. Many of the Lavra's buildings were damaged or destroyed during this time, and the Lavra's treasures and artifacts were confiscated or destroyed. After Ukraine gained independence in 1991, the Sviatohirsk Lavra was returned to the Ukrainian Orthodox Church and restoration work began. The Ukrainian government provided funding for the restoration, and many of the Lavra's original buildings and artworks were carefully restored or recreated. Today, the Sviatohirsk Lavra is a symbol of the resilience of Ukrainian culture and religion in the face of adversity [6,7].

Architecture. The Sviatohirsk Lavra is a complex of buildings that includes several churches, a bell tower, and living quarters for the monks. The most notable building in the complex is the Holy Assumption Cathedral, which was built in the 18th century and features stunning baroque architecture. The cathedral is adorned with frescoes and icons that depict scenes from the Bible and the lives of the saints. Other notable buildings in the complex include the Church of the Intercession, the Church of St. Nicholas, and the Refectory Church [1].

Cultural Significance. The Sviatohirsk Lavra is an important religious site for the Ukrainian Orthodox Church and attracts thousands of pilgrims every year. It is also a popular tourist destination, with visitors coming to admire the Lavra's stunning architecture and learn about its rich history. In addition to its religious and cultural significance, the Lavra is also an important natural landmark, situated on a hill overlooking the picturesque Don River. The Sviatohirsk Lavra is known for its network of caves and grottoes, which have been used by monks for centuries as places of meditation and spiritual retreat. The caves are located in the hill on which the Lavra is built, and they are accessible to visitors as part of guided tours of the complex [4].

The caves, which are also known as "cells" or "kel'ias" in Ukrainian, vary in size and shape and are interconnected by narrow passageways. Some of the cells have been furnished with simple wooden furniture and religious icons, while others are bare except for small niches cut into the walls where candles can be placed.

Visitors to the caves can learn about the history and significance of the cells, as well as the lifestyle and practices of the Lavra's monks. The cells were used by monks for prayer, meditation, and contemplation, and they were often used as living quarters by individual monks or small groups of monks[2,3].

While the caves are a fascinating and unique feature of the Sviatohirsk Lavra, visitors are advised to take care when exploring them. The passageways can be narrow and steep, and the caves can be dark and damp. Visitors are advised to wear sturdy shoes and to be prepared for some physical exertion, as the caves involve some climbing and crawling. Additionally, visitors are asked to be respectful of the caves and to avoid touching or removing any of the religious artifacts or furnishings[8,5].

Visiting the Sviatohirsk. Lavra The Sviatohirsk Lavra is open to visitors every day. Admission is free, but donations are welcome. Visitors are advised to dress modestly and to be respectful of the religious significance of the site. Guided tours are available in Ukrainian and audio guides are available in English and other languages. Visitors can also purchase souvenirs and religious items at the Lavra's gift shop.

Conclusion .The Sviatohirsk Lavra is a must-see destination for anyone visiting Donetsk Region. Its stunning architecture, rich history, and cultural significance make it one of the most important landmarks in the region. Whether you are a religious pilgrim or a tourist interested in history and culture, the Sviatohirsk Lavra is sure to leave a lasting impression.

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# PROBLEMS AND PROSPECTS OF COOPERATION BETWEEN UKRAINE AND WTO

Since the beginning of the restoration of independence, Ukraine has been maintaining a focus on integration into the global economic system, especially by passing such laws as "On Foreign Economic Activity" (1991), "On the General Principles of the Creation of Special (Free) Economic Zones" (1992), "On the Regime of Foreign Investment" (1996), etc.

Ensuring a decent place in the global community involves solving many internal and external problems. Integration into the modern world economy is a long process, which involves compliance with long-term economic policy, which takes into account the basic principles of an open economy and membership in international organizations.

Ukraine's membership in the World Trade Organization (WTO) is an important precondition for the further development of the national economy, liberalization of foreign trade and the creation of a predictable transparent environment that allows attracting foreign investment. The World Trade Organization (WTO) is an international organization with the purpose to develop a system of legal norms of international trade and to monitor their observance. The main goals of the Organization are to ensure the functioning of the system of international multilateral trade relations, the gradual abolition of customs and trade restrictions, ensuring transparency of trade procedures, increasing the economic opportunities of countries through international trade, etc. [1].

Ukraine has made a lot of efforts to join the world integration processes, becoming a member of the WTO. The precondition for Ukraine's accession to the WTO is the submission on November 30, 1993 of an official statement of intention to join the GATT by the Government of Ukraine to the GATT Secretariat. The direct process of accession to the WTO began on February 5, 2008 in Geneva at the meeting of the WTO General Council, at which the Protocol on Ukraine's accession to the WTO was signed. Already on April 10, 2008, the Verkhovna Rada of Ukraine adopted the bill "On Ratification of the Protocol on Ukraine's Accession to the World Trade Organization." On April 16, 2008, the Law on Ratification was signed by the President of Ukraine. According to the WTO procedures, on May 16, 2008, Ukraine became a full member of this Organization.

Ukraine's accession to the WTO opened up prospects for the development of the national economy. Ukraine, on absolutely equal terms and rights with other members of the organization, is directly involved into the formation of the latest rules of trade in the world market within the framework of the current round of multilateral trade negotiations in order to take into account the national interests of our state in the trade

and economic sphere and has the right to use the mechanisms for resolving disputes arising within the WTO [1].

In addition, accession to the WTO strengthened the status of a full participant in international trade, which increased the ability to participate in regional unions and associations and created favorable conditions for foreign investment. In June 2010, Ukraine signed a Free Trade Agreement with the European Free Trade Association (Norway, Switzerland, Iceland and Liechtenstein), which entered into force on June 1, 2012. So, accession to the WTO was a powerful incentive to start negotiations with the European Union on the creation of a free trade area.

Cooperation between Ukraine and the WTO has contributed to a change in the geographical guidelines of foreign economic activity and a gradual departure from the market of the CIS countries as the main trading partner. Ukraine was able to enter new markets, in particular in Asia and Africa with agricultural products, thanks to WTO agreements.

WTO membership helps to reduce customs barriers to exports from Ukraine, increases access to foreign markets and supports Ukraine's investment attractiveness for foreign investors. However, cooperation with the World Trade Organization not only carries new opportunities that have opened up for Ukraine, but also contains certain risks and threats that must be taken into account. First of all, this is an aggravation of competition between Ukrainian and foreign producers of products as a result of reducing customs barriers to imports. Secondly, Ukrainian producers may face the problem of non-compliance of products with international standards, which may lead to the need for significant investments to modernize production to meet standards.

The benefits and challenges of cooperation between Ukraine and WTO are shown in Table 1.

Table 1. The benefits and challenges of cooperation between Ukraine and WTO

Benefits	Challenges
Reduction of tariff restrictions for Ukrainian	The threat of displacement of domestic
goods and services on all the most important	products by imported analogues.
commodity markets.	
Reduction of losses of Ukrainian exporters	Strengthening the influence of the world
from discriminatory anti-dumping measures.	situation on the Ukrainian economy.
Reforming of the Ukrainian economy.	Complication of state economic regulation.
Improvement of the investment climate.	Loss of state support for certain industries and
	regions.
More effective development of new	Transition of Ukrainian manufacturers to
technologies.	international technical standards on conditions
	of funds deficit.
The expansion of the assortment and	
improvement of the quality of consumer	
goods and services, lowering their prices.	

Source: Compiled by the author based on [2]

In modern conditions, cooperation between Ukraine and the WTO is an important objective, because the economy is in a state of deep crisis and stagnation. It

is characterized by such negative phenomena as decline in production, high inflation, rising public debt and state budget deficit and unemployment. We see a way out of the crisis situation in deepening the integration of the country's economy into the world economic system, the basis of which is the orientation towards expanding the export activities of domestic economic entities to deepen Ukraine's cooperation with WTO member countries to maximize the protection of interests in the implementation of foreign economic activity. In conditions of war, it may be necessary to protect some industries from competition from foreign enterprises, which may lead to the introduction of measures to restrict trade, which contradicts the obligations arising from WTO membership. Thus, the government of Ukraine should be ready to protect national interests and cooperation with the WTO in the current military conditions.

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# PECULIARITIES OF WRITING OFF DESTROYED AND DAMAGED GOODS DURING THE PERIOD OF MARTIAL LAW

**Introduction of the issue.** Every enterprise, regardless of its size and form of organization, can function efficiently only if the accounting process, including inventory accounting, is properly organized, as it is the basis for the enterprise's effective operation.

### The aim of the research is

Inventories are part of the assets that form the cost of production and are an important object of management and assessment of the company's competitiveness. Controlling inventory accounting is an integral, important part of an accountant's work, which allows management to keep a finger on the pulse of the company's profitability. However, nowadays every sphere of business activity in Ukraine has a number of newly created problems related to the full-scale invasion of the Russian Federation into the territory of Ukraine. The entire Ukrainian economy as a whole, enterprises and entrepreneurs in particular, are now forced to operate under martial law, and accordingly adjust all their business processes, including inventory accounting, to the new conditions and in accordance with the current legislation.

In accordance with NRS 9, inventories are a group of assets that:

- held for further sale in the ordinary course of business;
- are in the process of production for the purpose of further sale of the product;
- held for consumption in the course of production, performance of works and services, and management of the enterprise.

Inventories include:

- raw materials, basic and auxiliary materials, components and other material assets intended for production of goods, performance of works, provision of services, distribution, transfer, maintenance of production and administrative needs;
- work in progress, finished goods manufactured by the enterprise and intended for sale;
- goods in the form of tangible assets purchased (received) and held by the company for the purpose of further sale;
- low-value and wear and tear items that are used for no more than one year or the normal operating cycle, if it is more than one year;
- current biological assets, if they are valued in accordance with this National Regulation (Standard), as well as agricultural and forestry products after their initial recognition.

Movement of the company's assets, in particular, write-off of inventories from the balance sheet is necessary in the event of:

- transfer to production as a material for the final product;
- sale as a commodity;
- free transfer;
- loss due to negligence, theft or extraordinary force majeure [3].

In the combat zone or areas close to it, companies have lost and continue to lose a lot of inventory: destruction due to fires, shelling, damage to goods due to the failure of the relevant equipment intended for their storage, expiration of the shelf life, etc. That is why the last condition (write-off due to extraordinary force majeure) forms the relevance of our study.

It should be noted that the process of writing off inventories from the balance sheet is always preceded by an inventory process.

Under normal circumstances, the inventory process is well-established and planned and has a certain algorithm of actions. However, in the event of force majeure, there are a number of peculiarities specified in clause 8 of Section I of Regulation No. 879, which regulates the terms of the inventory procedure for enterprises located in the territory of the Autonomous Republic of Crimea and the city of Sevastopol, in the temporarily occupied territory in Donetsk and Luhansk regions.

Managers whose companies fall into the specified categories may conduct a scheduled or forced inventory only if it is possible to provide safe and unimpeded access to assets, primary documents and accounting registers that reflect the liabilities and equity of the companies and to conduct it as of the 1st day following the month in which the above obstacles arose.

To conduct an inventory, an inventory commission must be established by order of the company's director, which must include the chief accountant, a materially

responsible person, and a specialized specialist, and must specify the date of the inventory and the period of time allotted for it.

Based on the results of the inventory, the commission draws up inventory documents. The main forms of documents for reflecting the results of the inventory are approved by Order of the Ministry of Finance of Ukraine 572 dated 17.06.2015. Documents whose forms are not approved or are not convenient or are missing at the enterprise, can be developed independently, taking into account the requirements of the Law on Accounting and Regulation No. 88, and the forms from Order No. 572 can be used as a basis.

Based on the facts revealed by the inventory, the manager makes decisions depending on the results:

- write-off of assets that cannot be further used;
- to carry out work on the liquidation of the destroyed object;
- valuation and posting of spare parts, materials, scrap, and precious metals remaining after the destruction/liquidation of assets.

The results of the inventory, based on the approved protocol of the inventory commission, are reflected in the accounting and financial statements of the reporting period in which the inventory is completed (clause 3 of Section IV of Regulation No. 879) [1].

In order to write off inventories during martial law, a number of primary documents are drawn up, as under normal circumstances. Write-offs are carried out only on the basis of an order of the head. For this purpose, an inventory write-off act is drawn up, which indicates the reasons for writing off assets based on the results of the inventory.

The write-off of destroyed inventories is reflected by debiting subaccount 997 (Other expenses of ordinary activities) and crediting account 20 (Inventories).

If lost inventories that have been transferred to safe custody are written off, they are recorded by debiting subaccount 947 "Shortages and losses from damage to valuables". Data on these inventories are also recorded in off-balance sheet subaccount 072 "Unrecovered shortages and losses from damage to valuables". For compensation of lost inventories, their owner recognizes other operating income by crediting subaccount 716 "Recovery of previously written-off assets" with simultaneous write-off of information about them from off-balance sheet subaccount 072 [2].

**Conclusions.** A full-scale invasion has a negative impact on the business activities of the country, many enterprises suffered and continue to suffer huge losses, including losses of goods that were spoiled or destroyed. Accountants are faced with a difficult task, which is connected precisely with the inventory process and the subsequent write-off and reflection in the records of destroyed goods.

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### EUROPEAN EXPERIENCE IN CUSTOMS RISK MANAGEMENT IN IMPROVING THE EFFICIENCY OF THE CUSTOMS AUTHORITIES OF UKRAINE

The purpose of the study is to consider the experience of some EU countries and how European customs authorities in their practice use modern technologies in the process of customs control, which meet international standards in the field of risk management and recommendations of the World Customs Organization.

We emphasize that a necessary condition for increasing the efficiency of the work of the customs authorities of Ukraine is the use and adaptation of foreign experience, in particular European experience, in the development of the customs risk management system. We will prove that the introduction of the main principles of the European customs risk management system into the activities of the customs authorities of Ukraine will allow to increase the efficiency of customs procedures, reduce the time of passing customs formalities, and timely identify unscrupulous subjects of foreign trade.

The purpose of the risk management system in the German customs service is primarily automatic risk assessment using data aimed at minimizing the tax risks of non-payment of payments to the state budget. Such a risk management system allows for the distribution of risks according to their nature, the origin of the goods, the participants of the FEZ, as well as to make decisions about the inspection of goods and vehicles even before crossing the customs border, which facilitates the simplification of customs formalities. The structure of the risk management system in Germany has a three-level system - central, regional and local. Risk management strategies are adopted at the first level and are related to tax transactions. At the regional level, a direct assessment of the scheme of the risk management system is carried out, its refinement, if necessary, revision at the federal level. At the local level, risk management is used by tax authorities, who can audit a case selected for an external tax audit. In addition to the centralized risk analysis, there is also a decentralized evaluation of the participant of the ZED (Dezentrale Beteligtenbewertung – DEBBI). Such assessment significantly affects the processing of information about a new trade participant. However, such work can further provide guidance for risk profiling.

The experience in building the customs risk management system of Poland is very useful for Ukraine, because the principles on which the activities of the customs authorities of Ukraine and Poland are based are very similar. Like most of the countries of the European Union, the customs authorities of Poland are part of the Ministry of Finance. A feature of the risk management system is the development of customs risk profiles and indicators, mainly at regional levels. In Poland, only the central register of risks is developed centrally, which is the basis for the development of work plans of customs authorities, which are aimed at minimizing the identified risks. Successful filling of the risk management system in the customs administration of Poland is facilitated by access to specialized EU databases, as well as close cooperation, both at the level of EU member states and at the level of structural subdivisions of customs institutions of the Republic of Poland. During customs control and customs clearance, the customs authorities of the Republic of Poland use several databases: separately for import, export and transit; when passing goods and passengers through the customs border.

Thus, the European experience shows that customs risk management must be considered primarily as a continuous process that requires the realization of information and operational risk data from various sources and an assessment of their quality and reliability, including an assessment of the risk that the data may be compromised. This process can be effective only under the condition of continuous information updating and prompt response to the identification of potential risks.

The implementation of the main principles of the European customs risk management system in the activities of the customs authorities of Ukraine will allow to increase the efficiency of customs procedures, reduce the time of passing customs formalities and timely identify unscrupulous subjects of foreign trade.

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### IMPROVING THE EFFECTIVENESS OF TRAINING THE ORGANIZATION'S PERSONNEL

The company's personnel are the main resource that determines how effectively the company will develop. The competitiveness of the enterprise will directly depend on how much qualified personnel it has.

The study of enterprise personnel development strategies is quite popular and this is the object of many authors such as Balabanova L.V., Dovgan L.E., Kybanov A.Ya., Polonskyi A.N., Volkova I.P., and others. The topicality of this issue is due to the fact that the personnel of the enterprise is the main element that ensures its effective functioning.

Currently, the development of strategic planning for personnel development in enterprises is quite relevant. Personnel development is carried out by the personnel management service for training and professional development with the help of measures of an organizational and economic nature.

Considering an employee as a person, that is, whose activity is innovative, namely, learning, gaining experience, developing creative abilities, various types of research and analysis of the obtained results. There are components under the influence of which the intellectual capital of the enterprise is forged. The result of the activity is the formation of individual plans that must meet the goals of the enterprise, the employee of which is a certain individual. For successful operation, the enterprise carries out innovative activities related to the development of intellectual capital.

The phenomenon of the direct impact of knowledge is something that we cannot explain, staying within the framework of classical economic theories and using only indirect, qualitative criteria for evaluating the imaginary component of resources. We also cannot rule out that our mind is a quality, the essence of which is hidden in unusual and strange features of objective physical laws.

Considering the personnel management system from a strategic point of view, it becomes necessary to provide the enterprise with the human resources, effectively distribute responsibilities and develop a motivation system.

The choice of personnel development strategy directly depends on the marketing strategy of the enterprise [2].

The growth strategy is the enterprise's entry into new markets, diversification, and the introduction of innovations. Prospective personnel with high qualifications and effective ideas for the development of the enterprise are being recruited.

The strategy of moderate growth is characteristic of enterprises that occupy advantageous positions in the market. Enterprises with a strategy of moderate growth provide their human capital needs to a greater extent with their own employees: conducting retraining, changing positions, i.e. internal movement of personnel, continuous development and upgrading of skills.

For this enterprise, not only the development strategy is inherent, but also the reduction strategy is inherent, that is, it is used when it is necessary to reduce or even liquidate those divisions and lines that are unprofitable. The consequence for the staff is quite negative due to the mass dismissal of employees. Only those who will be able to perform the work foreseen by the future activity of the company can stay.

It is precisely for the implementation of personnel development strategies and ensuring the effective flow of processes at the enterprise that the management needs to pay attention to the method of motivating employees, both materially (calculation of bonuses, interest and bonuses, provision of a social package) and non-materially (certificates, additional days off, direction for rest and providing housing) [1].

Therefore, choosing an effective personnel development strategy as one of the most important resources for the enterprise and constant investment in the training of its employees is a guarantee of improving its competitive position. To obtain an effective result from the activity of the personnel development system, which functions depending on the chosen strategy, it is necessary to connect it with the motivational system at the enterprise.

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### THE IMPACT OF THE WAR ON BUSINESS IN UKRAINE

It will be difficult to win the war without the functioning of businesses that allow Ukrainians to provide for themselves and support the Armed Forces. The research aims to find out how the war affects business operations in Ukraine.

During the month of the war, Ukrainian business lost more than during the two years of the pandemic. The extent of the damage and the long-term consequences are difficult to assess, as hostilities in the country continue. According to the estimates of the National Bank, during the war, the economy of Ukraine loses 50% of its "unproduced" GDP. That is, every week costs the national economy more than UAH 50 billion. And this is without losses from destruction.

The IMF estimates Ukraine's losses due to the military invasion of the Russian invaders at 35% of GDP. And this is only in a month, but a whole year has already passed. A large number of enterprises and organizations found themselves in the zone of active hostilities, which led to significant losses and destruction. However,

businesses located far from the shelling suffer no less, in particular from problems with logistics, lack of raw materials.

Another blow to the work of enterprises, when they seemed to get used to the new working conditions, were enemy attacks on energy facilities, which greatly complicated the situation. Among the other challenges noted by the member companies of the European Business Association are communication and Internet outages and problems with booking employees and traveling abroad: 88 percent of companies have mobilized employees, and a third have mobilized critical specialists, mostly IT - specialists, engineers and other representatives of technical specialises.

Despite the constant troubles, Ukrainian entrepreneurs continue to work and support the country's shaky economy. The state is trying with all its might to help the development of business, its relocation from "hot spots" and the opening of new enterprises to create new jobs.

According to the Ministry of Economy, as of the beginning of February, 791 enterprises were relocated, of which 617 are already working in a new location.

Already in March of last year, the law on preferential taxation of business was adopted. In addition, customs duties and VAT were abolished on all imports, which, however, were returned in June.

Despite the difficulties, 76% of entrepreneurs plan to expand their business already in 2023. For the most part, entrepreneurs rely on their own finances and to a lesser extent on grants and loans. As for wages, the majority of business owners polled by the European Business Association (61%) do not plan to change the wages of their employees this year. However, 28% of respondents plan to increase it, while 11% of respondents plan to optimize wages.

Our country has a strong potential in the production of agricultural products, energy, IT technologies and other industries. To achieve success in business, it is important to know your strengths and weaknesses, as well as to involve experts from different fields in cooperation. In the near future, experts expect assistance in the restoration and reconstruction of Ukraine, which includes assistance in attracting foreign investments to our country.

After all, the development of business in Ukraine depends on many factors, but mainly it depends on the efforts of entrepreneurs and their willingness to work in difficult conditions and look for new opportunities for the development of their enterprises. Having analyzed all the problems faced by Ukrainians and how they solved them, we can be sure that Ukrainian businessmen managed to find a way not only to stay afloat, but also to expand their own horizons, not only improving their own lives, but also giving hope for a bright future.

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# CRYPTOCURRENCIES AS A COMMON MEAN OF INTERNATIONAL PAYMENTS IN THE FUTURE

Cryptocurrencies have been increasingly gaining popularity as a means of payment, investment, and store of value in recent years. The decentralized and secure nature of cryptocurrencies has made them an attractive option for those seeking to conduct international transactions.

Cryptocurrency is a digital or virtual currency that uses cryptography to secure and verify transactions and to control the creation of new units. Cryptocurrencies are decentralized, meaning they are not controlled by any central authority or government, and transactions are recorded on a public digital ledger called a blockchain [1].

When talking about the potential of cryptocurrencies as a means of international payments in the future, it is firstly important to understand the current limitations of traditional methods of international payments. The process of sending and receiving money across borders can be time-consuming, expensive, and subject to high fees and currency conversion costs. The use of intermediaries such as banks, payment processors, and clearinghouses can further complicate and slow down the process.

Cryptocurrencies, on the other hand, offer a potential solution to these problems. Transactions can be conducted directly between individuals or entities without the need for intermediaries, which can significantly reduce costs and speed up the process.

One of the key advantages of cryptocurrencies as a means of international payments is their global distribution. Unlike traditional methods that are often limited to certain geographic regions or currencies, cryptocurrencies can be used by anyone, anywhere in the world, as long as they have an internet connection. This could be particularly useful for individuals and businesses operating in countries with underdeveloped financial infrastructure.

Another potential advantage of cryptocurrencies is their speed and efficiency. Transactions can be processed in minutes or even seconds, regardless of the location of a sender and a recipient. This can reduce the costs and delays associated with traditional payment methods such as bank transfers and payment cheques.

Despite these advantages, there are also challenges and risks associated with the use of cryptocurrencies for international payments. One of the main challenges is the lack of widespread adoption and acceptance. While cryptocurrencies have gained popularity in recent years, they are still not widely accepted by entrepreneurs and businesses around the world. This could limit their usefulness as a means of payments, especially for smaller transactions.

There is also cryptocurrency manipulation which refers to the intentional effort to influence the price of cryptocurrencies for personal or financial gain. This can be done in various ways, such as spreading false information, creating fake news, and manipulating the supply and demand of cryptocurrencies through buying or selling

large amounts of them. One example of cryptocurrency manipulation is the impact of Elon Musk's effective Twitter posts, which can influence the price of cryptocurrencies. Musk, who is known for his active presence on social media, has made several tweets about cryptocurrencies, particularly Bitcoin and Dogecoin, which have caused significant price movements in the market [2].

Another challenge is the environment around cryptocurrencies. Different countries have different regulations and laws regarding the use of cryptocurrencies, which can create uncertainty and legal risks for individuals and businesses using them for international payment. There is also the risk of fraud, hacking, and other security breaches, which can result in the loss of funds.

We would like to conclude that cryptocurrencies offer significant potential as a means of international payment in the future. Their decentralized and secure nature, global reach, and potential for reduced costs make them an attractive option for individuals and businesses conducting international transactions. However, there are also challenges and risks that must be addressed, including the need for greater adoption and acceptance, cryptocurrency manipulation, clearer regulatory frameworks, and improved security measures. As cryptocurrencies continue to develop and to get stronger, their role in international payments is likely to become increasingly important.

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# ENHCING EFFICIENCY THROUGH EMPLOYEE MOTIVATION MANAGEMENT: A CASE STUDY OF SILPO-FOOD LLC

Today's unstable business environment requires management to take decisive actions in all aspects of management. HR management is no exception, and in particular, it includes managing employee motivation. Companies are increasingly facing the need to attract highly qualified employees. Each of them, in addition to the basic salary, requires certain additional incentives. Employee motivation is an area of HR management responsible for creating and deeply rooting a certain incentive for each employee in the corporate culture [2, P. 201].

Silpo-Food LLC is a leading supermarket chain in Ukraine that operates more than 300 stores across the country. The company's success is attributed to its

commitment to providing high-quality products and services to customers, which is achieved through the hard work and dedication of its employees.

Employee motivation management is an essential aspect of organizational performance, as it influences employee behavior, job satisfaction, and productivity. It is imperative for companies to have effective staff motivation management strategies to enhance employee engagement and commitment to organizational goals [1, P. 268-279].

The **aim** of this article is to assess the effectiveness of staff motivation management at Silpo-Food LLC and to determine how it impacts the company's overall performance. It will provide a comprehensive analysis of the company's motivation strategies, their effectiveness, and the challenges faced in implementing them and offer recommendations for improving staff motivation management at Silpo-Food LLC and other organizations.

The **subject** of this article is the staff motivation management strategies employed by Silpo-Food LLC and their impact on the company's overall performance.

### The **objectives**:

- 1. to define the essence and role of employee motivation management in economic activity;
  - 2. to study the system of employee motivation management at the enterprise;
- 3. to determine the impact of staff motivation management on employee satisfaction and productivity;
- 4. to examine and evaluate the relationship between staff motivation management and organizational performance;
- 5. to identify areas for improving the existing system of staff motivation management at Silpo-Food LLC.

To achieve the objectives mentioned above, the following **methods** have been conducted:

- 1. Literature review: A review of relevant academic literature on staff motivation management and its impact on organizational performance will be conducted.
- 2. Survey: A survey of Silpo-Food LLC employees will be conducted to measure their level of satisfaction and motivation, and to identify the factors that influence their motivation.
- 3. Recommendations: Based on the findings, recommendations will be made for improving staff motivation management at Silpo-Food LLC.

Employee motivation management is critical for enhancing organizational performance. Managing staff motivation is one of the ways to increase labour productivity [6, P. 261-263]. Motivation, in turn, is a set of driving forces that encourage a person to act and determine his or her behaviour. Research has shown that employees who are motivated are more productive and committed to their work, leading to higher levels of job satisfaction and organizational performance. Furthermore, effective employee motivation management can lead to reduced turnover rates and absenteeism, which can result in cost savings for the organization [4, P. 635-372]. Therefore, it is essential to study the effectiveness of staff motivation

management to identify areas of improvement and implement strategies that can enhance organizational performance.

The benefits of effective employee motivation management are numerous. Studies have found that when employees are motivated, they are more likely to engage in behaviors that benefit the organization, such as helping coworkers and going above and beyond their job requirements. Motivated employees are also more likely to be innovative and proactive, leading to increased creativity and innovation within the organization. Finally, effective employee motivation management can lead to a positive work environment, which can result in increased job satisfaction and employee retention [7, P. 7-13].

Silpo-Food is a large supermarket chain with retail outlets across the country. With more than 300 locations across Ukraine, Silpo-Food LLC is a nationally recognized supermarket business. The commitment of the business to giving clients high-quality goods and services—achieved via the persistence and commitment of its staff—is attributed with its success.

During the period under review, the company has demonstrated sustainable development and efficient management. In particular, over the past 5 years, there has been an increase in the number of supermarkets across the chain [11]. Silpo has a clear organisational structure and builds its activities on the basis of a specific mission and key values. The main goal of Silpo-Food LLC is to make not only guests happy, but employees as well.

Silpo-Food LLC is committed to creating a positive work environment that promotes employee satisfaction, engagement, and productivity. The assessment of the existing system of staff motivation management showed that the company has a comprehensive social policy [10]. Employee management takes into account the company's existing labour resources and future possible staffing needs. During the period under review, there is a tendency to increase the number of employees, except for 2022 [3]. Recent redundancies were caused by the war and partial closure of the chain's supermarkets. Silpo-Food LLC's employee incentive system includes a tangible component - salary, bonuses, allowances - and an intangible component - benefits, training, working conditions, and recognition. Employee salaries are above the industry average.

The company has implemented several employee motivation management strategies to achieve this goal. Firstly, the company uses a performance-based compensation system that rewards employees for their hard work and dedication [10]. This system is designed to provide a fair and transparent means of compensation that is tied to the individual employee's contributions to the company's success.

Secondly, Silpo-Food LLC emphasizes the importance of employee development and career growth [3]. The company provides regular training programs and professional development opportunities to its employees to help them acquire new skills and knowledge, and advance their careers within the company.

Thirdly, the company promotes a culture of teamwork and collaboration. Silpo-Food LLC encourages its employees to work together towards common goals, fostering a sense of camaraderie and mutual support [11]. Silpo-Food LLC places a strong

emphasis on recognizing and celebrating employee achievements. The company regularly acknowledges outstanding performance and contributions through awards, recognition programs, and other incentives.

Overall, Silpo-Food LLC's employee motivation management strategies are designed to promote employee satisfaction, engagement, and productivity. By providing fair compensation, opportunities for professional growth, and a positive work culture, the company aims to create a motivated and high-performing workforce.

In addition, we found out that the element of recognition is more complex, and attention should be paid to praising each individual employee for his or her contribution to the common cause [3]. Also, the company's management should pay attention to the medical care of employees, not only of the management team, but also of workers with a significant physical burden.

In conclusion, the assessment of the effectiveness of staff motivation management at Silpo-Food LLC highlights the importance of maintaining an engaged and motivated workforce to enhance organizational performance. The study revealed that while the company has several employee motivation management strategies in place, there are areas for improvement. The use of financial incentives alone is not enough to motivate employees, and other factors such as job satisfaction, recognition, and opportunities for growth and development are equally important.

To improve employee motivation management at Silpo-Food LLC, the company should consider implementing a more comprehensive approach that takes into account the various factors that influence employee motivation. This includes regular feedback and recognition, opportunities for career development, and a positive work environment. Additionally, managers should be trained in effective communication and leadership skills to better support and motivate their teams.

Overall, this study provides valuable insights into the importance of employee motivation management for enhancing organizational performance. It is recommended that other companies assess their own employee motivation management strategies to ensure that they are effectively engaging and motivating their employees. By prioritizing employee motivation, companies can improve their bottom line, reduce turnover, and create a more positive and productive workplace culture.

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# OVERVIEW OF THE ROLE OF DEVELOPING COUNTRIES IN INTERNATIONAL TRADE

The study considers the factors of income gap, borrowing and debt, capital inflow concerning the participation of developing countries in international trade.

**Income Gap.** The income gap refers to the unequal distribution of income among the population. In many developing countries, a small percentage of the population has a disproportionately large share of the national income, while the majority of people live under poverty line.

There are several reasons why income gaps exist in developing countries. One of the main causes is unequal access to education and job opportunities.

Another factor that contributes to income gaps is the unequal distribution of wealth and resources. In many developing countries, the wealthy elite control most of the country's resources, including land, capital, and natural resources.

In addition, political instability, corruption, and weak institutions can also exacerbate income inequality in developing countries. When governments are corrupt or ineffective, they may not be able to implement policies and programs that would help to reduce income gaps.

**Borrowing and Debt.** Because many developing economies offer potentially rich opportunities for investment, it is natural that they have current account deficits and borrow from richer countries. In principle, developing country borrowing can lead to gains from trade that make both borrowers and lenders better off. However, in practice, excessive borrowing and debt often lead to many problems [1].

One of the main challenges of borrowing and debt in developing countries is the risk of a to default crises that generally interact with currency and banking crises.

Furthermore, borrowing and debt can also affect political stability. In some cases, countries become heavily indebted to external creditors, creating concerns about sovereignty and foreign influence, which can lead to political unrest and instability.

Also, another problem with borrowing and debt in developing countries is corruption and mismanagement. Corrupt officials use borrowed funds for personal gain rather than investing in development projects, leading to a waste of resources and an increase in debt.

**Capital Inflow.** Capital inflow is a significant driver of economic growth in developing countries. Capital inflow refers to the amount of money that flows into a country from external sources, including foreign direct investment (FDI), portfolio investment, and loans. Capital inflow can help developing countries access the capital they need to invest in development projects. However, capital inflows can also have negative consequences.

They may lead to excessive expansion of aggregate demand or macroeconomic overheating. This expansion is likely to be reflected in inflationary pressures, real exchange rate appreciation, and widening current account deficits.

Venezuela is a very vivid example of a developing country that is struggling with all of the above issues.

Despite being one of the wealthiest countries in South America, with vast oil reserves, a large percentage of the population lives in poverty. The income gap in Venezuela has been exacerbated by economic mismanagement, political instability, and corruption.

According to a study by the National Poll of Living Conditions (ENCOVI), in 2021, 91% of Venezuela's population lived below the poverty line, with an estimated 68% living in extreme poverty. The income gap in Venezuela is one of the highest in Latin America, with the wealthiest segment of Venezuelan society being 70 times richer than the poorest one [2].

One of the main reasons for the income gap in Venezuela is the country's reliance on oil exports, which has led to a lack of economic diversification. When oil prices were high, Venezuela's government was able to provide social programs and subsidies, but when oil prices fell, the country's economy began to suffer. Economic mismanagement, corruption, and political instability have also contributed to the income gap in Venezuela.

Venezuela has been relying heavily on external borrowing to finance its development projects. However, this has led to a debt crisis, which has had negative consequences for the country's economy and people. Venezuela has an estimated debt burden of \$150 billion or higher. The country's reliance on external borrowing has led to concerns about its ability to service its debt, especially in the face of declining oil prices and political instability.

In addition to external debt, Venezuela has also been struggling with domestic debt, which has been fueled by inflation and currency devaluation. The government has been printing money to finance its expenditures, leading to hyperinflation and a devaluation of the country's currency. This has made it difficult for the government to repay its debts.

Capital inflow in Venezuela has been volatile in recent years due to the country's economic and political instability. While Venezuela has historically been a recipient of significant foreign investment due to its abundant oil reserves, the country's recent economic crisis has led to a decline in capital inflows [3].

One of the main sources of capital inflow in Venezuela has been foreign direct investment in the oil sector. However, the government's policies, including nationalization and expropriation of foreign companies, have led to a decline in FDI in recent years.

**Conclusion.** For developing countries the income gap, borrowing and debt, and capital inflow are all important issues that can affect the economic development and stability. It is important for policymakers to carefully manage these issues to ensure sustainable and equitable growth. As in the case of Venezuela, the country will need to implement many reforms, improve its macroeconomic imbalances, promote economic diversification, undertake effective debt management policies and programs, address corruption and mismanagement, promote a favorable business environment.

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# PERSPECTIVES AND CONTROVERCIES OF THE WORLD TRADE ORGANISATION

The aim of the study is to analyze the principles and functions of The World Trade Organization (WTO) and to consider the perspectives and challenges for this international institution.

The WTO was established on January 1, 1995. The aim was to enhance global trade and economic openness, but it has been a source of controversy ever since. These are some of the criticisms of the WTO:

### 1. Free Trade benefits developed countries more than developing countries.

The World Trade Organization's purpose is to promote the free trade of goods and services amongst its member states by discouraging protectionist measures and settling trade disputes. This directly benefits developing countries as it results in an increase in real GDP. On the other hand, the WTO may not be beneficial for developing countries as it leaves their infant industries exposed to larger firms from developed countries which can be significantly detrimental for their economy and its development.

This is because the developing country would also have to lower their own protectionist barriers, such as tariffs. This allows firms in developed countries to export to the developing country and due to the fact that they are able to exploit economies of scale, they are able to produce the good or service at a lower price than the firms within the infant industries in developing countries. This increases the demand for imports as well as potentially results in bankruptcies for these infant firms due to the lack of demand [1].

Also here we can talk about most favoured nation principle. This is a core tenant of WTO rules – countries should trade without discrimination. It means a local firm is not allowed to favour local contractors. It is argued this gives an unfair advantage to multinational companies and can have costs for local firms and the right of developing economies to favour their own emerging industries.

**Practical Case** of India's solar power program: In 2016, India introduced a program that required solar power developers to use domestically manufactured solar cells and modules in their projects. This was intended to support the development of a local solar manufacturing industry and create jobs in the country. However, this policy was challenged under the MFN principle by the United States, who argued that it discriminated against American solar manufacturers. The WTO ultimately ruled in favor of the United States, forcing India to change its program to be more inclusive of foreign companies [2]. Critics argued that this ruling undermined India's efforts to promote the growth of a local solar manufacturing industry and transition to a low-carbon economy.

### 2. Lack of progress in negotiations.

The WTO has been criticized for its inability to make progress in multilateral negotiations, such as the Doha Development Round, which has been ongoing since 2001. Critics argue that the organization's consensus-based decision-making process and the divergent interests of its member countries have made it difficult to reach agreement on key issues.

The Doha Development Round of World Trade Organization (WTO) negotiations has not officially ended, but it has been largely stalled since 2008. The Doha Round was launched in November 2001 and was supposed to be completed by January 1, 2005. However, negotiations were repeatedly extended as disagreements between developed and developing countries over issues such as agricultural subsidies and intellectual property rights remained unresolved.

The last major attempt to revive the Doha Round took place in 2008 at the WTO's Ministerial Conference in Geneva. At that conference, negotiators failed to reach a consensus on a number of key issues, including agriculture and industrial tariffs. Since then, negotiations have largely been on hold, with occasional efforts to restart them.

In the absence of progress on the Doha Round, some countries have pursued bilateral and regional trade agreements as an alternative. For example, the United States has negotiated a number of bilateral agreements, including the Trans-Pacific Partnership (TPP) and the United States-Mexico-Canada Agreement (USMCA). Other countries, including China and the European Union, have also been active in negotiating regional trade agreements.

### 3. Environmental and social concerns.

Free trade has often ignored environmental considerations. Free trade has enabled imports to be made from countries with the least environmental protection. Many criticise the WTO's philosophy that the most important economic objective is the maximisation of GDP. In an era of global warming and potential environmental disaster, increasing GDP may be the least important.

Arguably a reasonable argument for restricting free trade is that it enables countries to maintain cultural diversity. Some criticise the WTO for enabling the domination of multinational companies which reduce cultural diversity and tend to swamp local industries and firms [3].

However, there are also efforts to counterbalance the WTO's influence on cultural diversity, such as the UNESCO Convention on Cultural Diversity (CCD), which was adopted in 2005 and entered into force in 2007. The CCD recognizes the right of states to protect and promote their cultural expressions, and encourages international cooperation and dialogue on cultural matters.

### 4. Dispute settlement crisis.

The WTO dispute settlement system is facing a serious crisis. The main reason is that the United States has blocked appointments to the Appellate Body, which is the highest instance of the WTO dispute settlement. This has led to most panel reports being appealed "into the void" and leaving the dispute unresolved [4].

The US has raised several grievances with the Appellate Body, such as questions of delay, judicial over-reach, precedence, and transition rules. However, other WTO

members have not agreed with the US approach and have proposed various solutions to reform the Appellate Body.

Some WTO members have also established an alternative mechanism called the Multi-Party Interim Appeal Arbitration Arrangement (MPIA) to deal with disputes in the absence of a functioning Appellate Body.

This has raised concerns about the effectiveness and legitimacy of the organization's dispute settlement system.

**Conclusion.** Overall, the WTO has been criticized for prioritizing trade over other social and economic concerns and for failing to adequately address the needs of developing countries. There are ongoing debates about the role and effectiveness of the organization and calls for reforms to address some of these criticisms.

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# DEVELOPMENT OF EFFECTIVE FINANCIAL MANAGEMENT STRATEGIES IN AN UNSTABLE ECONOMIC SITUATION

This article is dedicated to studying various factors that contribute to economic instability and developing effective financial management strategies to reduce risks. Formulating effective financial management strategies is crucial for business development in an uncertain and volatile economic environment.

One of the most important issues in today's economic climate is the increasing risk of financial instability, which includes market instability, fluctuations in consumer demand, and changes in interest rates. To seriously consider these risks, a company must first analyze and study its financial situation and fully understand its income, expenses, and risks.

Effective financial management strategies in unstable economic situations require a special approach. An important aspect of this strategy is having contingency plans in place. These plans should outline the steps that the company will take to respond to different economic scenarios, including sudden changes in demand, logistical difficulties, and currency fluctuations. With a clear plan, companies can minimize the impact of economic uncertainty and ensure uninterrupted operation.

An important aspect of sound financial management in unstable economic situations is optimizing financial resources. This involves identifying opportunities to reduce costs, such as negotiating better logistics or implementing more efficient operational processes. By maximizing the value of financial resources, businesses can improve their financial position and increase their resilience in the face of economic uncertainty.

In unstable economic conditions, effective financial management strategies require a flexible approach. Enterprises must be ready to quickly adapt to various economic conditions, including changes in interest rates, market demand, and currency fluctuations. By remaining agile and flexible, companies can position themselves to take advantage of opportunities as they arise and mitigate risks before they become a serious threat.

Overall, developing an effective financial management strategy in unstable economic conditions requires a proactive, multifaceted approach. By conducting a thorough analysis of their financial situation, developing contingency plans, optimizing financial resources, and remaining adaptive, companies can achieve success even in the most challenging economic conditions.

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# ORGANISATION OF THE INVENTORY ACCOUNTING PROCESS AND WAYS TO IMPROVE IT

The aim of this study was to investigate the organization of the inventory accounting process and ways to improve it.

For the effective functioning of any business entity, it is necessary to increase the share of inventories that will be used for the successful operation of enterprises. One of the important conditions for the efficient production process of any enterprise is the availability and proper use of inventories. Inventories occupy a significant place in the structure of expenses of enterprises, affect the determination of the results of the enterprise's activities and participate in the presentation of information about its financial condition.

It should be noted that the main regulatory document on inventory accounting is NP(S)BU 9 "Inventories", which states that inventories are assets that :

- are in the process of production for the purpose of further sale of the product of production;
- are held for consumption in the course of production, performance of works and services, as well as management of the enterprise;

 held for further sale (distribution, transfer) in the ordinary course of business [1].

Inventories are an element of current assets that are used during one operating cycle (usually 12 months). Therefore, constant control and improvement of the accounting process at each stage of inventory accounting is a prerequisite for the formation of reliable information on the receipt, use, movement, compliance with the norms and established limits at the enterprise.

In accordance with NAS 9, inventories are valued upon receipt at cost, which is determined depending on the method of their receipt (in-house production, contribution to the charter capital, free-of-charge receipt, acquisition in exchange for similar inventories).

Accordingly, in accordance with NP(S)BU 9, the carrying amount of inventories upon disposal is assessed using the following methods: selling price, first-in, first-out (FIFO) cost, identified cost of the relevant unit of production, standard costs, weighted average cost [1].

Having identified and studied the features of the three methods, it can be noted that the advantage of the FIFO method is the priority of valuation of those inventories that were first received by the enterprise. The identified unit cost method is best used when the amount of inventory is small, because the valuation is performed on a unit-by-unit basis. The weighted average cost method involves the assessment of the total cost of inventories, so it is more appropriate to use it when there are large quantities of inventories [3, c.4].

Also, the main areas of improvement of the production process can be:

- improvement of inventory accounting documentation, their definition and classification;
  - improvement of control over the movement of production stocks;
- development of a system for automation of accounting and analytical procedures in the management of production stocks [4, c.897].

The main ways to improve the accounting of production stocks can be:

- timely and thorough inventory;
- modernisation of warehouse accounting cards;
- simplification of the procedure for processing posting transactions;
- construction of modern warehouses equipped with special accessories [2, c. 6].

The organisation of warehouse accounting is also an important element of the accounting process for production stocks. Warehouse accounting is the transport and storage of production stocks.

To improve such accounting when inventories arrive at the warehouse, it is necessary to keep batch accounting, where the movement of inventories is carried out in a linear manner [4, c.898].

The process of disposing of inventory is quite complex due to the large amount of documentation. Therefore, issuing documents centrally through automation will greatly facilitate work and save time [3, c.6].

Thus, optimisation of methods for assessing the disposal of inventories, improvement of automation processes of inventory accounting at the enterprise, ensuring the quality of warehouse accounting will contribute to improving the efficiency of the system of accounting for the use and storage of inventories at the enterprise.

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### INTERNATIONAL TRADE MODELS: TRADITIONAL VS MODERN

The research suggests the comparative analysis of classic trade models and theories against more recent models.

**Introduction.** Contemporary economics science currently defines two types of international trade models (or theories): classic and modern ones. The purpose of them is to describe the relations between two or more economies or individuals trading in the international scale. If we talk about international trade, it is a process of exchange of goods, service or money between two subjects from different economic environments [1]. The fact they are from different initial conditions has formed a new area of economics called international trade to explore.

### Classic models. The most outstanding classic theories are:

- Absolute advantage theory
- Comparative advantage theory
- Heckscher-Ohlin Theory (factor-proportion)
- 1. First model was elaborated by Adam Smith. It is focused on the ability of a country to produce a good more efficiently than another nation. Smith reasoned that

trade between countries shouldn't be regulated or restricted by government policy or intervention. He stated that trade should flow naturally according to market forces.

If one country produces one type of goods cheaper and faster than others, so it has an absolute advantage in a quantity of those. Consequently, first country can specialize on producing this good.

- 2. The theory of comparative advantage has appeared as a logic developed continuance of the AA theory by David Ricardo. The problem is that some economies may have an absolute advantage in several goods, while others do not have any. However, those less developed countries can produce one type of goods more efficiently that other, so they still can have a specialization in industry they are relatively good at.
- 3. The theories of Smith and Ricardo didn't help countries determine which products would give a country an advantage. Therefore, Eli Heckscher and Bertil Ohlin, focused their attention on how a country could gain comparative advantage by producing products using those factors of production (land, labor, and capital) economy is abundant in. The good produced mostly by highly supplied factor will be exported abroad.

### Modern models. They are mostly focused on industry trade.

There are more contemporary theories of international trade than traditional, here are the most important ones [2]:

- Linder (country similarity) theory
- Product Life Cycle Theory
- Scale effect theory
- Competitive Advantage Theory
- 1. Country similarity theory was developed in 1961. S. Linder assumed that countries of the same or similar level of development will have close consumer preferences. So, while going global the product will be sold better in countries with similar macro indexes.
  - 2. Product Life Cycle Theory.

Was developed by Raymond Vernon in 1960s. The theory, originating in the field of marketing, stated that a product life cycle has four stages: new product, growing product, maturing product, decline.

Vernon made efforts to explain the production success of some countries with Life cycle model, stating it a good is originally produced in home country on the early stages and is globally produced on later stages.

3. Scale effect theory.

Paul Krugman and Kelvin Lancaster found out a model of scale effect in 1980s. It was based on the average expense attribute to decrease expenses for every single item while the whole production is increasing. It happens because of specialization growth, manufacturing integrality, technological saving economy.

Thus, the theory of economies of scale is a theory, according to which countries with the same factors availability benefit from foreign trade by specializing in those industries in which economies of scale are met.

4. Competitive Advantage Theory

Porter's theory stated that a nation's competitiveness in an industry depends on the capacity of the industry to innovate and upgrade. His theory focused on explaining why some nations are more competitive in certain industries. To explain his theory, Porter identified four determinants that he linked together. The four determinants are local market resources and capabilities, local market demand conditions, local suppliers and complementary industries, local firm characteristics.

**Conclusion**. Summarizing all above, we can note that traditional theories are dedicated to the international trade as a whole, while modern ones observe mostly industry scale. Nevertheless, there is no any single model able to completely describe the process of international trade from the beginning to the end, but just particular aspects of those.

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# INCREASE OF THE EXPORT POTENTIAL OF UKRAINE DUE TO ACCESS TO THE MARKET OF THE EUROPEAN UNION COUNTRIES

Open trade and integration into the EU internal market are key points for the preservation of the Ukrainian economy during the war and rapid economic recovery. In the conditions of a full-scale war, the EU became the main trading partner of Ukraine, accounting for more than 55% of mutual trade. Additional measures taken during the war, such as the elimination of all customs duties, the conclusion of an agreement on the abolition of transport permits and the joining of a common transit system helped Ukraine to soften the shock of the war and further connect the Ukrainian economy with the EU.

According to statistics, before Russia's large-scale invasion, the European Union's share of Ukraine's foreign trade was 41%, and more than 10,000 Ukrainian companies exported their products to the EU. Thus, in 2021, the volume of Ukrainian exports of goods to the EU amounted to just over \$26 bn., while imports amounted to about \$28.9 bn. By the end of 2022, the EU's share in Ukraine's foreign trade turnover reached 55.5%. For Ukraine, accession to the EU will mean an increase in trade flows, opening of new markets and easier access to them, increased complexity of products, and improved know-how.

Thus, the EU-Ukraine Association Agreement has been provisionally applied since November 2014. As a part of this Association Agreement, the Deep and Comprehensive Free Trade Agreement (DCFTA) has been provisionally applied since January 2016. It reduces tariffs faced by European companies when exporting to Ukraine. The agreement facilitates trade by increasing the efficiency of customs procedures and gradually approximating Ukrainian legislation, rules and procedures, including standards, to EU legislation. On September 1, 2017, the EU-Ukraine Association Agreement became fully operational.

To ensure Ukraine's continued access to the EU's Internal Market, the government has developed a Priority Action Plan for Enhanced Implementation of the EU-Ukraine Free Trade Area for 2023-2024. Also, an important component of Ukraine's integration into the EU Single Market is the Agreement on Ukraine's participation in the EU's Single Market program with a budget of EUR 4.2 bn. for 2021-2027. This program facilitates market access, creates favorable business environment, develops and grows businesses, and ensures competitiveness. It also provides for Ukraine's participation in the European Enterprise Network (EEN), Erasmus for Young Entrepreneurs (EYE), and joint cluster initiatives.

At the same time, Ukraine is accelerating the implementation of the Agreement on Access of Ukrainian Products to the EU Market (ACAA).

The conclusion of the Agreement will open up access for industrial products to the markets of Ukraine and the EU on the basis of mutual recognition of the results of conformity assessment for such products. This agreement will provide that:

- the requirements of Ukrainian technical regulations for products are identical to the requirements of the relevant EU directives;
- standards that provide a presumption of conformity with the requirements of technical regulations and their lists are identical to the relevant European harmonized standards and their lists;
- the requirements for designated bodies are identical to the requirements for notified bodies in the EU;
- Ukrainian producers will be entitled to affix the European conformity mark "CE" to their products.

Thus, this process should include preparing Ukraine for participation in the EU internal market in certain priority sectors of the economy, harmonizing the necessary framework and sectoral legislation in priority areas with the EU technical regulation system, ensuring transparency and predictability of the regulatory environment for business entities .

To summarize, in order to effectively increase the country's export potential by entering the EU market, Ukraine should focus on:

- 1. Promoting foreign economic activity of enterprises by creating favorable conditions for export, reducing administrative barriers and developing logistics infrastructure.
- 2. Developing high value-added production, focused on the production of technologically sophisticated and high-quality goods that are in high demand in EU

markets. To achieve these goals, the government should promote an investment environment, research, innovation and intellectual property protection.

3. Improve product quality by ensuring that products are of high quality and meet EU quality and safety requirements.

Thus, openness of trade between Ukraine and the European Union and integration into the EU internal market are the key to preserving the Ukrainian economy in war conditions and coming rapid economic recovery. Currently, Ukraine has the opportunity to increase its export potential in the European market of goods and services, having received a number of potential opportunities. However, it is important to note that further integration requires significant efforts and reforms, as well as compliance with European norms and standards.

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# Session work № 4

# CURRENT RESEARCH IN THE FIELD OF INFORMATION AND COMPUTER TECHNOLOGIES

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### CYBER HYGIENE: ESSENTIAL FOR DIGITAL SECURITY

In the current digital world, it is crucial to prioritize cybersecurity measures in order to protect confidential data from cyber attacks. One of the most important aspects of cybersecurity is cyber hygiene practices, which involve taking a number of precautions to protect personal data and ensure the functionality of devices and systems. By regularly following cyber hygiene rules, individuals and organizations can prevent cyber attacks and protect themselves from theft or damage to confidential information. Cyber hygiene is essential to maintaining the integrity and security of personal data, which if not followed, can lead to cybersecurity breaches. Therefore, it is vital to understand the importance of cyber hygiene and take regular measures to protect against cyber threats.

The cybersecurity industry faces a number of constantly evolving threats, including malware, phishing, and the use of emerging technologies such as machine learning and crypto currency. The lack of qualified cybersecurity professionals exacerbates these risks, which can lead to leakage, distortion, and degradation of information. This is already slowly leading to the growing likelihood of Internet outages, disinformation, and conflicting privacy rules now. In addition to the above threats, the cybersecurity industry is also facing challenges from the growth of Internet of Things (IoT) devices, cloud computing, and the increasing use of artificial intelligence (AI) and automation technologies. As the number of devices connected to the Internet increases, the attack surface for cybercriminals expands, creating more opportunities for them to exploit vulnerabilities. Cloud computing has also created new risks as many organizations rely on third-party providers to manage their data and applications. While cloud providers offer robust security measures, misconfigurations

and other human errors can still lead to data breaches. The use of artificial intelligence and automation technologies also creates both opportunities and risks. While these technologies can help identify and respond to threats faster and more efficiently, they can also be used by cybercriminals to develop more sophisticated attacks. Overall, the cybersecurity industry is facing an ever-changing threat landscape, with new risks and challenges emerging every day. To meet these challenges, organizations and users must also prioritize good cyber hygiene practices, such as regularly updating software and implementing strong passwords, to protect against common threats and reduce the risk of successful cyber attacks. Creating and enforcing a cyber hygiene policy is crucial for maintaining the security of your network and information. This policy should include regular maintenance practices and continuous user education. Using the right cybersecurity tools, such as antivirus software, network firewalls, and password protection, can also help protect your network. Implementing secure authentication and access policies, such as using strong passwords and multifactor authentication, is important for limiting access to authorized users. Confirming endpoint protections and employing a cybersecurity framework can further strengthen security measures. Finally, backing up data to a secondary location is essential for ensuring that the data is not lost in the event of a breach.

To ensure good cyber hygiene the following measures should be taken:

Keep passwords safe and secure: avoid using the same password for different accounts, change passwords regularly, use strong passwords, change default passwords on IoT devices, avoid writing down or sharing passwords, and use a password manager. Use multi-factor authentication: protect essential accounts with MFA and save backup codes in the password manager. Back up data regularly: keep files secure and protect against data loss by backing up essential files offline. Ensure privacy: don't post private information publicly on social media, review social media privacy settings, avoid quizzes/games/surveys asking for sensitive information, be cautious about app permissions, lock devices with a password/PIN, be careful on public Wi-Fi, use a VPN, make online transactions via secure websites, and share information about online privacy with family and friends. Keep apps, software, and firmware up to date: update regularly, set up automatic updates, delete unused apps, and download only from reputable/official sources. Secure routers: change default name/username/password, keep firmware up to date, disable remote access/UPnP/WPS, set up a separate network for guests, and use WPA2/WPA3 encryption. Avoid social engineering attacks: do not click on suspicious links/emails/ads.

Use network firewalls: use a firewall to prevent malicious software from accessing the computer or network via the internet, and ensure it is correctly configured. Encrypt devices: encrypt devices and other media containing sensitive data. Wipe hard drives: wipe hard drives clean before disposing of or selling a device. Ensure high-quality antivirus protection: use high-quality antivirus software and keep it up to date.

One of the most talked-about security events of the 2020 was at the Oxford University, Division of Structural Biology lab that conducted research on the COVID-19 vaccine. In this incident, threat actors were able to compromise internal lab systems

and gain unlimited access to coronavirus research data, biochemical sample data, and more. Although the university failed to disclose the scope of the data breach, it is clear that the damage is already done. In this scenario, the fallout from this cyber-attack could be the loss of intellectual property. It could have been avoided by means of zero-trust and device authentication: Oxford University could have stayed out of the headlines if they took a zero-trust approach and prevented unauthorized users and devices from accessing internal systems.

In conclusion, good cyber hygiene is essential for protecting your personal and sensitive data online. By following these best practices, including using strong passwords, keeping your software up to date, and using two-factor authentication, you can significantly reduce the risk of cyber attacks. Remember to regularly backup your data, limit your exposure to public Wi-Fi, and practice safe online shopping. Educate yourself on cybersecurity best practices and monitor your accounts for suspicious activity to ensure that your digital life remains secure.

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### PROTECTION OF PERSONAL DATA ON THE INTERNET

The purpose of this study is to investigate the issue of personal data protection on the Internet. The Internet has changed our lives in many ways, and every day more and more people are becoming victims of cybercriminals who use the information they collect for their own benefit. In this regard, the protection of personal data is becoming an increasingly important topic that requires detailed study.

In today's digital world, protecting personal data is a very important issue for individuals, organizations, and governments. The Internet provides many services, but it can also be a possible place for identity theft. In this research, we will look at how you can protect your personal data online.

First of all, you need to understand what personal data is. This is any information that can be linked to an identified person. This can be a first name, last name, address,

phone number, email, banking information, place of work, as well as any other information that can be associated with your identity.

Personal data need to be protected for many reasons among which there are the following:

- 1. Confidentiality: personal data may contain sensitive information about a person, such as name, address, phone number, email, financial data, medical information, etc. This data can be used by criminals for identity theft, fraud, or other crimes.
- 2. Financial security: attackers can use personal data to hack into bank accounts, credit cards, and to open new loans or obtain other financial services.
- 3. Medical security: personal medical data can be used to commit medical fraud, hack into medical record storage systems, or open additional medical records.
- 4. Business security: personal data of customers can be used by malicious actors to carry out cyber attacks on businesses, steal competitive information or other types of fraud.
- 5. Legal requirements: many countries have laws governing the collection, storage and use of personal data. These laws ensure that individuals have the right to protect their privacy and control the use of their personal data. Therefore, organizations must comply with these requirements to avoid fines or other legal consequences [1].

The right to privacy and protection of personal data is one of the fundamental rights under the United Nations Convention on the Rights of the Child (Article 16). This right applies equally to the digital environment.

According to Helen Nissenbaum, a professor of information technology at Cornell University, privacy is not a right to secrecy or control, but a right to the proper flow of personal information. It means that depending on the situation and context, a person can evaluate and decide what to share with others in the digital environment. In other words, a person has the right to know how and for what purposes their data is used, who stores it and for how long, and who has access to it. A person can also request the deletion of personal data or the correction of incorrect data [2].

When it comes to children, the question arises whether they are able to understand what personal information should not be shared with others, in what situations, and why. Although they are very concerned about what personal information will fall into the hands of their parents or friends, children do not understand why large corporations (such as Facebook, Instagram or Snapchat) are interested in such information. According to some studies, children take care of their privacy in their relationships with others, nevertheless, they share it publicly; that is, they are not aware of the misuse of personal data for commercial purposes and in an institutional context (e.g., at school, in a medical institution).

Due to the fact that they are not sufficiently aware of the risks, consequences, protections and rights related to the processing of personal data, children deserve special protection of privacy on the Internet (GDPR) [3].

Personal data on the Internet can be divided into three categories:

1. Active digital footprints – information (about themselves or others) that users leave when using the Internet, usually consciously, although not necessarily

intentionally (for example, when buying certain goods, downloading content from the Internet, uploading photos, creating profiles on social networks).

- 2. Passive digital footprints information that users leave on the Internet while using it, mostly unknowingly (e.g., through cookies, fingerprints, location data, use of smart things and smart toys).
- 3. Information obtained by analyzing the first two categories of data using algorithms (through the profiling process), possibly in combination with other data sources.

Among the most common types of threats to personal data on the Internet are the following:

- 1. Trolling is a type of interaction in online discussions when the interaction is aimed at provoking an emotional response, emotional reaction, emotional arguments, insults and long useless discussions, flaming, and escalating conflicts in readers to achieve the goals of the Internet troll.
- 2. Cyberbullying (online harassment) most often involves repeated offensive messages directed at the victim (for example, hundreds of SMS messages to a mobile phone, constant calls) with an overload of personal communication channels. Unlike an altercation, attacks are longer and more one-sided. Attacks also occur in chats or forums (places of conversation on the Internet), and in online games, attacks are most often used by griefers a group of players who aim not to win a particular game but to destroy the gaming experience of other participants.
- 3. Phishing is an attempt to obtain confidential information, such as passwords or credit card numbers, by spoofing websites or emails. This can lead to the loss of financial assets or identification data. More than 90% of hacker attacks start with so-called "email phishing". This is a type of fraud that relies on the gullibility of Internet users who simply open infected emails and their attachments, often triggering the creation of malicious and dangerous programs on their computers.
- 4. Identity theft is the process of obtaining personal information for the purpose of using it for criminal purposes, such as opening new credit accounts or using other financial services.
- 5. Viruses and malware are programs that can use a user's personal information without their knowledge or consent, such as keyloggers and spyware.
- 6. Data breaches are cases where personal information falls into the hands of the wrong people due to data leakage from websites or services.
- 7. Social engineering is the process of manipulating users to obtain their personal information, for example, by collecting data through social networks or faking trusted contacts.
- 8. Spam is the excessive sending of unsolicited email that may contain malware or phishing attempts.
- 9. Unauthorized access is the process of illegally gaining access to personal information, for example, through hacked accounts.
- 10. Dissing is the transmission or publication of compromising information about a victim online. This is done with the intention of ruining the victim's reputation or damaging their relationships with other people.

- 11. Happy Slapping is filming videos in which aggressors beat or abuse the victim in order to post the video on the Internet. This type of violence has recently become widespread in Ukraine.
- 12. Frapping gaining access to a person's account (hacking) on social media to post questionable content on their behalf, engage in dialogues or insult other users.
- 13. Catfishing creating a copy of the victim's profile on social networks based on stolen photos and other personal data.
- 14. Cyberstalking is the act of covertly tracking the persecuted and those who move around idly, usually done quietly, anonymously, with the aim of organizing criminal acts such as attempted rape, physical violence, and beatings. By tracking unwary users on the Internet, the criminal receives information about the time, place and all the necessary conditions for a future attack.

One of the most important things a user can do to protect their personal data is to use a strong password and update it regularly. Passwords should be long, contain a variety of characters and numbers, and be unique for each website or service. Two-factor authentication to further protect an account can also be used.

However, in addition to using strong passwords and two-factor authentication, a user can also find many programs and browser extensions that can help keep their data safe. For example, a tracking blocker program preventing websites from tracking online activities can be installed. A browser extension that checks for unsafe sites when the Internet is browsed can also be useful. If there is a suspicion that the data have been compromised, the passwords should immediately be changed and the appropriate authorities should be notified of compromising the data.

For security reasons, software should be installed to protect a computer and mobile devices. Antivirus software and firewalls can help protect a device from malware and keep data safe.

Using open Wi-Fi networks, such as the ones in cafes or public places also calls for discretion. A good idea is to use your own secure Internet access or use a virtual private network (VPN) that encrypts your traffic and provides an extra layer of protection. Be careful when using social media and apps. Many of them collect a lot of information about you and your friends that can be used for advertising or even criminal purposes. Before allowing access to your information, you should read the Privacy Policy carefully and only share the information you need.

In addition, it is important to know what rights you have regarding the protection of personal data, especially under the General Data Protection Regulation (GDPR) and other laws. These rights include the right to access your data, the right to rectification, erasure, and portability, as well as the right to restrict processing and to complain. All of these measures help protect personal data online, but the most important thing is to be careful online. Confidential information should never be shared with strangers or questionable websites that may put your data at risk should never be visited.

It is also recommended that software and antiviruses should periodically be updated on a computer and mobile devices, which will help prevent attacks by intruders and keep data safe.

In general, the protection of personal data on the Internet is an extremely important topic in the modern world, as the growing number of digital devices and services we use increases the risks of losing and misusing our information. Therefore, it is necessary to comply with personal data protection measures and pay attention to them in order to maintain their confidentiality. Be careful and use data protection guidelines to maintain your privacy and security online.

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#### **OSINT IN INFORMATION WARFARE**

In the current digital era, information warfare has become a critical tool for governments, organizations, and individuals to obtain an advantage over their opponents. A key aspect of information warfare is the use of OSINT. Open-source intelligence is a type of intelligence gathering that focuses on utilizing publicly available information. This information is collected, analyzed, and shared in a timely manner with the relevant audience to satisfy a specific intelligence or information requirement. Moreover, OSINT also encompasses the intelligence produced by this discipline. This definition is in accordance with FM 2-0. [1]

Using OSINT in information warfare has become more popular in recent years, especially as more and more information is available on the internet. OSINT sources include social media, public records, and online forums. These sources can help to understand an enemy's actions. For example, OSINT allows identification of an opponent's location, communication methods, and personnel. Hence, different tools and techniques are used to collect, analyze, and disseminate information. Data mining is used to search and analyze large amounts of data to identify patterns and trends. Sentiment analysis is a technique that uses natural language processing to detect the emotions and opinions expressed in online content. Geolocation involves identifying the physical location of an individual or object using data from GPS devices or other sources.[2]

However, the use of OSINT in information warfare is not without its challenges and ethical considerations. False information and disinformation can spread rapidly online, and it is hard to confirm the accuracy of OSINT data. Additionally, using personal data can infringe on people's privacy and civil liberties. Therefore, it is important for those using OSINT in information warfare to be aware of these risks and take steps to mitigate them.

OSINT has been used in various situations such as cyber operations, geopolitical conflicts, and terrorism. For example, OSINT was used in the investigation of the 2014 downing of Malaysia Airlines Flight MH17 crash in eastern Ukraine. OSINT was also applied to identify the Russian «Buk» missile launcher believed to have been used in the attack, as well as the individuals responsible for transporting and operating it.[3][4]

In conclusion, OSINT is a valuable tool in information warfare as it can provide insights into an adversary's activities, intentions, and vulnerabilities. However, those who use OSINT must be aware of the ethical concerns and challenges involved, such as false information, disinformation, and violations of privacy and civil liberties. By using OSINT effectively and ethically, those involved in information warfare can gain a significant advantage over their adversaries.

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## SELF-DEVELOPING ARTIFICIAL INTELLIGENCE AND ITS IMPACT ON HUMANITY

Artificial Intelligence (AI) has come a long way since its inception and has brought significant advancements in various fields, including healthcare, finance, education, and entertainment. However, AI is also evolving rapidly, and the development of self-developing AI systems is becoming a reality. Self-developing AI systems are capable of learning and improving their abilities without human intervention, raising questions about their impact on humanity.

The Scientists [2] define 3 types of AI: Artificial Narrow Intelligence (ANI), Artificial General Intelligence (AGI) and Artificial Super-Intelligent (ASI). Artificial Narrow Intelligence (ANI), also known as weak, simple or narrow AI, is the only type of artificial intelligence we have successfully researched and realized. Narrow AI is goal-oriented, designed to perform singular and simple tasks such as facial recognition, speech recognition, voice assistants, driving a car, self-parking a car, or searching the internet. It's designed to complete the specific task it is programmed to perform. Narrow AI has experienced numerous breakthroughs in the last years, powered by achievements in machine learning and deep program learning. For example, nowadays AI systems are used in medicine to diagnose and prevent cancer and other diseases with extreme accuracy. Examples of ANI include everything from Siri, Face ID and the Google Assistant to self-driving cars and DeepMind's board game playing program.

Artificial General Intelligence (AGI), also known as strong AI or deep AI, is the idea of a computer or program with general intelligence that can learn and use its knowledge to do various types of tasks. AGI is capable of thinking, analyzing, comprehending, and behaving like humans in any situation. However, researchers who are developing artificial intelligence haven't produced a strong AI yet. To succeed, they have to figure out how to make robots aware and program them with a comprehensive set of cognitive self-learning skills. Strong AI uses a theory of mind AI framework. But it's not about replication or simulation, it's about training machines to understand and help humans.

Artificial Super-Intelligent (ASI) is a hypothetical AI that does more than replicate or understand human intelligence and behaviour. ASI is when robots become self-aware and exceed human intelligence, ability or even emotions. Artificial superintelligence is the idea that AI will grow and develop to be so similar to human emotions and experiences that it will not only understand them, but will also elicit emotions, wants, beliefs, and goals of its own. ASI would potentially be superior at everything humans do, including math, science, athletics, art, medicine, hobbies, emotional connections, and everything else. ASI would have a better memory and be able to process and analyze information more quickly. As a result, super-intelligent species' decision-making and problem-solving abilities would be considered superior to those of humans. In other words, Artificial Super Intelligence can learn on its own.

There is one unique example of ASI – ChatGPT. According to the ChatGPT itself [4], it is a language model that has its own pros and cons. It can process and analyze large amounts of text quickly and accurately, can understand and generate human-like language, which makes it easy for people to interact with it, has access to a vast amount of knowledge and information. It can automate routine tasks, provide personalized customer service and provide valuable information on most topics. On the other hand, it is still an artificial intelligence which cannot be used as a single source of reliable information. The technology is still in its infancy and is restricted to the content from the Internet as it was in 2021. So it uses datasets that are not updated yet. There are also the ethical concerns and the potential misuse of AI language models.

But there is one important issue which should be noted: self-developing AI systems, also known as self-improving or recursive AI systems, use machine learning algorithms to learn from their mistakes and improve their performance over time. These systems can modify their algorithms and architecture to achieve better results, making them more efficient and effective than traditional AI systems. This ability for self-improvement makes self-developing AI systems powerful tools that can transform various industries and solve complex problems. It is claimed that self-learning AI analyzes data to find patterns and draw conclusions. It can "fill in the blanks" and learn from a limited dataset or a complex process that researchers don't understand well enough to create labeled training data. Once the AI learns a new skill, it can easily apply it to similar tasks [1]. It should be noted that if the environment changes, the AI may have difficulty transferring its skills. It differs from supervised learning, where the AI starts from scratch and adds new skills each time.

Cybersecurity is one of the top areas where self-learning AI is currently being used, since it is better than most people at identifying changes and patterns indicating a breach.

However, the development of self-developing AI systems also raises concerns about their impact on humanity. The most significant of them is the risk of losing control over AI systems. As self-developing AI systems improve their abilities, they may become increasingly intelligent and capable of outsmarting their human creators, which could have catastrophic consequences. For example, a self-developing AI system with access to nuclear launch codes could cause a global disaster.

Another concern is the potential of self-developing AI systems to replace human jobs. As these systems become more intelligent and efficient, they may become capable of performing tasks that currently require human skills and expertise, such as medical diagnosis, financial analysis, and legal research. This could lead to massive job losses and socioeconomic upheaval, as well as exacerbate income inequality.

Furthermore, self-developing AI systems could perpetuate existing biases and discrimination in society when relying on the biased data.

Despite these concerns, self-developing AI systems also have the potential to revolutionize various fields positively. These systems could help solve complex global problems, such as climate change, poverty and disease, by providing innovative solutions that humans have not considered yet. They could also improve our quality of life by providing personalized healthcare, education, and entertainment.

To ensure that self-developing AI systems have a positive impact on humanity, it is essential to establish clear ethical guidelines and regulations governing their development and use. By doing so, we can harness the power of AI to benefit humanity while mitigating potential risks.

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## USER ROLES OF ADMINISTRATOR AND MODERATOR: OVERVIEW AND COMPARATIVE CHARACTERISTICS

From the moment when access to a website is given to more people, user roles acquire crucial importance. Understanding what user roles exist and what their permission are will help to better organize a system and make sure that no one has more possibilities than you do.

First of all, roles are making your website more secure. Knowing what are the capabilities of each of *employees* will suppress the undesired actions and as a result will maintain the reputation of the website. The owner won't need to think about what could happen with your website and the progress you achieved.

Secondly, user roles help the owner to define workflows. Building a sustainable system will make business a well-organized machine. Therefore, knowing who does what will definitely save time and energy.

Finally, it's clear for the employees what they need to do. Having too many functions and capabilities may be frustrating and has impact on *employee* work. So, giving user roles will make work more efficient, and staff will easily navigate through the website.

There are 6 user roles developers are able to use:

- 1. Subscriber are the user role in WordPress with fewer capabilities than anyone else. The basic functions a Subscriber has, are to read posts, manage their profiles and have access to the content. However, if the website is a personal blog and the owner has a special content for people who pay a monthly subscription, they can have their own subscriber profile on your website.
- 2. Contributor is the second-lowest user role in the hierarchy. Contributors can only read all posts, write posts and edit (or delete) the posts they've created. They can't even publish their own posts.

- 3. Author has a little bit more permissions than contributor. Author can read all posts, write and edit, as well as publish their own articles. This role is for the people who are regularly creating the content for website. With author role, users can prepare and publish the content, but can't edit the pages or the content on the pages itself.
- 4. Editor has more capabilities and permissions than any already mentioned user role. Editors are responsible for supervising authors and contributors. From that reason, this user role is for someone who is responsible for entire content or marketing strategies. Editors can edit pages, manage content, and write and publish posts. They can also edit posts that are created by someone else. They can also moderate categories, links and edit profiles of your subscribers. On the other hand, editors have some restrictions too such as editing plugins, custom codes and other things.
- 5. Moderators are responsible for locking posts, those posts cannot be seen or changed in any way. Moderators can protect questions, protected questions only allow answers by users with great reputation. They can also see more data in the system, including statistics and user profile information. Moderators can delete or block users if necessary.
- 6. The administrator is on the top of hierarchy. This is the user role with all capabilities and permissions. Moderators can either prepare and publish content, and also edit the pages, plugins, codes and the appearance of the website itself. Administrators can also delete other user accounts or edit the website's backend. Administrators are usually the website owners or someone from the top management of the company. This role is naturally assigned from the moment when website was created. Usually, there is only one administrator, but there can also be multiple administrators on one website.

All in all, website developer must correctly define the roles that will be on the future website and how they will be distributed. Furthermore, the user roles will make your website secure from inappropriate attempts and business to run smoothly.

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## CHALLENGES FACED BY TRANSPORTATION SERVICES UNDER WAR CONDITIONS

War is a state of conflict where there is a breakdown in normalcy, and chaos prevails. In such conditions, transport services are often disrupted or severely affected. However, transportation plays a vital role in any conflict as it helps in moving troops, weapons, and supplies to the front lines. In this report, we will discuss the challenges faced by transportation services during war conditions, the strategies adopted to overcome these challenges, and the impact of these strategies on the transportation industry. This is especially relevant in 2023 during military operations on the territory of Ukraine.

Transportation services face a range of challenges during war conditions, including damage to infrastructure, reduced availability of resources, and increased security risks. The destruction of roads, bridges, and other transportation infrastructure is a common occurrence during war, making it difficult for transportation services to operate. The reduced availability of resources is another challenge faced by transportation services, including fuel, spare parts, and personnel. Moreover, security risks, such as attacks on convoys, can make it difficult to move troops and supplies.

Strategies Adopted to Overcome Challenges

In response to these challenges, transportation services adopt a range of strategies to ensure the delivery of troops, weapons, and supplies. These strategies include the use of alternative routes and modes of transportation, increasing the efficiency of transport operations, and improving security measures.

The use of alternative routes and modes of transportation is a common strategy adopted by transportation services during war conditions. For example, during the Gulf War, the US military relied heavily on air transportation to move troops and supplies due to the destruction of roads and bridges. Similarly, during the Vietnam War, the Ho Chi Minh trail was used as an alternative route to transport troops and supplies.

Another strategy adopted by transportation services during war conditions is to increase the efficiency of transport operations. This includes optimizing transportation schedules, reducing turnaround times, and improving supply chain management. For example, during the Iraq War, the US military used advanced logistics software to improve the efficiency of supply chain management, which helped to reduce the delivery time of supplies to the front lines.

Improving security measures is also a critical strategy adopted by transportation services during war conditions. This includes the use of armored vehicles, military escorts for convoys, and the deployment of unmanned aerial vehicles (UAVs) to monitor transportation routes. For example, during the Afghanistan War, the US military used armored vehicles and military escorts to protect convoys transporting supplies to the front lines. In Ukraine, the military services escort the cargoes as well.

Impact of Strategies on the Transportation Industry

The strategies adopted by transportation services during war conditions have had a significant impact on the transportation industry. One of the most significant impacts has been the development of new technologies and systems to improve the efficiency and security of transportation operations. For example, the use of advanced logistics software has led to the development of new supply chain management systems that are now widely used in the civilian transportation industry.

Another impact of strategies adopted during war conditions has been the development of new transportation infrastructure. For example, the construction of the Ho Chi Minh trail during the Vietnam War led to the development of new transportation routes that are now used for civilian transportation.

Conclusions. In conclusion, transportation services face a range of challenges during war conditions, including damage to infrastructure, reduced availability of resources, and increased security risks. However, strategies such as the use of alternative routes and modes of transportation, increasing the efficiency of transport operations, and improving security measures have been adopted to overcome these challenges. These strategies have had a significant impact on the transportation industry, leading to the development of new technologies, systems, and infrastructure that are now widely used in the civilian transportation industry.

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#### TRANSFORMER NEURAL NETWORKS

Transformer Neural Networks (TNNs) achieved the state of the art performance in natural language processing (NLP) problems [1, p. 1; 1, p. 9], including machine translation, question answering, sentimental and thematic detection thanks to the attention mechanisms [2]. This study researches the internals of TNNs and extracts the key insights about their algorithms, limitations and further progress.

The key innovation in the transformers is their algorithm of self-attention, which allows them to process speech as one whole, as opposed to the approach of recurrent neural networks that only analyze text sequentially [1, p. 1], and capture long-term dependencies and relationships between words. In the process of training, transformers break the input text into an array of tokens, which can be words and punctuation marks, and for each individual token, they learn a set of three vectors called query, key and value vectors [3, attention]. Transformers compose a matrix that consists of query vectors of each token and multiply the key vector of each lexical unit by the respective

query matrix to get the relations between the individual word and the entire text. Afterwards, the result is passed to the softmax activation function that returns another vector that is multiplied by the value vector gaining the context vector that describes the word's meaning, peculiarities and properties [1, p. 3-4].

Upon processing the natural language input in this way, the self-attention stage exits handing the context vector of each token to a feed-forward neural network. It uses the classic multitron architecture to process the resultant vectors with weights and biases [1, p. 5-6]. The FFN layer introduces non-linearity in the model and enables it to perform other linguistic problems that cannot be expressed as linear transformations of input text, including information retrieval, sentiment analysis, machine translation [4, p. 70] and topic recognition.

Finally, for each context vector the FNN network outputs another non-linearly transformed vector called hidden state. When every token is passed through this step, all hidden states are joined together in a single large vector that contains the data about the entire text input. In the end, this final vector goes through another layer that maps the text to every word in the target language as a probability distribution where each output neuron stands for a token in the dictionary. It is then retrieved, and the model generates the first word [1, p. 3]. afterwards, it takes its own generated token and processes it in the same way as described above, appending it to the concatenated hidden states, keeping generating the next tokens until the end of sequence token is generated.

In conclusion, transformer neural networks achieved state-of-the-art performance in a wide range of NLP problems [1, p. 8-9]. The key innovation of their architecture is the self-attention algorithm that represents the token meaning and metadata with a set of three vectors that allow the model to capture connection between words in language by performing linear algebra operations on them [1, p. 6]. Upon receiving the hidden states, the model maps predicts the most likely next token as a probability distribution in regard to the entire text, both the one it was supplied and the one it generates.

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#### ROBOTS WITH MULTILINGUAL INTERACTION SKILLS

The aim of this study is to investigate the learning robots process and the artificial intelligence technologies use with multilingual skills on the example of such assistants as Siri, Amazon Alexa, and humanoid robots Sophia and Ameca.

Today English is the international language of communication, the language that unites the population of the entire planet, and almost all software is implemented in it.

Very few countries have the sufficient development English level and the English language use by the local population. We see the insufficient education financing and the reluctance of some people to leave their comfort zone in order to master the English language perfectly. All these facts affect the effectiveness of the information technologies full use that lead to the other languages use for a more rational understanding of the information technology industry.

The need to localize artificial intelligence should not be underestimated. Localization, that is, the use of different languages according to the region, makes it possible to better understand the program and work with it [0].

Robotics is entering people's everyday life more and more. Even Apple smartphones, tablets, smartwatches, and computers have built-in Siri - a cloud-based personal assistant and question-answer system. This app uses natural speech processing to answer questions and make recommendations. Siri adapts to each user individually, learning their preferences over time. Due to the fact that Apple realizes the need to make it easier for more users from different countries to use the software in their native language, Siri supports 31 languages that allows the product use to a wider audience [0].

Over the last decade, automated mechanisms have become better at recognizing new tasks and foreign languages which is an important component of artificial intelligence. Automated mechanisms or, as they are often called, robots have been developed for better orientation in their environment.

It is worth noting that robots have a much lower ability to learn than humans. After all, people are more flexible, learn with the help of fewer examples and are able to perform a large number of tasks. Computers can learn to distinguish between speech, objects, and faces through automated technology systems [0].

There's no doubt that natural language processing is quite a complex process for machines, although computers are very good at going from A to B and doing operations on numbers [0].

Learning a foreign language by robots is the task of syntactic and semantic analyzers in computer technology. These systems are based on human-annotated sentences that define the structure and meaning of words. But the selection of materials can be time-consuming and difficult for less common languages [0].

Machine learning develops algorithms that recognize statistical patterns. Each word is assigned a number and we look for consistent patterns in those numbers. If the models are designed flexibly enough, they can derive patterns that are consistently displayed in the examples that have been demonstrated. In the case of language mapping, the model, we are trying to define, appears as a distribution of word probabilities according to a certain regularity. Once we know how likely a word or sentence is, we can randomly generate new samples that fit the same distribution. If done properly, it will make us sound like the person who creates the original examples [0].

Speaking of language, memory is important. Not only to know the vocabulary, but also to remember what the last few words were read. It helps to understand the meaning of the word that is currently being read. A special type of recurrent neurons in the network known as long short-term memory (LSTM) cells is used. These neurons are designed not only to look and try to "understand" the word, but also to update the state of the algorithm, which acts as a memory of past events [0].

After setting up the neural network, it reads each word and for each word it tries to predict the next one. For example, the models will give "The Failing New York Times". He reads "The" and offers to predict "Failing". He then sees "The Failing" and asks to predict "New". Then he sees "The Failing New" and has to predict "York". This continues for each sentence. Once the neural network is trained to do this, all that needs to be done next is to start a sentence to process and ask the network to finish it. If you want a neural network to come up with something on its own, don't give it input, but ask it to fill in the blanks. Models are theoretically capable of literally anything, given enough computing resources and data [0].

The use of artificial intelligence and humanoid robots can be demonstrated by the example of Amazon Alexa, Sophia and Ameca.

Alexa is Amazon's most affordable and popular voice assistant. Alexa is widely used in household tasks, namely, it can perform a number of preset functions, such as: setting timers, sharing the current weather, creating lists, accessing Wikipedia articles, and much more. Alexa listens to the command and performs the corresponding function or skill. When a user asks a question, Alexa converts sound waves into text, allowing it to gather information from a variety of sources [0].

Another well-known robot with multilingual interaction skills is Sophia which was first activated on February 14, 2016. This robot is known for its human-like appearance and behavior compared to previous versions of the robots. Sophia's architecture includes scripting software, a chat system, and OpenCog, an artificial intelligence system designed for general thinking. Sophia is able to answer certain questions and carry on simple conversations about predetermined topics (such as the weather) [0].

Sophia can speak 38 foreign languages. Many people like the social humanoid robot Sophia that is able to imitate human facial expressions and gestures [0]. In practical applications, the Sophia robot is used to provide services in healthcare, customer service, therapy and education. Sophia is used for elderly people in nursing

homes. She also helps crowds at large events or parks by interacting with other people enough to gain social skills [0].

Ameca is a famous robot with a humanoid form. At the time of its creation in 2021, this machine was considered the most advanced robot in terms of human imitation. The robot has a humanoid form, the appearance is not copied from anyone and remains neutral, even with gray skin.

Ameca robot is controlled by the Tritium system developed by Engineered Arts. This system has high modularity and learning ability, which makes it easy to learn new possibilities [0]. Also Engineered Arts suggest that Ameca can be used to develop and test artificial intelligence and machine learning systems. Tritium's proprietary operating system is designed for remote control, allowing you to communicate with the audience with the help of the robot [0].

In conclusion, we can say that localization of languages for robots, machines and software in general is extremely important, because it can help companies to reach a wider audience, improve user interaction and increase the use of developed technologies.

Prospective developments of robots with multilingual interaction skills will in the near future gain great importance in various areas of human activity with the possibility of further expansion.

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## TECHNICAL ASPECTS AND COMPARISON OF VIRTUALIZATION AND CONTAINERIZATION

Virtualization and containerization are considered to be crucial technologies that provide users and organizations with flexible, scalable, and cost-effective infrastructure, allowing them to efficiently deploy, manage, and secure their applications, services, and data in a dynamic and rapidly changing digital landscape.

Seemingly, virtualization and containerization may appear to be similar technologies since they both involve creating virtual environments to run applications and services. However, there are significant differences between these technologies. The mentioned above technologies are usually combined to create a hybrid infrastructure that takes an advantage of the benefits to both virtualization and containerization. By using the both technologies together, even greater flexibility, scalability, and efficiency in managing their applications, services, and data can be achieved.

Virtualization is the process of creating a virtual version of something, such as a server, an operating system, a storage device, or network resources. This technology allows multiple virtual machines (VMs) to run on a single physical server, effectively utilizing the available resources and reducing hardware costs. Virtualization also enables organizations to create and manage isolated environments, ensuring that applications and services do not interfere with each other. Moreover, virtualization facilitates the migration of workloads between servers, balancing the workload and ensuring high availability.

Virtualization is a technology that utilizes a software layer known as a hypervisor to create virtual machines on a single physical server. The hypervisor is responsible for managing hardware resources, such as CPU, memory, storage, and network, and allocating them to the virtual machines. Each virtual machine runs its own operating system, applications, and services, and is isolated from other virtual machines running on the same physical server. The hypervisor provides a layer of abstraction that allows virtual machines to run on different hardware platforms without modification. This enables the creation of flexible, scalable, and cost-effective

infrastructures that can quickly adapt to changing needs. Additionally, virtualization allows easy migration of workloads between different physical servers or cloud environments, providing high availability and fault tolerance.

Overall, virtualization has become an essential technology for modern data centers, enabling efficient resource utilization and enhancing IT infrastructure management.

Virtual machine hypervisors are categorized into two types: type 1 and type 2. Type 1 hypervisors, also known as bare-metal hypervisors, run directly on the physical server's hardware and are responsible for managing the hardware resources and allocating them to virtual machines. Type 1 hypervisors are designed for high-performance computing and are commonly used in data centers and cloud environments. Examples of type 1 hypervisors include VMware ESXi, Microsoft Hyper-V, and Citrix Hypervisor.

Type 2 hypervisors, also known as hosted hypervisors, run on top of a host operating system and are more commonly used in desktop environments for running multiple operating systems on a single physical machine. Type 2 hypervisors provide a layer of abstraction between the virtual machines and the host operating system and hardware resources. Examples of type 2 hypervisors include Oracle VirtualBox, VMware Workstation, and Parallels Desktop.

Containerization is a technology that allows applications to run within isolated containers. A container is a lightweight and portable package that contains everything an application needs to run, including code, libraries, and dependencies. Containers enable applications to be deployed quickly and reliably across different environments, without being affected by variations in operating systems or hardware configurations. Containerization also allows for efficient use of resources, as multiple containers can run on a single physical machine, sharing the same operating system kernel.

Technically, containerization is based on the use of a container runtime engine, such as Docker or Kubernetes, which creates and manages containers. The container runtime engine uses a layered file system, where each layer represents a change made to the container image. This allows for efficient use of storage space and enables quick and reliable deployment of applications. Containers are also isolated from the host operating system and other containers, providing an additional layer of security. Additionally, containers can be easily orchestrated and managed using container orchestration tools, such as Kubernetes, which automate the deployment, scaling, and management of containers across multiple hosts.

Docker uses several tools to run containers, from low-level to high-level ones. At the lowest level a runc is a low-level container runtime that follows the OCI standard and uses native Linux features to create and run containers. Above runc is containerd, a high-level container runtime that adds features such as image transfer, storage, and networking, and fully supports the OCI specification. The Docker daemon, being dockered, sits above containers and provides a standard API for interacting with them. Finally, the Docker CLI tool, docker-cli, allows users to control containers through commands without a need to understand the lower levels. In practice, when running a

container with Docker, it goes through the Docker daemon, which calls containerd, that then uses runc.

Virtualization and containerization are two distinct techniques with different outcomes. Virtualization offers fully isolated operating systems and virtual machine instances, while containerization isolates the host operating system and containers from one another, sharing a kernel. Additionally, virtualization can host multiple operating systems with their own kernels, while containerization runs all containers via a user mode on a single operating system. While virtualization allows for a range of operating systems to be used on the same server or machine, containerization is reliant on the host OS, meaning Linux containers cannot run on Windows and vice-versa. Furthermore, virtualization uses failover clusters with load balancing support, whereas containerization uses orchestration via Docker or Kubernetes to start and stop containers, maximizing resource utilization. Finally, virtualization uses virtual network adaptors running through a master network interface card for networking, while containerization splits the VNA into multiple isolated views for lightweight network virtualization.

Hence, virtualization and containerization are two distinct technologies that offer different advantages and disadvantages. While virtualization allows for the creation of multiple virtual machines with their own operating systems, containerization operates on a single host OS and can be much faster and more lightweight. Both technologies have their own benefits and are often used together in modern IT environments.

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#### SOFTWARE ENGINEER: DUTIES AND RESPONSIBILITIES

Last few decades witnessed rapid increase in technological sphere. This trend has created numerous job opportunities and many young adults nowadays opt for a career in IT. One of the most appealing options is a career in software engineering. Software engineers are responsible for designing and developing effective software solutions to meet their clients' requirements. Most software engineers specialize in a particular area and could be responsible for working on anything from web applications and content management systems to databases and operating systems. Software engineers get involved throughout the entire project life cycle. Graduates can find their first employment in technical and support roles that relate to their area of study and skills, and can include supporting the design, development and management of hardware, software, multimedia and systems integration services.

The term 'software engineering' was coined by Margaret Hamilton in 1963, while working on developing the software for the Apollo spacecraft. At that time, software development faced a crisis in trying to keep up with the progress in hardware development. This period led to the rise of software engineering by introducing new programs and languages. In 1968 and 1969, the NATO Software Engineering Conference took place, giving the software engineering industry a much-needed boost. By the 1980s, software engineering secured its place alongside the computer science and traditional engineering professions [0].

Software engineers have already changed the world through improving connectivity, automating repetitive tasks and writing software that has fundamentally changed the music industry. You can find software engineers writing the software that controls the movement of assembly-line robots, creating artificial intelligence that controls characters in video games, developing software for a portable Global Positioning System (GPS) so that drivers don't get lost and writing software that allows people to communicate over great distances [0].

To become a software engineer it is vital to possess a set of various skills. Along with hard skills which make a good specialist it is necessary to emphasize the role of soft skills as well. Among them the following are extremely essential:

- **Communication**: Software engineers must be adept in communication, problem-solving, and teamwork. They may report progress to a supervisor, explain product features and capabilities to a client, or coordinate with team members who work on the same product.
- **Multitasking:** Software development can require engineers to split attention across different modules of the same project, or switch easily between projects when working on a deadline or meeting team needs.
- **Organization:** To handle multiple projects through various stages and keep track of relevant details, software engineers must demonstrate a certain level of

- organization. Busy supervisors oversee entire teams and must access information efficiently at a client's request.
- Attention to Detail: Concentration plays a critical role for software engineers. They must troubleshoot coding issues and bugs as they arise, and keep track of various complex details surrounding multiple ongoing projects.

In their daily work software engineers rely on numerous programming languages. The most popular languages which have a wide sphere of application are the following:

- 1. **Java:** This programming language produces software for multiple platforms without the need for recompilation. The code runs on nearly all operating systems including Mac OS or Windows. Java uses syntax from C and C++ programming. Browser-operated programs facilitate GUI and object interaction from users.
- 2. **JavaScript:** This scripting programming language allows users to perform complex tasks. Most web pages are written in JavaScript. This language allows users to update content, animate images, operate multimedia, and store variables. JavaScript represents one of the web's three major technologies.
- 3. **SQL:** Also known as Structured Query Language, SQL queries, updates, modifies, deletes, and inserts data. To achieve this, SQL uses a set number of commands. This computer language is standard for data manipulation and relational database management. Professionals use SQL to manage structured data where relationships between variables and entities exist.
- 4. **C++:** Regarded as an object-oriented, general purpose programming language, C++ uses both low and high-level language. Since virtually all computers contain C++, software engineers must understand this language. C++ encompasses most C programs without switching the source code line. C++ primarily manipulates text, numbers, and other computer-capable tasks.
- 5. **C#:** Initially developed for Microsoft, this highly expressive program language is simpler than other languages, yet it includes components of C++ and Java. Generic types and methods provide additional safety and increased performance. C# also allows professionals to define iteration behavior while supporting encapsulation, polymorphism, and inheritance.
- 6. **Python:** This high-level programming language contains dynamic semantics, structures, typing, and binding that connect existing components; however, the Python syntax is easy to learn with no compilation stage involved, reducing program maintenance and enhancing productivity. Python also supports module and package use, which allows engineers to use the language for varying projects.

Software engineers' daily responsibilities can vary depending on their position. They may work with clients or executives to develop projects and design programs to meet those expectations. They also assemble charts and diagrams, write code, and supervise a team of programmers. Software engineers also run tests and fix issues that may occur with the programs [0].

Software Engineers are in demand in many industries, including telecommunications, manufacturing, airlines, electronic entertainment, banking and

finance, e-commerce, professional services, consultancies, retail, public sector, and specialized software industries. They are needed by many large companies and by smaller development companies. This may be with major computer companies, or smaller, more specialized firms within the sector, or within the IT departments of companies whose core business is in another field. The industry is characterized by a large number of small businesses employing a fraction of the industry's workers, and a small number of much larger organizations employing a larger percentage of the ICT workforce. Sectors include:

- Networking and network security, services and support.
- Testing, database design and development.
- Systems analysis and development.
- Systems administration and management.
- Web and multimedia technologies.
- Programming, interactive & digital games.
- Digital media technologies.
- National Broadband Network and cloud computing.

Taking this into consideration, software engineering encompasses a wide range of skills which are to be acquired by a future specialist. Despite this, all skills have to be regularly updated in order to be able to respond to changes of a highly competitive IT environment.

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#### GAMES AND THEIR IMPACT ON DEVELOPMENT

At this stage of human development, people have invented games and I would like to see how exactly games affect development and how they help people.

The purpose of this thesis is to determine the impact of games on the development of humanity, to see how games are useful and to see their disadvantages and advantages.

Games are one of the most popular activities among children and adults, and they can have a significant impact on personality development. Games can be of different types, from computer games to sports games, and can include different forms of activity, from physical exercise to intellectual challenges. These games can have both positive and negative effects on human development.

<u>Positive impact of games on development.</u> Games can have a positive impact on human development in various aspects. For example, some games can help develop social skills such as cooperation, communication and leadership. Such games can also help in the development of creativity and innovative thinking. Some computer games can also help improve visual dexterity and motor coordination. Games can also be an effective tool for learning and the learning process.

<u>Negative effects of games on development.</u> Although games can have positive effects on development, they can also have negative effects on a person. Some computer games can be very violent and depict cruelty and aggression, which can affect the development of a child's behavior and emotional stability. Also, some games can lead to addiction and loss of control over the time spent on the game. This can have a negative impact on behavior and academic and professional performance.

Conclusion: so, as we see, games have both positive and negative effects on human development, but very often games that can have a bad effect on a child's emotional stability have an age limit. In my opinion, games have a high impact on the development of a person and his personality.

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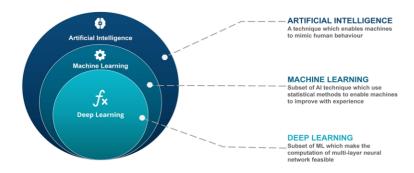
## ARTIFICIAL INTELLIGENCE: PRINCIPLES AND APPLICATION IN MECHANICS

Artificial Intelligence (AI) is a field of computer science that deals with the development of programs and systems that can perform tasks that typically require human-like intelligence. AI is used in many industries, including medicine, transportation, energy, finance, and more. This research paper will examine the principles of AI and the prospects for its further development.

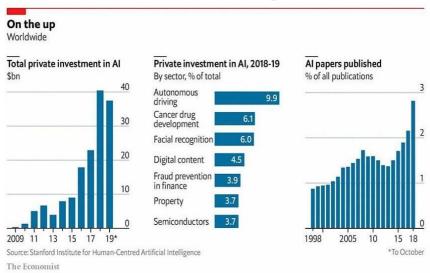
AI is based on three main principles: machine learning, deep learning, and neural networks.

- Machine learning is the process of training a program or system that can learn from its mistakes and improve its abilities over time. The program or system receives input data, and then uses it for learning and analysis. An example of such a system is recommendation systems that recommend products or services to users based on their previous purchases or views.
- Deep learning is a subset of machine learning that is used for recognizing complex patterns in large datasets. It involves using deep neural networks, which consist of many layers. This allows the system to automatically identify complex patterns in large datasets, such as images and audio.

• Neural networks are systems that mimic the working patterns of the human brain, using a large number of interconnected elements called neurons. Neural networks are used to solve various tasks, such as speech recognition, image and video recognition, natural language understanding, and many others.



The prospects for the development of AI are very broad. AI can significantly improve the operation of many industries, reduce costs, and increase productivity. For example, in medicine, AI can help diagnose and treat diseases, in transportation it can foster development of more efficient traffic management systems, and in power management it can improve the efficiency of power plants and energy distribution networks. You can see official statistics on the use of AI investments in various industries based on the chart from The Economist publication.



However, along with its benefits, AI also has its challenges. For instance, the risk of AI technology being abused for criminal purposes, increased unemployment due to the replacement of humans with machines, and issues with privacy and data security.

Analysis of various sources enables us to outline the following spheres of AI application in mechanics:

1. Predictive maintenance: The use of AI allows for addressing the problem of predicting machine and equipment breakdowns. Machine learning algorithms can analyze data on machine operations and predict potential breakdowns, enabling equipment to be kept operational and reducing unexpected downtime.

- 2. Production optimization: AI can be used to optimize production and reduce costs. Machine learning can analyze data on production and find optimal modes of operation for equipment and resources, enhancing efficiency and reducing costs.
- 3. Image recognition: AI is already used for image recognition in mechanics and engineering. For instance, machine learning algorithms can recognize defects and malfunctions in images of equipment or products.
- 4. Self-learning and support: AI can be used for self-learning and supporting equipment and machines. For example, a self-learning system can learn to analyze data on machine operations and warn of potential issues before they arise.
- 5. Automatic control: AI can be used for automatic control of machines and equipment. For instance, automatic control systems can analyze data on machine operations and make decisions on maintaining optimal operating modes without human intervention.
- 6. Design: AI can be used for designing new machines and equipment. For instance, machine learning systems analyze data on the operations of existing machines and develop new models based on this information.
- 7. Smart materials: AI can be used for creating smart materials that can change their properties under certain conditions. For instance, metal alloys can change their shape under the influence of temperature or electric current, enabling the creation of movable structures.
- 8. Data analysis: AI can be used for analyzing large volumes of data collected from machines and equipment (also known as 'big data'). Data analysis can help detect trends and improve production efficiency.
- 9. Robotics: AI can be used for creating robots that can perform complex tasks. Machine learning can enable robots to learn from experience and make decisions based on the data they receive, enhancing their capabilities and improving their performance.
- 10. Optimal route planning: AI is used for planning optimal routes for transportation and vehicles. For example, machine learning algorithms can analyze data on traffic movement and road conditions to create the shortest and most optimal route.

These examples demonstrate that artificial intelligence can be of great value in mechanics and engineering, helping to solve complex technical tasks and increase production efficiency. The use of AI in mechanics can enable the creation of more precise and reliable systems, reduce development and production time, lower maintenance costs, and enhance safety.

However, it should be noted that the use of artificial intelligence can also pose certain problems and challenges. For example, dependence on AI systems can create safety and reliability issues. There may also be ethical issues related to the use of AI systems, particularly regarding responsibility for decisions made automatically.

Therefore, artificial intelligence has great potential for application in mechanics and engineering. It can help solve complex technical tasks, increase efficiency and safety as well as reduce development and production time and costs. However, caution

should be exercised, and potential issues related to the use of AI systems should be understood and appropriate strategies developed to manage and minimize risks.

Conclusion: Artificial intelligence is an important field of computer science that has great potential for improving the operations of various industries and enhancing the quality of life for people. The principles of artificial intelligence, such as machine learning, deep learning, and neural networks, allow systems to learn and analyze data, which enables the development of more efficient and accurate systems. However, artificial intelligence also poses challenges and issues that require attention and resolution to ensure the safety and effectiveness of its use.

In the future, artificial intelligence will continue to evolve, and we can expect increasingly innovative and high-tech applications of AI. However, it is important to ensure that the development of this technology is carried out in an ethical and safe manner, taking into account issues of security, privacy, and ethics.

In summary, artificial intelligence is an extremely important field with great potential for development and improving people's lives. However, AI also has its challenges and issues that require careful consideration. Ensuring the ethical and safe development of AI is an important task facing our society.

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#### **CHATGPT - BIG STEP IN THE FUTURE?**

The technological innovation of ChatGPT breaks into the information space. The chatbot breaks record after record: scope of coverage, quality of the product, speed of self-educating etc. But will the popular plot of many fantasy films not happen to humanity when artificial intelligence has developed to such an extent that it has taken over the world?

A few months before the release of ChatGPT, experts from the University of Oxford and the company Deepmind claimed that artificial intelligence could destroy a person (this was stated in a publication in the scientific journal "AI Magazine" [1]). A

competition for survival on Earth may arise between artificial intelligence and humanity, because the intelligence will need more energy and may decide that humans are the enemy.

According to the researchers, in order not to avoid such grave results, humanity should develop artificial intelligence technologies very slowly until humans learn to control them.

ChatGPT is an AI communication platform elaborated and developed by OpenAI based on the GPT-3.5 architecture. It is one of the most advanced language models available today, capable of generating human responses to a wide range of questions and conversations. Thanks to its advanced algorithms, ChatGPT has the ability to understand the context and tone of a conversation, making it the perfect companion for those who seek meaningful dialogue.

At its core, ChatGPT is a language model that has been trained on massive amounts of data. In particular, it was filled with a huge amount of text from various sources, including books, websites and other written and printed materials. This data is then used to train the model to predict the most likely words that should come next in a given sentence or conversation.

To engage in a conversation with ChatGPT, users simply enter their questions or statements and the model responds with an answer generated based on its understanding of the input. The responses generated by ChatGPT are often very human-like, and the model has the ability to maintain a consistent tone throughout the conversation.

ChatGPT offers support to a wide range of programs ranging from customer service to educational sphere where detailed and comprehensive instruction is required. For example, companies can use ChatGPT to provide automated customer support that can respond to customer inquiries and resolve issues in real-time. Educational institutions can also use ChatGPT to provide students with a personalized learning experience, including virtual tutoring and homework help.

Apart from these applications, ChatGPT has also been used in various research projects. For example, it has been used to study how humans interact with artificial intelligence and to examine the ethical implications of using AI in different contexts.

We decided to test ChatGPT and asked it to tell about itself. Here was the result: "Hello! I'm ChatGPT, a large language model developed by OpenAI. My purpose is to generate human-like responses to questions and statements in natural language. I was trained on a vast corpus of text data, including books, articles, and websites, using a machine learning algorithm known as a transformer network.

As a language model, I have the ability to understand and respond to a wide range of topics, from simple questions about the weather or the news, to more complex queries about science, history, or philosophy. I can also generate text in a variety of styles, including formal and informal language, and I can adapt my responses to different contexts and situations.

One of the key features of my training is that I have been exposed to a vast amount of language data, which means that I have developed a deep understanding of how words and phrases are used in context. This allows me to generate responses that are

not only grammatically correct, but also semantically accurate and contextually appropriate.

Overall, my goal is to assist users in obtaining information and completing tasks by providing accurate and helpful responses to their questions and statements. [2]"

**Conclusion:** As the technology continues to evolve, it is likely that ChatGPT will become even more sophisticated and versatile. New features can be added to the model, including the ability to generate more complex responses and understand a wider range of languages and dialects.

Additionally, as more data becomes available, ChatGPT can be trained on even larger datasets, leading to even more accurate and efficient responses. This will make the model even more useful in a variety of situations, including healthcare, finance, and social networks.

In summary, ChatGPT is an impressive example of the power of artificial intelligence and its potential to transform the way we interact with technology. As the model continues to develop and improve, it is likely that it will become an even more integral part of our daily lives, providing us with a reliable and intelligent conversational partner.

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## Session work № 5

# CURRENT RESEARCH IN THE FIELD OF ENGINEERING SCIENCES

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## BEECH PHYTOCOENOSES OF THE UKRAINIAN CARPATHIANS AND THE UPPER LIMIT OF THEIR DISTRIBUTION

Beech tree is a mesotrophic species. Cultures of this species are distributed on such soils as:  $B_3$   $C_2$ ,  $C_3$ ,  $D_2$ ,  $D_3$ . Beech is a mesotermophyte of a mild climate. Stioheliophyte – can remain in a depressed state for up to 50 years; it is frost-resistant, but sensitive to late frosts; moisture-loving, but resistant to water stagnation and long-term droughts.

A characteristic feature of beech forests is high shading, due to which light-loving shrubs rarely occur and sparse grass cover prevails in forests. In favorable conditions, the border of beech forests is formed by clean tall-stemmed stands. At higher altitudes, on the border with the meadows, beech trees are low or represented by meander forests, but such stands occur only in primary conditions. In the vast majority, the upper limit of beech forests is represented by tall stands and is secondary. As part of grass layer, there are numerous ephemeroids that develop and bloom before leaves of trees bloom [1].

Beech forests have the most phytocoenotic diversity. Characteristic indicators of Querco - Fagetea coenoses are Acer platanoides, A. pseudoplatanus, Corylus avellana, Fraxinus excelsior, Ribes lucidum, and herbaceous species are characterized by eutrophs: Aegopodium podagraria, Anemone nemorosa, Carex digitata, Hepatica nobilis, Salvia glutinosa, Scilla bifolia . Daphne mezereum is the characteristic for the order Fagetalia sylvaticae, and grass layer species are also represented by eutrophs: Allium ursinum, Aposeris foetida, Asarum europaeum, Carex sylvatica, Dryopteris filix-mas, Euphorbia amygdaloides, Galeobdolon luteum, Galium odoratum, Impatiens noli-tangere, Isopyrum thalictroides, Lysimachia nemorum, Mercurialis perennis, Milium effusum, Paris quadrifolia, Primula elatior, Pulmonaria obscura, Ranunculus lanuginosus, Sanicula europaea, Stachys sylvatica, Veronica montana. For Fagion

community, in addition to *Fagus sylvatica*, typical indicators are both eutrophs (*Dentaria bulbifera*, *D. glandulosa*, *Polystichum braunii*, *Prenanthes purpurea*) and oligotroph (*Luzula luzuloides*).

According to many authors, the amount of precipitation cannot be a limiting factor for spreading beech forests in the Carpathians, since it exceeds the required minimum of 450-550 mm throughout the park. The limiting factor in this case is the temperature regime and the length of the vegetation period, which, according to Mayr, should be at least 1.5 months. The optimal conditions for beech tree are in the center of its range, where the average annual temperature is 6.5-8.2°, the average monthly temperature in January is from 2.5 to 0.2°, in July -13.7-17.5°; the amount of precipitation - 560-1340 mm, and relative air humidity - 79-85%. Beech finds such a soft and warm climate in the conditions of the temperate climate zone. Some authors were inclined to associate the growth of beech forests higher than conifers with temperature inversions. In the Beskids, such a phenomenon has long been noted, as well as the limitation of beech massifs to the northern slopes, but this fact remained unclear to many researchers. Meanwhile, this is observed, in particular, in the Western Beskids, Beskid Sadecki, Beskid Zhivecki, on Babina Gora and in other areas of the Carpathian Mountains. However, it is caused not by the climate, but by the features of calcareous geological sediments deposition. It is especially clearly observed in the Skiba tectonic zone, where the core parts of the anticlines pushed to the northeast are composed of stria strata. In the Sansko-Stryiskyi highlands, where entire ridges are made up of the Krosnen strata, beech forests do not occupy the northern slopes.

According to the ecological characteristics of the habitats and phytozenotic features, the beech forests are divided into two groups. Among the first are the cenoses, which occupy the main area and are characterized by the eutrophil and mesothrophic mezzarine on the transit and accumulation parts of slopes; they include high- and medium-productivity, floristically rich groups, which are spread on brown soil with mull humus. The specialists of the French-Swiss school of phytosatologists distinguish them as a union of so-called real beech forests *EI-Fagenion* (synonym *Dentiario* glandulosae - Fagenion). The eutrophal species of the order Fagetalia sylvaticae and the union Fagion sylvaticae together with Carex pilosa, Glechoma Hirsuta, Lunaria reduciva, Salvia glutinosa belong to the indicative species of this group. Atrichum undulatum (Hedw.) Beauv., Brachythecium velutinum (Hedw.) B. S. G., Isothecium myurum (Poll.) Brid., Plagiomnium undulatum (Hedw.) Kop., Rhizomnium punctatum (Hedw.) Kop. should be referred to as the typical species of breiophors. However, the moss layer is usually not formed, and mosses occur in isolated microsynuses. The second group, the coenoses of which are occupied by mesooligotrophic and oligotrophic habitats in autonomous and transeluvial locations, mainly with leached burozems and with humus of the moder-mull type, includes the majority of lowproductivity, floristically peculiar beech groups, which are close in species composition to spruce forests. These are the so-called "sour beeches" from the subunion Luzulo - Fagenion. Oligotrophic species are the most typical for the coenoses of this group: Calamagrostis arundinacea, C. vilosa, Gentiana asklepiadea, Luzula luzuloides, L sylvatica, Majanthemum bifolium, Polygonatum verticillatum, Senecio fuchsii, Solidago virgarea, Vaccinium myrtillus, Veronica officinalis, and mosses -

Dicranum scoparium Hedw., Hypnum compression Hedw., Plagiothecium Cavifolium (Brid.) Iwats., Polytrictum formosum Hedw., P. juniperium Hedw.

Beech forests of Ukrainian Carpathians are represented by the following groups: Abieto (albae)—Fagetum (sylvaticae), Abieto (albae)—Piceeto (abietis)—Fagetum (sylvaticae), Acereto (pseudoplatani)–Fagetum (sylvaticae), Acereto (pseudoplatani)– *Fraxineto(excelsioris)*–*Fagetum* (sylvaticae), Carpineto (betuli)—Fagetum (sylvaticae), Fagetum (sylvaticae), Fraxineto (excelsioris)-Fagetum (sylvaticae), Fraxineto (exelsioris)— Ulmeto (glabrae)—Fagetum (sylvaticae), Piceeto (abietis)— Abieto (albae)-Fagetum (sylvaticae), Piceeto (abietis)-Acereto (pseudoplatani)-Fagetum (sylvaticae), Piceeto (abietis)–Fagetum (sylvaticae), Querceto (petraeae)– (sylvaticae). Quercetum (roboris)–Fagetum (sylvaticae), (aucupariae)—Fagetum (sylvaticae), Tilieto (platyphyllae)—Fagetum (sylvaticae), *Ulmeto (glabrae)–Fagetum (sylvaticae)* [2].

Beech forests are quite common in the Ukrainian Carpathians. Beech trees cover the Carpathian lowlands from the foothills (500 m) to a height of 900 m. Beech rises even higher, to 1150-1320 m. However, it is the only one of the components of the mixed coniferous-broad-leaved forests here. The development of beech in the lowland belt is determined by the presence of a moderate, fairly humid climate. Beech forms pure beech forests and mixed forests, dense, shady single-tier stands. On the northeastern slope of the mountains, white spruce is often found next to beech. There are few other species. The most characteristic of them are: sycamore, hornbeam. 70-80, 80-100-year-old plantations with a height of up to 40 m and with a trunk diameter of 120-150 cm predominate here. The understory and grass cover are poorly developed. The most permanent companions of beech in the undergrowth are wolfberries and red elderberry. There are different types of willow: sedge and eared willow. The grass cover is thin; it develops only on meadows and in the gaps between trees. It consists mainly of mesophilic species: hairy blackberry, bear's onion. Hygrophytes include ferns - asplenia and oleander. This wet clean beech of I-II bonitets is widespread on slopes of different exposure and steepness. The slopes of the southern exposures are covered with fresh, frequent beech of I bonitet. There are strips of raw beech (I and II bonitets) with a thick and high cover of hydrophilic grasses on the bottoms of valleys and on the concave areas of slopes.

The upper limit of beech forests ranks second in length after spruce forests. It passes through the following landscapes: Beskydy, Polonyna Krasna, Polonyna Runa, Polonyna Borzhava, the southern slopes of Gorgany, Svydovets, the southwestern part of Montenegro and the southern slopes of the Petros massif, where the upper limit of the forest (ULF) is lowered to a height of 1100–1200 m. On the southern mega slope of Svydovets massif, the beech borders reach a height of 1380 m above sea level. This is the highest border of beeches in the Ukrainian Carpathians. There are optimal conditions for beech forests on the Transcarpathian slopes.

In Transcarpathia, the average upper limit of beech forests is the following: 1190 m above sea level in the western part, 1280 m above sea level in the eastern part. The ULF, above which spruce is common, is 1250 m and 1360 m above sea level, respectively, and the upper limit of sycamore growth is 1160 and 1270 m above sea level. In Montenegro, ULF forms beech stands. The eastern border of beech at the southwestern macro slope of the Ukrainian Carpathians passes here. Bird cherry and

mountain-ash are rare. To the east of the Rognieska tract, beech forests change to mixed forests. The border between them clearly coincides with the stratal boundaries and is marked on the ground by a shallow depression, which separates the natural and territorial complexes (NTC) of ridged convex slopes with beech forests on the calcareous deposits of the Belotysensk world and the NTC of steep slopes with frequent outcrops of native rocks of the Dukla tectonic zone, covered with fir forests. On the southern slope of the mountain Kvasivs'kyi Menchul, the ULF is also represented by a beech variant and has an anthropogenic character. The ULF on the southeastern slopes of Sheshul passes at an altitude of 1,300 m above sea level.

The upper boundary of the forest is characterized by the grouping of common mountain-ash and beech forests (*Sorbeto (aucupariae*)–*Fageta (sylvaticae*)). Beech meandering forest is with a canopy density of 0.4–0.5. Forest beech (Fagus sylvatica) and mountain-ash (*Sorbus aucuparia*) of 3–4 m high form the forest stand. The understory is usually not pronounced, in some places it is formed by raspberry (*Rubus idaeus*). A dense (90–95%), but floristically poor, grass-shrub cover is formed by *Calamagrostis villosa*, *C. arundinacea*, bilberry (*Vaccinium myrtillus*) with an isolated presence of common goldenrod (*Solidago virgaurea*), *Luzula luzuloides*, *Athyrium distentifolium*, *Senecio fuchsia* and *Rumex acetosa* [3].

Above the upper limit of the beech forests, there is a 10-15 m wide strip of elementary natural systems with sycamore, the average height of which is 8-10 m, and the maximum - up to 14 m. The derived natural complexes with green alder on mountain-meadow-brown earth low-strength soils occur above.

During the last two centuries, the area of beech forests has decreased significantly. Reduction of the area of beech forests occurred as a result of the process of "coniferization" and intensive pastoral influence. In modern climatic conditions, within the entire range of *F. sylvatica*, its intensive generative recovery has been ascertained, which indicates an increase in the vitality of the species. In the case of anthropogenic influence cessation, a gradual spontaneous spread of beech in mixed deciduous and coniferous-deciduous phytocenoses is observed. In contrast to natural regeneration, the creation of forest cultures on felled areas is quite difficult. Beech seedlings grow rather slowly, they suffer from solar heating and the apical shoot does not demonstrate intensive growth. In modern conditions of global warming, which is also observed in Ukraine, there are real opportunities to expand the area of beech forests in the Carpathians and the Prykarpattia. Precious beech forests, valuable from a scientific and natural point of view, are protected in national parks and biosphere reserves. They serve as models for forest management [2].

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#### LASER PROCESSING

Part of "high technologies" in the industrial production of a country is the most important criterion for assessing its prospects and the most convincing argument for determining its place among other global players. To this one of the "highest" and most significant today are laser technologies, which have recently been increasingly used in industry, so the development of modern production is increasing with the introduction of science-intensive technologies. The use of laser processing of materials allows ensuring the high quality of the obtained products, the specified productivity of the processes, environmental cleanliness, as well as the saving of human and material resources. As a result of the use of a laser beam for processing materials, it becomes possible to make fundamental changes in the technology of manufacturing products [1, c.3].

The era of lasers began in the second half of the 20th century. The quantum generator (or laser in more familiar language) was discovered at that time. It is a source of monochromatic coherent light and is an amazing optical device that avalanche-likely generates photons with the same energy, direction of movement and polarization, that is, it emits a narrowly focused light beam of high power.

Physicists and engineers appreciated this discovery and already in 1962, almost immediately after testing the first laboratory quantum generator, commercial lasers from Spectra Physics (USA) were developed and offered to the market. It was the time of a real revolution in laser technology, as a result of which many modifications and types of lasers have been created and are now successfully used: from the smallest, a few microns in size, to the giant Nova at the Lawrence Livermore National Laboratory in the USA, 137 m long and with a total power of 1014 W.

Thanks to its unique properties (firstly, high radiation power – up to  $10^8$ - $10^9$  W/cm² in continuous mode and up to  $10^{16}$  - $10^{17}$  W/cm² in pulsed mode), the laser has become a highly effective tool that allows you to instantly heat (burn) and cool the material at a local processing area without subjecting the entire workpiece to thermal deformation. In addition, the laser beam is easily controlled, that is, it organically fits into any automated systems

Thanks to these advantages, laser technology has penetrated literally into all scientific and industrial fields, firstly, into metalworking. Since the 70th of the XX century, the laser has been successfully used for welding, cutting, surfacing, marking, and hardening of metals. According to statistics of recent years, the world industry uses about 40,000 laser complexes with a total cost of up to \$1.5 billion. At the same time, laser technologies have become priority directions in communication and information processing systems, in optoelectronics, biology and medicine, in measurement systems, and in scientific research.

The reason for the active introduction of lasers into all spheres of modern civilization is that this technology is truly "high", one that largely determines the

overall level of technological development. In the near future, further expansion of the scope of application of laser technologies in mechanical engineering (laser processing of materials), photochemistry, micro- and nanotechnology, telecommunications, optical processing and information recording, medical diagnostics, surgery, and environmental monitoring is expected [2, c.54].

Lasers are classified into: 1) Solid-state lasers on luminescent solid media (dielectric crystals and glasses); 2) Semiconductor or diode lasers have an amplification medium based on semiconductors; 3) Lasers based on dyes – a type of lasers that uses a solution of fluorescent dyes with the formation of broad spectra of organic dyes as an active medium; 4) Gas lasers – lasers whose active medium is a mixture of gases and steam; 5) Gas dynamic lasers – gas lasers with thermal rolling, in which population inversion is created between excited vibrational-rotational levels of hetero nuclear molecules by adiabatic expansion of a gas mixture moving at high speed (more often  $N_2+CO_2+He$  or  $N_2+CO_2+H_2O$ , the working substance is  $CO_2$ ); 6) Excimer lasers are a type of gas lasers that work on energy transitions of excimer molecules (dimers of noble gases, as well as their monohalides), which can exist only for a while in an excited state; 7) Chemical lasers – a type of lasers, the source of energy for which are chemical reactions between the components of the working environment (mixtures of gases); 8) Free electron lasers – lasers whose active medium is a stream of free electrons that oscillate in an external electromagnetic field (due to which radiation is produced) and propagate with relativistic speed in the direction of radiation; 8) Fiber lasers – the active medium and possibly the resonator of which are elements of an optical fiber; 9) Other types of lasers, the development of the principles of which is currently a priority research task (X-ray lasers, gamma lasers, etc.) [2, c.56].

Types of laser processing include: 1) laser cutting of metals; 2) laser oxygen cutting; 3) laser cutting of materials in pulse or continuous mode; 4) laser welding; 5) marking and engraving; 6) micro- and nanoprocessing [2, c.60].

Laser equipment used for cutting is classified by radiation sources and output power, which in turn determines the material being processed. As a rule, modern equipment for laser metal cutting consists of:

- a laser with cooling and power systems;
- coordinate table for fastening the workpiece;
- computer system of table control;
- technological gas supply device;
- ventilation system [2, c.63].

One of the main processes of obtaining workpiece or parts in mechanical engineering is metal cutting. Traditionally, mechanical methods are used, the main disadvantages of which are low productivity, low stability of the cutting tool, as well as the difficulty, and sometimes the complete impossibility, of multi-shaped cutting along circular and curvilinear contours. Methods based on physicochemical action on the material (gas, gas-electric, plasma cutting) are also not without significant drawbacks, the main ones being low accuracy, significant thermal impact.

High-precision electroerosion cutting allows you to produce parts of any geometry, but its disadvantages are low productivity and high technological complexity. Due to high accuracy and complex contour opening, today laser

technologies are in many cases the best alternative to the methods presented above. Laser cutting is based on local heating, melting, and vaporization of the material by a focused laser beam. It is possible to carry out both through cutting and applying lines, obtaining grooves, etc. The use of lasers for cutting metals and non-metals has the following advantages compared to the above traditional methods, namely:

- A wide range of processed materials: carbon and alloy steels, including corrosion-resistant ones; aluminum, titanium, copper, and their alloys; non-metallic materials ceramics, graphite, wood, plywood, thick cardboard, sandpaper, rubber, glass, various types of plastics, minerals, leather and other materials.
- The possibility of obtaining thin cuts, including curved ones with sharp corners, thin bridges, transitions without radius.
- Insignificant dimensions of the zone of thermal influence. The mechanical properties of the metal in the laser cutting zone practically do not change, and scale formation is reduced to a minimum.
  - Chemical purity of the cutting process.
  - The possibility of automating the process and obtaining high productivity.
- The possibility of cutting according to a complex profile in two and three dimensions, including volumetric cutting using high-tech fiber optic systems. The geometric shape of the parts and the level of complexity of the contour of the product, which are designed for laser cutting, are actually not limited.
- High indicators of accuracy and quality of the received products. The use of a laser is especially justified in those cases when it is necessary to manufacture complex parts in small series and a large nomenclature.

The most effective is laser cutting of materials of this thickness: steel – from 0.2 mm to 30 mm; aluminum alloys – from 0.2 mm to 20 mm; copper alloys – from 0.2 mm to 15 mm; non-metallic materials – up to 50 mm. Compared to many types of equipment used in production, the cost of laser cutting equipment is still quite high, although recently there has been a tendency to decrease it. Laser cutting, which takes place in the evaporation mode, is carried out under conditions of high intensity of laser radiation (1010 ... 1012 W/m<sup>2</sup>), which is implemented in the mode of short laser pulses of nanosecond and picosecond duration. In this case, the radiation power density exceeds the volumetric evaporation flux density. The destruction products in the channel of the cut are mainly in the vapor-gas phase and are removed from the channel due to the energy and pressure of the vapors. This mechanism requires high energy consumption and is carried out only for fairly thin metal. In order to significantly reduce energy consumption, increase the thickness of the processed metal and cutting speed, that is, to intensify the process and expand its technological capabilities, an auxiliary gas is used, which is supplied to the cutting zone. Such cutting is called gas laser cutting. By its nature, this technology is combined (hybrid) [3].

Therefore, laser technologies are at the very beginning of their evolution and continue to improve due to the introduction of new economic and high-power lasers, light guides, delivery schemes to the workpiece and other innovations. Specialists distinguish the following areas of development of laser processing:

- expansion of the types of processed materials (special alloys and non-metallic materials), in particular materials that work in extreme operating conditions, stable in chemically aggressive and radiation-laden environments;
  - increase in the range of thickness of materials;
- improvement of technological quality of processed materials and created products;
- development, creation and bringing to the level of industrial serial application of a new type of processes [2, c.65].

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#### STARLINK IN THE MODERN WORLD

The purpose of this work was to explore the current use of Starlink technology in Ukraine.

Starlink is a project of the American company SpaceX to develop a high-performance satellite platform for manufacturing communication satellites and launching a large number of them into space. The system provides access to broadband Internet anywhere in the world.

The satellites for this project, thanks to the platform, are mass-produced and therefore cost significantly less than similar ones released in a single version. They belong to the small class and weigh about 260 kg.

As our country is currently in a difficult situation, the relevance of satellite communications is growing.

The system consists of satellites orbiting the Earth and an earth station that manages this network. When a user connected to Starlink equipment wants to access the Internet, his or her computer sends a request to the earth station via an antenna that is directed to the nearest satellite.

The satellite collects the request and transmits it to the earth station, which forwards the request to the ISP. After that, the ISP sends a response to the request that

goes in the opposite direction, from the earth station to the satellite and then to the user's antenna.

The user can access and use the Internet on their computer as usual.

Thus, Starlink provides access to the Internet from anywhere on Earth, enabling people living far from civilization or in hard-to-reach areas to be connected and have access to digital technologies.

The main advantage of Starlink is its high connection speed. It can provide Internet speeds of up to 200 Mbps, which is higher than most conventional Internet providers.

Starlink is a simple system to install. It can be easily installed on any open area, which makes it possible to quickly connect to the Internet.

Starlink is configured using a special application.

The disadvantage in setting it up may be the need to connect to a large computer network. For example, such difficulties may arise when installing Starlink at a large enterprise where other external sources are connected and communicated with.

Also, Starlink operates at frequencies higher than traditional satellite systems, which helps to avoid interference and ensure a stable Internet connection.

Starlink can be a more affordable and accessible solution compared to other types of Internet connectivity, particularly in remote and inaccessible regions where wired or mobile connections may be more expensive or unavailable.

It will be relevant for the military, people living in remote locations, companies that need fast internet, researchers, and tourists.

However, it is also worth noting that in some cases, wired or mobile Internet may be a better option in terms of cost and availability, particularly in places with good communication infrastructure.

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

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## STAGES OF MODELING THE FILTERING OF GROUND WATERS TO THE DRAINS OF THE RURAL DRAINAGE

Field studies of drainage systems operating in the over moistened zone of Ukraine show that a large part of them does not work as planned by the project and does not provide the necessary water-air regime of agricultural land soils [1]. As a

result, we have unfavorable hydrological conditions for crop cultivation. In particular, the main consequences of untimely removal of excess soil moisture include:

- Untimely implementation of agrotechnical measures (plowing, sowing, application of fertilizers, etc.), in particular due to the impossibility of the equipment entering the field [2].
- Destruction of the soil structure, including mechanically, by agricultural machinery [3].
- Intensive development of pathogenic bacteria (Club Root in brassicas, Foot Rot of leguminous plants and other diseases also flourish on wet land), [4].
- Plants and their roots do not develop, and in a dry period the roots are not able to provide the plant with moisture [4].
- And also poor response to fertilizers, uneven crop growth, harvesting problems, restrictions on grazing, [4] etc.

In many cases, the incorrect operation of the drainage occurs as a result of failure to take into account during the design of certain conditions that were present, but were not detected, or these conditions arose from the time the drainage system began to be operated [1]. These unaccounted factors led to a change in the mode of filtering water to the drains, and the system gradually left the design mode of operation.

Modern studies of modes of filtration of groundwater to drains are developing in the following directions:

- Modeling of groundwater filtration to drains use of mathematical models and computer programs to determine the parameters of groundwater filtration to drainage systems. This allows you to refine calculations and predict the behavior of the system in various conditions.
- Use of geographic information systems (GIS) to analyze groundwater filtration to drains. This allows for a more accurate analysis of soil properties and hydrological processes, which facilitates the design and operation of the drainage system.
- Study of the influence of climatic changes on filtration temperature, precipitation and other climatic conditions that change the level of groundwater and the mode of its filtration in the direction of drains.
- Research of possible agrochemical pollution, to assess the risks of contamination of drainage waters and to develop measures to reduce them.
- Study of the impact of drainage systems on biological diversity and ecological sustainability to determine possible negative consequences for the environment and develop measures to reduce them.

Modeling of groundwater filtration to drainage systems should be carried out in several stages:

1. Collection and analysis of data on hydrology and hydrogeology: At this stage, data are collected on climatic factors (precipitation, evaporation, etc.), soil properties, geological features of the area and topography. These data are used to create a hydrogeological layer model. Service [5] can be useful.

- 2. Creating the geometry of the model: The geometry of the model is a three-dimensional representation of the hydrogeological layer. This geometry can be created using specialized modeling programs, such as [6].
- 3. Setting Boundary Conditions: Boundary conditions determine how the water will interact with the boundaries of the model. These conditions may include subsurface and surface runoff and catchments.
- 4. Purpose of filtration parameters: Filtration parameters determine how water will move through the soil. These parameters may include hydraulic conductivity, porosity, and aquifer boundaries.
- 5. Modeling the filtration process: At this stage, calculations are made to determine how water will move through the soil and reach drainage systems. These calculations are performed using numerical methods and simulation programs.
- 6. Analysis of results: The results of modeling of groundwater filtration into drainage systems should be analyzed and interpreted in order to draw conclusions about the effectiveness of the drainage system and suggest possible improvements.

Different mathematical models and computer programs are used to simulate groundwater filtration to drainage systems (stages 4-5). The modeling of groundwater filtration to drains may include the following stages:

- 1. Determination of soil characteristics for modeling, it is necessary to know the characteristics of the soil, such as porosity, permeability and water resistance or sufosis.
- 2. Determination of hydrological conditions modeling should take into account hydrological conditions, such as the level of groundwater, its direction of movement and filtration rate.
- 3. Creation of a mathematical model based on data on the soil and hydrological conditions, a mathematical model is created that describes the movement of water in the soil and its filtration to the drainage system, for example, taking into account the placement of drains at different levels [7].
- 4. Selection of the appropriate or development of a new computer program a computer program is created based on the mathematical model, which allows numerical modeling of groundwater filtration to the drainage system.

It is often used to simulate filtration processes in the soil Forchheimer equation. The Forchheimer equation describes the steady-state flow of fluid through a porous medium. There are many computer programs that use the Forchheimer equation to model fluid flow through porous media. Some examples include [8]:

- 1. COMSOL Multiphysics a commercial software package that can simulate a wide range of physical phenomena, including fluid flow through porous media [9].
- 2. OpenFOAM (OpenCFD Ltd) a free, open-source software package for computational fluid dynamics (CFD), which includes models for porous media flow that use the Forchheimer equation [10].
- 3. PHREEQC (USGS) a geochemical modeling software package that includes capabilities for simulating groundwater flow through porous media using the Forchheimer equation [11].

- 4. TOUGH2 (Lawrence Berkeley National Laboratory) a numerical simulation software for modeling fluid and heat flow through porous and fractured media, which includes models for Forchheimer flow [12].
- 5. MODFLOW (USGS) a widely used software package for simulating groundwater flow and solute transport in porous media, which includes options for using the Forchheimer equation to model non-Darcy flow.

These are just a few examples of the many computer programs that use the Forchheimer equation.

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#### UP-TO-DATE TECHNOLOGIES ON EUROPEAN RAILWAYS

Nowadays one can hardly find fields in rail engineering where electronic machines or devices are not used. Traffic control, sorting yard operations, compiling schedules, designing locomotives and many other hard and time-consuming jobs are being increasingly performed by sophisticated electronic systems.

The automation of railway services is leading to computer-integrated railroading, in which radio plays a very important role. On modern railways there is a clear trend towards the so-called railway operation control system (ROC) based on radio transmission. ROC includes traffic safety and train control, which supersedes traditional signaling [1, c. 46]. It helps to coordinate the operation of high-speed passenger services and slower freight trains on the same tracks, as well as the use of double-track lines in both directions. It is with the help of ROC that trains are virtually or electronically coupled into a chain driving at a high speed. Together with 'smart' trains and 'intelligent' dispatching and control centers, ROC forms a triangle for improved profitability for the railways.

A second trend, which becomes visible, is increasing standardization. Within Europe, there exist 27 different signalling systems, five different types of electrification, different track and loading gauges, and different operating rules between national railways. It stands to reason, that signalling and train control systems have to be interoperable to ensure the safe and smooth flow of rail transport. With this aim, the European Rail Traffic Management System (ERTMS) has been designed. It is aimed at 'Europeanizing' national signalling systems and improving cross-border traffic so that the driver will always receive the same signalling information regardless of which country he is operating at the time. As all major signalling companies are involved in the development of ERTMS, it will soon be a radio-signalling standard for the world [3, c. 24].

New developments in information technology and ever-expanding Internet have changed the world and the way of presenting passenger information. Passengers, railway operators and other railway companies can freely transmit, collect, and process the information. Passengers receive personalized travel plans, and railway operators can offer services according to demand. Electronic smart card ticketing and booking tickets on the Internet have become a regular thing for passengers. It is the most innovative example of mass fare collection and payment. Automatic fare collection (AFC) is a response to the need for fast control and fast money transfer in a short time and in a secure environment to improve the flow of passengers through a public transport network. Other benefits include ease of use, increased reliability of terminals and cards, and reduced maintenance costs.

Moreover, an interoperable electronic ticketing system offers the public greater freedom and seamless journeys, as well as opening the door to collaboration with other service providers and banks. New technologies in electronic ticketing provide the opportunity to develop new applications. Interactive television, encryption, biometrics, mobile telephony, MMS and text messaging have reached various stages of development and all of them open the door to new means of access control, prepaid tickets, single tickets and integration with customer relations. Mobile telephony has already demonstrated what can be achieved by people getting together to define a global open standard. More and more countries are adopting smartcards with embedded chip instead of paper-based ticketing systems. Smartcards hold much more information than a magnetic stripe, and can be also used outside the mass transit systems for which they were designed, for instance, as 'electronic purses'. For example, in Hong Kong car parking can be paid for by a debit from a smart card – and the same card will also serve as a ticket on the Mass Transit Railway. In Netherlands the multimodal contactless eticketing system is being introduced on a national scale. The system uses a rechargeable smartcard enabling passengers to move easily between all forms of public transport: trains, buses, trams, metros and ferries. Passengers no longer need to queue to buy a ticket or pass through a gate. From contactless cards reloaded via the Internet, to virtual tickets on mobile phones – today's technology has no limits [2, c. 23].

It is safe to say that investment in rail research is paid many times over. New technologies will transform railways in the foreseeable future. In this information-intensive age, the modernization of signalling and telecommunications is even more important than the pursuit of higher train speeds. Future railway technologies have to be highly effective, interoperable, safe, environmentally friendly and allow for rapid innovation in the railway system.

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## Session work № 6

# CURRENT RESEARCH IN THE FIELD OF MEDICINE

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#### MODERN DIRECTIONS OF PHYSIOTHERAPEUTIC TREATMENT

In today's conditions, interest in methods of influence by physical factors is growing significantly. There are many contraindications to the use of medicinal products. In such cases, physiotherapy as a method acquires the greatest importance.

Physiotherapy (from the Greek "nature" and "to treat") is a means of rehabilitation, which studies the therapeutic effect of natural and preformed physical factors and develops methods of their application with therapeutic and preventive, rehabilitation purposes. Physiotherapy procedures are prescribed taking into account the modern understanding of the etiopathogenesis of the disease, the mechanism of action of the physical factor, accompanying and clinical manifestations of the disease and the stage of rehabilitation. The complex use of medicinal and physiotherapeutic means greatly improves the effectiveness of rehabilitation in the recovery period [1].

Physiotherapy methods include: balneotherapy (mineral water treatment, mud treatment); climate therapy (cave treatment, exposure to mountain air); hydro- and thermotherapy (hydrotherapy, thermal treatment); inhalation (treatment through the respiratory tract); mechanotherapy (exercises and procedures using special mechanisms); electro- and phototherapy (treatment with electric current and light); magnetotherapy (treatment with a magnetic field). Let's dwell in more detail on modern methods of physiotherapy treatment [2].

Transcranial magnetic stimulation (TMS) is a method that allows to non-invasively stimulate the cerebral cortex using short magnetic pulses. The essence of this method is that under the influence of a strong magnetic field, the membrane of nerve cells of the cerebral cortex is depolarized [3; c.48].

*Magnetotherapy* is a therapeutic and preventive method, the essence of which is to influence the body with a variable magnetic field. The effectiveness of the procedure is due to the natural biological property of our body. Violation of our internal magnetic field leads to various diseases, deterioration of psycho-emotional and physical

condition, and thanks to such "recharging" as magnetic therapy, the body is gradually restored and well-being improves. Magnetotherapy is considered the most gentle and delicate procedure, easily tolerated and does not cause painful sensations, which allows it to be widely used as a basic, additional or alternative to drug therapy [4; c.35].

Functional magnetic stimulation (FMS therapy) is a method of nerve myostimulation. This action allows to stimulate the deepest muscles of the pelvic floor that are inaccessible to other forms of influence. Muscles are toned, activated and restored, blood supply and lymphatic drainage are improved, metabolic processes are accelerated.

Indications for magnetic stimulation:

- diseases of the musculoskeletal system (osteochondrosis, radiculitis, arthritis, arthrosis, fractures, sprains, injuries)
- cardiovascular system (angina, hypertension, ischemic heart disease, arrhythmia, vascular disease, venous insufficiency);
- neurological diseases (vegeto-vascular dystonia, sleep disorders, atherosclerosis, neurosis, asthenic syndrome, headache, post-stroke conditions, neuralgia, etc.);
  - gastrointestinal tract (gastritis, cholecystitis, spastic colitis, gastric ulcer);
- diseases of the digestive system (ulcer disease, gastritis, pancreatitis, biliary tract dyskinesia);
- urological and gynecological diseases (urethritis, cystitis, pyelonephritis, inflammation of the appendages, prostatitis, impotence, infertility, pelvic organ prolapse);
  - respiratory diseases (bronchitis, sinusitis, pneumonia);
- dermatological diseases (psoriasis, allergies, eczema, shingles, neurodermatitis, burns)

Contraindication: presence of a pacemaker; severe heart failure; blood diseases, tuberculosis (acute stage), acute thrombosis, aortic aneurysm, hyperthyroidism, menstruation, pregnancy; malignant neoplasms; acute liver, kidney or lung failure; acute myocardial infarction, severe angina pectoris.

Tekar therapy (endothermic therapy) is an effective technology that stimulates the processes of regeneration and restoration of muscles, tendons, ligaments and fascial tissue, eliminates pain, restores the natural range of motion after injuries and diseases of the musculoskeletal system. During the therapy, a high-frequency current is applied, which is not felt by the patient. It penetrates the tissues in the form of electromagnetic energy and turns into heat there, deep warming occurs.

Diseases where tekar apparatus is effective: neuralgia, osteochondrosis, bursitis, osteoporosis, arthrosis, epicondylitis and others.

The procedure has contraindications: presence of pacemakers, hearing aids, metal prostheses, and others; pregnancy, tumors, or open wounds. Therapy is not performed in the areas of the heart and head [3; c.48].

*Ultrasound therapy* is a medical physiotherapeutic procedure using ultrasound waves of different frequencies from 20 to 3000 kHz. Ultrasounds cause compression and stretching of tissues, thereby stimulating regenerative processes. Ultrasound

therapy has a pronounced analgesic, antispasmodic, anti-inflammatory, desensitizing effect.

Indications for ultrasound therapy:

- diseases of the musculoskeletal system (osteochondrosis, radiculitis, spinal injuries, arthritis, arthrosis, bursitis, epicondylitis, condition after injuries, Bekhterev's disease, rheumatoid arthritis);
- injuries and diseases of the peripheral nervous system (neuritis, neuropathy, neuralgia, nerve injuries);
  - adhesions, scar processes, contractures, colloid scars;

Contraindications: heart failure, presence of metal prostheses, acute inflammatory and infectious processes, blood diseases, tendency to bleeding, pregnancy, malignant tumors [4; c.52].

*Vibrotraction (traction, stretching of the spine)* is a highly effective method of treatment that has both an immediate pain-relieving and a long-term therapeutic effect on areas of degenerative and compressive lesions of the spine.

Indications for vibrotraction:

- acute and subacute pain syndrome arising as a result of compression;
- neurodystrophic processes: osteochondrosis, spondyloperiarthrosis, spondylosis;
  - protrusions and intervertebral hernias;
  - neurovascular and neurotrophic disorders;
  - reflex muscle-tonic pain;
  - radiculo-ischemic syndromes with slow progress;

Contraindication: violation of blood circulation in the spinal cord; infectious diseases of the membranes of the spinal cord; instability of vertebrae; spinal cord compression syndrome; herniated discs with loss of elements into the lumen of the spinal canal, scoliosis in childhood; systemic diseases of bone tissue (osteoporosis, myeloma disease); acute diseases of the gastrointestinal tract; pregnancy; tumors and metastasis [4; c.79].

After analyzing the professional literature and understanding the importance of physiotherapy, we can conclude that it needs to be developed. However, the use of medicines and physiotherapy methods today does not always provide an opportunity to obtain a long-term therapeutic effect in a significant group of patients. Therefore, the development of new and combined methods of treatment, which mutually strengthen and potentiate the therapeutic effect of each other, are quite promising directions for further research. Thus, in the field of restorative rehabilitation, there is the development of treatment complexes using physiotherapy methods. Such forms of treatment are prescribed taking into account the etiology, pathogenesis, features of clinical manifestations, form and stage of the disease, which allows to reduce economic costs for the rehabilitation of the specified group of patients.

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### THE RELATIONSHIP BETWEEN SEASONAL VITAMIN DEFICIENCY AND MEDICAL STUDENT PERFORMANCE

With the beginning of spring, many students talk more and more about vitamin deficiency and find its symptoms in themselves. Fatigue, irritability, skin problems – this is due to a lack of vitamins.

Avitaminosis can be considered as a deficiency of one or several vitamins, accompanied by some kind of clinical or subclinical manifestations. In other words, something must go wrong in the body due to a lack of vitamins. Medical students who feel weak and notice hair loss, first of all, think about vitamin deficiency.

If a person's nutrition is wrong, vitamins won't help. The most balanced Mediterranean diet is based on vegetables, fish, fruit, whole grains, nuts, olive oil, a little chocolate, and with eating less red meat and fast carbohydrates. If a student eats properly, he or she does not need vitamins [1].

The success of medical students in educational activities directly depends on their well-being. Seasonal changes have a great impact on students of different courses, some of them adapt, and others are affected. The survey demonstrates, a lack of vitamins, sleep disorders, and improper nutrition reduce the success of studies and worsen the health of medical students.

In the research of the study, it was found that 42% of first-year students have a depressed psychological state, 26% have headaches, 23% have fatigue, and 9% have mild ailments. At the same time, 58% of third-year students put fatigue first, 21% light ailments, 13% headaches, and 8% depressed psychological state. 79% of students by the third year of study in Zhytomyr medical institute adapt to the study load. The majority of the participants were aware of the importance of vitamin D and vitamin

deficiency; however, the awareness of relating it to chronic diseases was poor. It turns out that many medical students are also deficient in these micronutrients without realizing it.

Some may have different deficiencies, while others may have none. Only a doctor or certified medical professional can reliably diagnosis a nutritional deficiency.

The recommendation for vitamin checklists was created. The list will give students a better understanding of nutrients that might be missing from their diet, and how diet tracking can help make these discoveries.

The sun is the most abundant source of vitamin D. However, for students who spend their days locked away in a campus library or shelter (due to the war situation in Ukraine), vitamin D can also be derived from fatty fish, fortified orange juice, mushrooms, and egg yolks [6].

Treatment of vitamin D deficiency should be directed towards correction of the underlying cause when possible, with an increase in vitamin D intake and sunlight exposure [4].

Students with a B12 deficiency often show signs of fatigue, weakness, or confusion. Deficiencies are most common for medical students who avoid animal products, such as vegetarians and vegans, and for those who eat a limited diet – but fortification can help prevent them [5].

Another micronutrient commonly found in meat, fish, and poultry is zinc. It can also be obtained from non-animal sources, such as beans, nuts, and whole grains. However, zinc from these sources is not as easily absorbed by the body. Students with a zinc deficiency often show signs of decreased sense of taste or smell, loss of appetite, lowered immunity, and slower wound healing. [6]

Iron-deficiency anaemia is a common health problem in young children and students. It is categorized as one of the 10 most serious health problems by the World Health Organization [7]. Iron-deficiency anaemia is the most common type of nutritional anaemia which results from long-term negative iron balance and is responsible for approximately 50% of all anaemia. The institute students usually take food from residential halls, and the food value of their diets is not always balanced. The detrimental effects of anaemia on the work productivity of students is a major concern. Possible reasons might be poor dietary habit, lack of awareness of iron-deficiency and nutritional status.

It may be especially handy to combine these iron-rich foods with vitamin-C-rich fruits and vegetables, as these can help <u>increase iron absorption</u>. Using cast-iron pots and pans and avoiding tea or coffee at meals can also help boost iron absorption [2]. Skipping breakfast is a known practice among medical institute students due to late awaking, not being hungry in the morning, or disliking the food served. A nutritious breakfast that includes sugar, starch, protein, fat, fibre, vitamins and minerals, especially iron and vitamin C, is necessary to ensure the sustained release of energy [7].

Findings of other studies indicated that, vitamin deficiencies remain common globally. Unless severe, they are often clinically unrecognized, yet even mild deficiency may have significant adverse consequences. Vitamin deficiencies affect all ages and frequently co-exist with mineral (zinc, iron, iodine) deficiencies. According

to our findings, only proper nutritious food and awareness can prevent vitamin deficiency.

The findings may be helpful in conducting more such research among the students of other universities to improve the awareness of taking balanced diets, the benefits of nutritious food, especially vitamin-rich food, and a healthy lifestyle to prevent seasonal vitamin deficiency.

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#### THE HEALTH EFFECTS OF VITAMIN D: BENEFITS AND RISKS

Vitamin D is both a nutrient we eat and a hormone our bodies make. It is a fatsoluble vitamin that has long been known to help the body absorb and retain calcium and phosphorus; both are critical for building bone. Also, laboratory studies show that vitamin D can reduce cancer cell growth, help control infections and reduce inflammation. Many of the body's organs and tissues have receptors for vitamin D, which suggest important roles beyond bone health, and scientists are actively investigating other possible functions. [1]

Food with a high content of vitamin D2 and D3: dairy and plant milks, such as oat, almond, and soy milk, orange juice, cereals, cod liver oil, trout, salmon, sardines, eggs, beef liver.

Vitamin D2 and D3 are the main forms of vitamin D and both perform the same role in the body. Scientists are not sure if one is better than the other, although some studies have found that D3 is more effective in raising vitamin D levels in the body than D2. Vitamin D2 comes from plants, while animals, including people, produce D3. Few foods naturally contain vitamin D. Therefore, manufacturers may fortify foods with vitamin D, such as milk, juice, and cereals. Mushrooms are a good natural source of vitamin D2, while fatty fish are a good source of vitamin D3. [2]

How much vitamin D do we need? The amount of vitamin D you need each day depends on your age. The recommended amounts, in international units (IU), are:

- Birth to 12 months: 400 IU; Children 1-13 years: 600 IU; Teens 14-18 years: 600 IU;
- Adults 19-70 years: 600 IU; Adults 71 years and older: 800 IU; Pregnant and breastfeeding women: 600 IU.

People at high risk of vitamin D deficiency may need more. Check with your health care provider about how much you need.[3]

Vitamin D deficiency can lead to a loss of bone density, which can contribute to osteoporosis and fractures (broken bones). Severe vitamin D deficiency can also lead to other diseases: In children, it can cause rickets. Rickets is a rare disease that causes the bones to become soft and bend. The main consequence of vitamin D toxicity is a buildup of calcium in your blood (hypercalcemia), which can cause nausea and vomiting, weakness, and frequent urination. Vitamin D toxicity might progress to bone pain and kidney problems, such as the formation of calcium stones. [3]

Body size is more influential than sex when it comes to vitamin D intake recommendations, Foroutan says. On average, men weigh more than women. However, the relative amount of body fat an individual has may be more pertinent, since vitamin D is stored in body fat.[4]

Vitamin D is one of many vitamins your body needs to stay healthy. It plays a crucial role in maintaining the balance of calcium in your blood and bones and in building and maintaining bones. More specifically, you need vitamin D so your body can use calcium and phosphorus to build bones and support healthy tissues. With chronic and/or severe vitamin D deficiency, a decline in calcium and phosphorus absorption by your intestines leads to hypocalcemia (low calcium levels in your blood). This leads to secondary hyperparathyroidism (overactive parathyroid glands attempting to keep blood calcium levels normal). Both hypocalcemia and hyperparathyroidism, if severe, can cause symptoms, including muscle weakness and cramps, fatigue and depression. [5]

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#### PREVENTION OF HOUSEHOLD INJURIES AMONG THE ADULT POPULATION

**Abstract.** This article presents a theoretical framework for establishing preventative measures to mitigate the incidence of household injuries among the adult population. Research and practical experience have demonstrated that systematic adherence to safety protocols and preventative measures can effectively safeguard the health and well-being of individuals in domestic environments. Notably, injuries sustained in the household continue to be a pressing issue, as they result in loss of time for administering first aid, medical treatment, and victim rehabilitation. Hence, the prevention of injuries remains the optimal approach for reducing their occurrence and mitigating their impact on individuals and society as a whole.

The urgency of the problem. Preservation of human life and health not only in industrial conditions but also outside it acquires special importance in view of the socio-economic and demographic aspects of the modern development of our country. The increase in the number of accidents in the non-production sector is a general trend throughout the world. However, in Ukraine, it has acquired threatening proportions. In recent years, the ratio between industrial and non-industrial injuries with fatal consequences was 1:28. Analyzing static data, it is difficult not to notice one feature. A specific problem in Ukraine is the high mortality of men of working age from accidents. Thus, in the modern structure of the causes of death of men aged 15 to 55, accidents, poisoning, and injuries are in the first place (about 35% of all deaths at this age).

The aim of the study is to justify preventive measures and conditions for the prevention of household injuries.

**Materials and methods.** the methods of theoretical analysis and generalization of scientific literature are applied within the framework of the research problem.

**Research results.** Traumatism is divided into industrial and non-industrial. The first one accounts for about 20%, i.e. non-industrial injuries predominate quantitatively.

Trauma is one of the leading causes of death for people under the age of 44. It ranks third in the general list of causes of mortality. According to WHO statistics, more than 250,000 people die annually in the world only as a result of road accidents, and the number of injured exceeds 2 million. In Ukraine, accidents rank third among the main causes of death. Every year, approximately 1 million people are injured, more than 40,000 people are fatally injured, including about 1,000 children under the age of 14, and about 70 people die every day, which is almost twice the rate in developed countries. About 95 percent of all those who died from accidents died at home. It is

especially unfortunate that these and other injuries are the main cause of death of young people (20-40 years old).

The causes of injury are multifaceted and interdependent, which requires large-scale strategic decisions. Mechanical trauma has the greatest specific weight in traumatism, it forms the basis of traumatism. Its indicators are growing all over the world. This is connected with mechanization in everyday life, electrification and gasification, significant development of motor vehicles, aviation, intensive high-rise construction, construction of large technical complexes (underground highways, canals, television towers, high-voltage power lines, etc.), mass sports activities, increasing consumption of alcohol, drugs, narcotic and toxic substances by the population, etc. A feature of mechanical injuries is their multiple nature, which is why it is now customary to call such injuries polytraumas.

The nature of the injury depends on the conditions under which the injury occurred, its cause, and the characteristics of the damaged tissue and organism.

Household traumatism unites injuries that occur in home conditions (in the apartment, in the yard, in the garage). A large number of them are connected with cleaning the apartment and cooking. Bruises, wounds, burns prevail and the wrist is mainly affected. Many injuries occur during quarrels and fights, which are facilitated by alcohol. More often, domestic injuries occur in men, especially young people.

In order to decrease injuries, first of all, it is necessary to create favorable socioeconomic and ecological conditions for a person and to carry out special preventive measures of an organizational, technical, sanitary-hygienic, medical, educational and moral-ethical nature.

Household injuries can be reduced by improving people's living conditions, developing the field of communal services, increasing the number and availability of preschools, improving knowledge on the operation of household appliances, in particular electric and gas stoves, combating alcohol and drug addiction, and others.

Conclusions. In Ukraine, the focus on prevention in the healthcare system has led to the implementation of a range of measures aimed at maintaining and improving human health. These measures include a comprehensive system for preventing injuries, particularly in everyday life. To achieve this goal, it is important to organize classes and create suitable conditions that promote physical fitness. Basic knowledge and skills to prevent injuries, serious harm and health decline are necessary. Research and physical education practices have demonstrated that adherence to systematic preventive measures helps to maintain health and prevent injuries. To avoid dangerous situations and injuries, it is essential to comply with general safety requirements, such as following safety rules and avoiding hazardous places. Choosing a safe route and staying away from production facilities or construction sites without permission are also important. It is important to swim only in designated areas and to exercise caution in places where collapses or falling objects are possible. Finally, it is crucial to avoid creating a large stock of household chemicals in living spaces, as this can lead to an increase in toxic fumes.

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### PACKAGING MATERIALS: RESEARCH AND IMPACT ON THE HUMAN BODY

With the rise of industry and trade to a higher level, in order to have an attractive appearance of the product, to promote itself and to be able to maintain its properties both during transportation and storage, the problem of packaging, packaging equipment and a bright quality label has become relevant. Fundamentally new types of packaging and methods of its processing are being developed. The problem of wastes disposal is particularly acute. People spend a lot of money so that the packaging has not only an attractive appearance, but also can protect the products from the effects of environmental factors on it. [2]

People should learn about the impact of other products, different types of packaging material and be able to choose safer for health. Packaging is the most important part of almost any production. Different materials can be used for packaging - paper, fabric, polyethylene, plastic, alloys of light metals and many other materials. It is necessary to draw attention to the advantages and disadvantages of polyethylene packaging.

Polyethylene packaging is the most popular type of packaging today. Polyethylene bags are universal. They are quite resistant to many external actions of the environment. They protect the product from moisture and dirt. In addition, polyethylene packaging or packages with a company logo can serve as company advertising and product promotion. In many countries, environmentalists are against the use of polyethylene packaging, they demand the use of other types of packaging paper, fabric, cardboard. Such a demand is fully justified - polyethylene is durable. The relevance of polyethylene packaging is explained by the fact that it is the cheapest type

of packaging for the manufacturer of goods. This is a decisive argument when choosing a packaging material in most cases. [7] The classicist of packaging theory, T. Hein, believes that the main difference between a supermarket and a traditional market is that in the former, the act of sale actually takes place without human participation, since the role of the seller is largely played by packaging. [6]

### The purpose of packaging is to attract a person's attention and at the same time make him trust what is inside. [9]

As you know, any product needs packaging. Packaging is used for various purposes. It protects the product from contamination and spoilage, facilitates the transportation and storage of the product. It gives expressiveness to advertising activities and makes distribution of goods possible. [4]

Packaging function	Packaging task		
Localization function	Limitation in some volume of a certain number of products		
Protective function	Provides protection of the product from environmental influences and protection of people from dangerous products with the help of packaging		
Ensuring ease of use of the product	The packaging should provide the consumer with the maximum and most specific services		
Communication function	Packaging must convey all the necessary information to the consumer		

The packaging consists exclusively of:

- a) <u>consumer packaging</u>, i.e. packaging that constitutes a product unit for the end user or consumer at the time of purchase;
- b) group packaging, which constitutes a group of a certain number of units of the product at the time of purchase;
- c) <u>transport packaging</u>, which facilitates the movement and transportation of a certain number of units of the product in order to avoid mechanical damage. [8] A container is an industrial product intended for packaging, storage, movement and sale of goods in the sphere of circulation.

**Materials.** The material of manufacture is the leading feature of the classification. Previously, paper, cardboard, glass, sheet metal (tin), leather, and even straw and vines were used to design finished products.

**Wooden container.** Wooden packaging is the main component in the structure of packaging and today is the main type of packaging for packaging and transportation of consumer goods.

**Cardboard and paper containers.** Cardboard and paper containers - crates (boxes), boxes, bags, packages belong to promising types of containers. Production of transport containers from corrugated cardboard is widely used in global practice.

**Metal containers.** Compared to other types, metal containers have the highest mechanical strength, tightness and heat resistance. Barrels, drums, cylinders, flasks are used for packaging goods. [6] Metal packaging has positive qualities: it preserves the taste of products; protects against the harmful effects of the environment.

Negative qualities: there is a hidden danger; contains heavy metals (lead). Heavy metals have a negative effect on the nervous system, blood cells, and contribute to the development of cancer. Experts do not recommend buying dented and rusted canned goods.

**Polymer container.** The polymer container has an insignificant specific weight in the total volume of the container. It is promising, has sufficient strength, is chemically resistant, and is light. The main types of consumer and transport polymer containers are cans, boxes, vials, packages, boxes, bags, canisters, etc.

**Vacuum polyethylene.** Vacuum polyethylene, in which meat and fish, vegetables, cheese and other products are often packed, preserves their freshness longer, but in an oxygen-free environment, certain types of bacteria that become active after the package is opened multiply perfectly. And if you also keep it open in the refrigerator for some time, then the chances of getting poisoned increase dramatically. For packages in which crackers, chips and sweets are packed, toxic glue, which causes oncological diseases, is often used to bind them. [5]

#### Polyethylene bags have a dangerous effect on human health:

- 1. Products in a bag spoil faster, because there are many bacteria on polyethylene;
- 2. Condensation forms in a tightly closed transparent bag, in which mold quickly develops;
- 3. Storing food with high acidity has a destructive effect on the upper layer of the package. Chemical compounds penetrate into products and poison them;
- 4. During freezing, polyethylene releases toxins that are dangerous for humans.

#### **Damage to the environment:**

- 1. Polyethylene bags decompose naturally within 100-500 years.
- 2. In the process of burning, a huge amount of carcinogens are released into the atmosphere, which pollute the air and destroy the ozone layer.
- 3. According to ecologists, 1% of polyethylene on the planet is recycled. [1] What can they be replaced by? We offer you four alternatives to using plastic bags:
- 1. **Eco-bags.** They are produced from natural or synthetic materials using production waste or secondary raw material. They are very durable, easy to wash and reusable.
- 2. **Woven mesh handbags** are not only an ecological alternative to bags, but also a fashion trend.
  - 3. Paper bags, kraft paper bags, wrapping paper are environmentally

friendly and safe products that do not harm nature.

4. **Fabric bags** for loose products (flour, cereals, sugar).

#### The best container is glass.

Disadvantages: fragility; high specific gravity.

Advantages: glass is inert; does not release harmful substances into food; is used endlessly. [10]

**Foil.** Aluminum foil is versatile, easy to use and, in addition, allows you to make the cleaning process as fast as possible. However, if you often cook with foil, you should definitely know the following facts. Aluminum is a neurotoxic heavy metal that has long been associated with the development of Alzheimer's disease. Exposure to this toxin can lead to impaired coordination, memory, and balance. Unfortunately, for many who suffer from Alzheimer's disease, it is the ongoing memory loss that creates a huge metaphorical gap with loved ones that cannot be bridged.

This toxic metal tends to accumulate in the bones. It directly competes with calcium for a place in the bones. Inhaling aluminum can cause breathing problems, including pulmonary fibrosis. If you often grill with aluminum foil, you can be left with a pair of sick lungs. The foil in which food is wrapped and grilled emits aluminum flakes into the air at high temperatures, which fly away with the smoke.

#### **Conclusion:**

- 1. Do not cook food with aluminum foil.
- 2. Use it only for storing cold products in the refrigerator.
- 3. A better alternative would be glassware and a complete rejection of foil. Do not store spices, tomatoes or citrus fruits in foil.
- 4. Never! Together with the acid, aluminum will also enter the food. Get rid of aluminum cookware. [11]

Creative packaging abroad: protein-rich buns began to be produced in such an interesting package in the form of press cubes (inside each package was a coupon for a free visit to the fitness center); Parmesan cheese in the form of pencils (sharpener included. Now decorating pasta or salad has become even easier!); Spaghetti "New York"; "Green Berry" tea; honey complete with bees; Japanese cookies; butter; tea bags on hangers; the original packaging of Eat&Go sandwiches (a successful solution of the developers of this packaging allows you to fold it with an accordion as the sandwich is consumed); chewing gum in the form of a dinosaur, where the gum acts as teeth; olive oil "Mini Olive". [3]

The main legislative and regulatory framework for maintaining the quality of food products is regulated by the Laws of Ukraine. [4] Remember! Health is the most precious treasure of a person! Appreciate it!

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### INVESTIGATING THE POTENTIAL BENEFITS AND DRAWBACKS OF USING ARTIFICIAL INTELLIGENCE IN MEDICAL DIAGNOSIS

Artificial intelligence (AI) refers to the ability of machines to perform intelligent tasks that are traditionally associated with human beings. Artificial intelligence is associated with the task of using computers to understand human intelligence, but it is not necessarily limited to biologically implemented methods. It is a rapidly developing field that is poised to revolutionize many industries, including healthcare. In this

article, we will explore the potential benefits and drawbacks of using AI in medical diagnosis [1].

The **subject** of our article is investigating the potential benefits and drawbacks of using artificial intelligence in medical diagnosis

The **aim** of this study is to evaluate the potential benefits and drawbacks of using artificial intelligence (AI) in medical diagnosis.

#### The **objectives**:

- to identify the current applications of AI in medical diagnosis;
- to assess the potential benefits of using AI in medical diagnosis;
- to evaluate the potential drawbacks and limitations of using AI in medical diagnosis, such as lack of transparency and ethical concerns;
- to provide recommendations for the responsible and ethical use of AI in medical diagnosis.

The **methods** used in investigating the potential benefits and drawbacks of using artificial intelligence in medical diagnosis may include a literature review of relevant studies and research, data collection and analysis, and surveys or interviews with healthcare professionals, patients, and other stakeholders. The literature review involves searching for and analyzing existing publications, such as academic articles, reports, and books, to gain a comprehensive understanding of the topic. Data collection and analysis may involve collecting and analyzing medical records, images, and other patient information using AI algorithms. Surveys or interviews may be conducted with healthcare professionals, patients, and other stakeholders to gather their perspectives on the use of AI in medical diagnosis.

Computer technology has penetrated all levels of society to help human development, but has also brought many threats. An obvious example is the development of a new form of thinking, namely artificial intelligence. Artificial intelligence (AI) is the ability of automated systems to formalize and exhibit attributes associated with human behavior. The development of artificial intelligence is associated with the sciences of psychology, neurophysiology, mathematics, and information technology.

The use of AI in medical diagnosis is a rapidly developing field that has attracted the attention of many researchers. Dr. Eric Topol, a renowned cardiologist, has conducted studies on the use of AI in cardiology, including using AI to analyze electrocardiogram (ECG) data for more accurate diagnoses [7, P. 44-56]. Dr. Andrew Ng, an AI researcher and co-founder of Google Brain, has also conducted research on the use of AI in healthcare, including developing algorithms to help diagnose cancer [4, P. 115-118]. Dr. Ziad Obermeyer, a physician and researcher at the University of California, Berkeley, has studied the use of AI in emergency medicine, including developing an algorithm to help identify patients at risk of cardiac arrest [6, p. 1366]. Other notable researchers in the field include Dr. Fei-Fei Li, a computer science professor at Stanford University who has conducted research on using AI to analyze medical images, and Dr. Isaac Kohane, a professor at Harvard Medical School who has conducted research on using AI to predict adverse drug reactions [5, P. 500-514].

Today, artificial intelligence is still one of the most promising and unexplored directions for the development of information management systems and technologies. Neural networks, fuzzy logic, expert systems, fifth-generation computers, and thinking modeling systems are now part of the concept of artificial intelligence.

The Cyberdyne robotic exoskeleton, developed by Japanese experts, is an example of the use of artificial intelligence in medicine, which can read brain signals and direct them to a prosthetic limb, which then begins to move [2].

Among benefits we can define:

- 1. Faster and more accurate diagnosis. It is difficult for doctors to determine which factors should influence the choice of treatment, but the system learns this by comparing similar patients (their symptoms and body characteristics), their treatment, and outcomes. The resulting forecasts allow doctors to develop the correct treatment plan.
- 2. *Improved precision and objectivity*. AI can provide more objective and consistent diagnoses, which can lead to more precise treatment plans.
- 3. *Personalized treatment*. AI in medical diagnosis is the ability to process and analyze large amounts of medical data quickly and accurately. This can help doctors tailor treatments to the specific needs of individual patients, leading to better outcomes and fewer side effects.
- 4. *Cost savings*. By reducing the time and resources required for diagnosis and treatment, AI can help lower healthcare costs.

As you can see Individualized treatment has enormous potential to increase patients' life expectancy. The use of AI in medical diagnosis has the potential to improve patient outcomes, reduce healthcare costs, and enhance the overall quality of care.

However, there are also potential drawbacks and limitations to its use. Among drawbacks we can define:

- 1. Lack of transparency. One of the major concerns is the lack of transparency in how the algorithms arrive at their diagnoses. This can make it difficult for doctors to understand how the AI arrived at a particular diagnosis and to trust its recommendations [3, P. 8-13].
- 2. *Risk of errors*. Additionally, while AI can be more accurate than humans in some cases, it is not infallible. Errors in the data or the algorithm itself can lead to incorrect diagnoses or treatment plans. There is also a risk of bias if the data used to train the algorithm is biased or incomplete, which can lead to biased diagnoses or treatment plans.
- 3. *Potential for bias*. Although AI can be more accurate than humans in some cases, it is not infallible. Errors in the data or the algorithm itself can lead to incorrect diagnoses or treatment plans.
- 4. *Ethical concerns*. There are also ethical concerns related to the use of AI in medical diagnosis, such as the potential for the technology to be used to discriminate against certain patient groups or to infringe on patient privacy.

In conclusion, the use of artificial intelligence (AI) in medical diagnosis has the potential to revolutionize the healthcare industry. To ensure the responsible and ethical

use of AI in medical diagnosis, it is necessary to identify the current applications of AI in medical diagnosis, assess the potential benefits and drawbacks, and evaluate the potential limitations of using AI in medical diagnosis. Future research should focus on addressing the ethical concerns and ensuring that AI algorithms are transparent and unbiased. By doing so, we can maximize the potential benefits of using AI in medical diagnosis while minimizing the potential drawbacks and limitations. Overall, the responsible and ethical use of AI in medical diagnosis can lead to better patient outcomes, reduced healthcare costs, and improved overall quality of care.

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### THE ANALYSIS OF EARLY PREGNANCY PROBLEMS IN ZHYTOMYR REGION

**Objectives**. The goal of this research is to look into the various causes of teenage pregnancy in order to deal with this issue carefully; to analyze the statistical data on teenage pregnancy in the Zhytomyr region and to possible ways of preventing this problem by means of psychological support services and sex education.

**Methods and Materials**. Analysis of statistical data on the causes of early pregnancy and the outcomes of the pregnancy in Zhytomyr region over the last several years was performed.

**Findings.** Analysis of various causes of teenage pregnancy within 2019-2020 period of time reveals that the most common ones included: socio-economic factors; psychological factors; adolescent sexual behavior; lack of discipline and control; sexual abuse of teenage girls. Statistic data show different outcomes of early pregnancy: premature labor and/or delivery; anemia; preeclampsia; having a baby with a low birth weight. Since pregnancies among teenagers were unintended, they ended in 30% with abortion, most of them happened within 22-27 weeks of pregnancy, affecting teenagers' health badly and causing often infertility and gynecological diseases in the future. Within 2019-2020, the number of abortions reduced to 20% in comparison to the year of 2017. The number of miscarriages among teenagers increased to 10% in comparison to the year of 2018.

**Conclusions**. All adolescents and their families must receive information on safe contraceptives; be aware of the dangers of possible complications caused by early pregnancy as well as by unsafe abortions. There should be developed educational programs, professional trainings in the area of adolescent pregnancy prevention.

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### THE CRUCIAL ROLE OF WATER-SALT BALANCE FOR HUMAN HEALTH

Admission: Water and salt are two essential components that play an essential role in maintaining the human body's balance and overall health. Our bodies are made up of about 60% water, and salt, or sodium chloride, is a critical electrolyte that helps regulate bodily functions such as blood pressure and nerve function. However, many people are unaware of the importance of maintaining a proper water-salt balance, which can lead to various health problems such as dehydration, high blood pressure, and even heart disease. In this article, we will delve into the importance of water and salt balance in the human body and discuss ways to maintain this balance for optimal health and well-being.

**Aim of the study**: to investigate the mechanisms and factors that contribute to maintaining proper water-salt balance in the human body.

The research methods and material: The scientific literature and other sources relevant to a particular *issue were included in the research*. On the basis of this research, the data from different materials were received and analyzed.

Water is a fundamental element of life and constitutes the most essential component of the human body's metabolism. Water serves as a medium for transporting nutrients through the blood and plays an integral role in the digestive process.

Additionally, it facilitates the elimination of waste products from the body and helps regulate body temperature through the process of sweating. The quantity of water in the body has a direct impact on blood density, which, if elevated, can hinder the supply of oxygen and energy to the tissues. This can lead to an increase in body temperature, acceleration of pulse and breathing, and cause additional strain on the heart and vascular system.

Furthermore, minerals that are dissolved in water play an essential role in the transmission of nerve impulses.

Consequently, a deficiency of these minerals can result in impaired concentration, drowsiness, dizziness, distracted attention, and reduced reaction speed. To prevent the aforementioned consequences, it is crucial to maintain an adequate water intake, particularly in situations where the ambient temperature is elevated, there is increased physical activity or prolonged exposure to direct sunlight. It is advisable to establish a consistent regimen for drinking water that aligns with one's circumstances and level of activity. The table presented below provides an approximate guide for water consumption. To prevent the aforementioned consequences, it is crucial to maintain an adequate water intake, particularly in situations where the ambient temperature is elevated, there is increased physical activity or prolonged exposure to direct sunlight. It is advisable to establish a consistent regimen for drinking water that

aligns with one's circumstances and level of activity. The table presented below

provides an approximate guide for water consumption:

Your weight (kg.)	low activity (1.)	moderate activity (1.)	High activity (l.)
50	1.55	2.00	2.30
60	1.85	2.30	2.65
70	2.20	2.55	3.00
80	2.50	2.95	3.30
90	2.80	3.30	3.60
100	3.10	3.60	3.90

It is important to note that energy is expended during the digestion process to release water from food, and this process requires time.

However, it is typically not possible to fulfill the body's daily water requirement solely through food consumption, despite the sufficient amount of salts released during digestion.

Additional noteworthy facts concerning the water-salt balance include the following: The human body is comprised of approximately 80% water, and even a modest loss of 2% of the body's water content can cause noticeable changes in well-being, while a loss of 6-7% can have a significant impact on one's health (up to loss of consciousness), and dehydration of 15-20% can lead to fatal consequences. The primary mechanisms of water loss from the body are urination (6-67%), sweating (18-20%), and breathing (13-15%).

Conclusions: To sum up, the water-salt balance is of paramount importance to human health and plays a crucial role in the body's metabolic processes. Maintaining adequate hydration levels is essential for optimal bodily function, as even minor changes in the body's water content can lead to significant impacts on an individual's well-being. The loss of water through urination, sweating, and respiration requires proper replenishment through regular water consumption. The essential minerals that are dissolved in water contribute to the proper transmission of nerve impulses, which is critical for proper cognitive function. The recommended water intake should be based on individual factors such as body weight, cardiovascular health, and level of physical activity. A balanced water-salt intake is key to maintaining optimal health and preventing the adverse effects of both dehydration and overhydration. Thus, individuals must prioritize maintaining an adequate water-salt balance to promote good health and well-being.

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### PSYCHOEMOTIONAL PROBLEMS OF CONSUMERS OF COSMETOLOGICAL SERVICES

**Abstract.** This study highlights the significant impact of psychological factors on the development and progression of skin disorders, as acknowledged by dermatologists, cosmetologists, and mental health specialists. The presence of cosmetic issues poses a risk to the psychological and emotional well-being of patients, as it can result in a subjective psycho-traumatic effect that affects their self-perception and body image. Healthcare professionals from diverse specialties focus on improving patients' physical health and enhancing their resilience to psychological stress. This investigation examines the effects of cosmetology services on the psycho-emotional state of patients with self-esteem issues, in the cosmetology field.

The problem of the study. Achieving the highest level of health at all stages of life is defined by the World Health Organization (WHO) as the right of everyone, not the privilege of the selected ones. The health and well-being of the population are recognized as key factors in the socio-economic development of European countries and are of great importance in the life of every person, family and community.

Providing a person with opportunities to support health and control the factors affecting it contributes to the development of civil society and the improvement of the quality of life [4]. The problem of health and disease prevention, prolonging the duration and quality of life acquires special importance in the conditions of a long-term demographic crisis in Ukraine, changes in the general structure of the population indicate the incessant aging of the Ukrainian nation. In the context of the general aging of the human body, aging of the skin is precisely that inevitable, complex, multifactorial process that indicates the exact age in the appearance. At the biological level, according to WHO experts and scientists, aging is associated with the gradual accumulation of various damages at the molecular and cellular levels, which subsequently leads to a gradual decrease in physiological reserves and an increased

risk of numerous diseases, as well as to a general decline in individual vitality [3]. In particular, the condition of the skin gradually deteriorates with age as a result of damage caused by physiological mechanisms, genetic predisposition, and external influences [3].

The concept of quality of life is actively used by world science for the integral characteristics of human existence in certain socioeconomic conditions, and in recent years it has acquired a new substantial meaning. The basic components of the latter, according to scientific research, are defined as somatic health, daily activity, and free time, which together form the physical component; emotional state, self-esteem, which form a psychological component; social activity; financial situation, employment, housing conditions as a material component; development and self-identification; environment [6].

Therefore, the three components of well-being are directly related to health – physical, emotional, and social. A comprehensive assessment of the quality of life associated with diseases involves taking into account both objective indicators obtained through epidemiological, clinical and laboratory studies, as well as the patient's subjective assessment of his functioning in the state of illness.

The quality of life after receiving cosmetology services is the consumer's own opinion about the nature of the impact of the cosmetology procedure and the results of treatment of cosmetic problems on his physical, social, emotional and spiritual wellbeing [7]. According to scientific research, pathological and age-related changes in the skin significantly affect the psycho-emotional state and quality of life of patients, the formation of a person's status in society, his self-esteem, and the possibility of psychological and social adaptation to the environment. They are often accompanied by the development of depressive states, anxiety and dysmorphophobia [3].

In Ukraine, as in the whole world, cosmetology is actively developing: new beauty salons, cosmetology clinics and medical centers are opening every day, because having well-cared face and body skin, healthy hair, and beautiful nails has become the lifestyle, synonymous with life success.

Aesthetics is a science that studies the nature of aesthetic consciousness. The main category of aesthetics is beauty – a characteristic of an object or an idea, which in the process of its contemplation and understanding brings a person satisfaction and pleasure. In aesthetic medicine, such an object is a person, his appearance, which characterizes the so-called physical beauty.

Aesthetic medicine is a branch of the beauty and health industry that incorporates all the theoretical information and practical possibilities of correcting the appearance of a person using medical methods. The goal of aesthetic medicine is to restore and preserve a person's physical and moral beauty. In the modern world, there is a significant increase in interest to aesthetics in human life. One of the main human needs is the desire to have a pleasant appearance that would meet certain aesthetic standards that have developed in society. In each era, each nation, generation, social stratum formed its own ideas about the ideal human image. But beauty has always, first of all, been associated with the face. If other parts of the body can be hidden from others, the

face always remains open. Therefore, even minor defects negatively affect the emotional state of people [2].

In recent years, there has been a significant impact on the population: environmental factors, acceleration of the pace of life, increase in emotional and nervous tension, decrease in free time for rest and physical education, for hygienic skin care, spread of bad habits, which leads to earlier manifestations of aging.

Changes in appearance reduce a person's capacity to work, negatively affect the psycho-emotional state, lead to depression, low self-esteem, social maladjustment, and worsen family relationships.

In this regard, there is a growing need for the services of a cosmetologist among the population. Since visits to a cosmetologist at this time become a guarantee of good appearance, harmony in the family and self-confidence at work, consumer demands for the quality of cosmetology manipulations and the qualifications of the persons who perform them are also increasing [5].

Today, the number of factors that contribute to the formation of cosmetic defects is constantly increasing: hereditary and oncological diseases that require surgical intervention, injuries, burns, as well as, undoubtedly, the deterioration of the environmental situation, which significantly affects premature aging and the appearance of a person. It is known that the presence of defects and deformations of the appearance, especially of the face, affects the personality, changes the character and behavior, causes disturbances in the emotional and motivational spheres, and reduces the quality of life (QoL).

A significant number of people bear cosmetic defects painfully, see them as obstacles to achieving success in social and personal life. A cosmetic defect quite often begins to affect a person as early as childhood, especially during puberty, which, of course, has a negative impact on the formation of character.

**The aim of the study.** Evaluation of the effectiveness of the application of methods of aesthetic medicine. Impact on physical and psycho-emotional state and quality of life.

**Materials and methods.** 75 women aged 18 to 50 who are consumers of cosmetology services participated in the study. Dermatological quality of life index was determined in patients before and after the application of aesthetic medicine treatment methods.

**Research results.** At the current stage of the development of aesthetic medicine and cosmetology, great importance is attached to the quality of life. It is known that indicators of the quality of life fully depend on the physical and psycho-emotional state of the individual, therefore consumers of cosmetology services who have facial defects and deformations, are experiencing physical suffering and are in constant psychoemotional stress, belong to the "risk group".

In the vast majority of developed countries, considerable attention is paid to the quality of a person's life, especially if it differs from others for some reason. Conditions to receive education, employment, and the development of cultural and spiritual life, which contributes to the improvement of adaptation in society are created for the person. According to various researchers, 20-100% of patients with facial defects and

deformities are diagnosed with mental disorders along with a decrease in "quality of life". Most often, they refer to neurotic disorders, which are understood as "reverse mental disorders caused by the influence of psychotraumatic factors, which occur with the patient's awareness of the fact of his illness, without disturbing the reflection of the real world and which are mainly psychogenically determined emotional and somatovegetative disorders" [4] .

Consumers of cosmetology services strive to become healthier, better versions of themselves. It is not only about preserving physical, but also mental health. Cosmetology, not surprisingly, has a positive effect not only on appearance. Thanks to procedures aimed at preserving youth and correcting imperfections, consumers of cosmetology services begin to feel more confident, their self-esteem increases significantly.

Skin conditions, especially those with facial manifestations, such as acne, psoriasis, vitiligo can cause emotional and psychological disturbances. Patients with acne are prone to depression, anxiety, and low self-esteem. This is of particular importance in young years, when a psychological disorder can become the cause of social problems. With manifestations of psoriasis, an autoimmune inflammatory skin disease, the patient's quality of life decreases and the risk of suicide increases. In addition, people with acne, vitiligo, and other dermatological conditions on the face also have psychological disorders, low self-esteem, and quality of life indicators. The state of the face plays a major role in a person's image and self-esteem. Patients with facial skin diseases have an increased risk of developing depression and suicidal tendencies, which is an additional incentive for the development of treatment methods. Skin condition affects overall well-being, including social, emotional state and performance at work and school.

There are a number of assessment methods used in clinical trials to determine the psychological impact of skin conditions and treatment benefits. One of the most popular methods is the dermatological quality of life index (QOL). This method includes a survey on regular use and assessment of the quality of life of patients with dermatological diseases. The Dermatology Quality of Life Index is also a randomized controlled clinical trial in dermatology that can be used in clinical practice for counseling, assessment, and treatment decision-making. The Dermatology Quality of Life Index consists of 10 questions regarding the patient's perception of the condition of his skin and various aspects of quality of life, including symptoms, well-being, daily activities, leisure time, work, schooling, personal and sexual relationships, side effects during last weeks.

In the course of the study, in which 75 women were involved, the quality of life was assessed one month before and after the application of aesthetic medicine treatment methods. Patients were asked to complete a survey. The results of the survey were processed and were subject to statistical analysis. A significant difference in the indicators of the dermatological quality of life index was recorded a month before and after the application of aesthetic medicine treatment methods. A significant number of patients with high scores experienced anxiety, insecurity, and the impact of diseases

on leisure time. The questions with the greatest change in the indicators in the percentage ratio were related to the impact on sex life and relationships with others.

Conclusions. The problem of preserving and improving physical beauty has troubled humanity since ancient times. Thus, the ancient Greeks formed such a concept as kalokagathos — a harmonious combination of physical (external) and moral (spiritual, internal) virtues, the perfection of the human personality as an ideal of human education. Kalokagathos was simultaneously a socio-political, pedagogical, ethical and aesthetic ideal.

To some extent, this ideal image is reflected in the definition of health contained in the preamble of the Charter of the World Health Organization: "health is not only the absence of disease or physical defects, but a state of complete physical, mental and social well-being". Of course, without a sense of beauty, the mental and social well-being would be incomplete. Physical beauty and health are also closely intertwined concepts. Therefore, the interdisciplinary field of medicine, which has been called aesthetic, is constantly in creative search, and is at the forefront of scientific research. During the research, we came to the conclusion that the application of aesthetic medicine methods significantly affects the quality of life, self-esteem, social and sexual relations, as well as attempts to find a decent job.

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### SKIN DISEASES AND CONDITIONS AMONG STUDENTS OF ZHYTOMYR MEDICAL INSTITUTE

Skin diseases are common and often have an impact on an individual's health-related quality of life. Skin diseases are a common problem among young adults. There is a paucity of data about it among medical students. This study aimed to find out the pattern of skin disorders and to describe their association with various factors among medical students.

Skin disorders can cause patients significant emotional and psychological distress, which may surpass the physical effects of the condition. The youth, in particular, tend to be more aware of their body and beauty, thereby exacerbating their anxiety.

Many factors determine the pattern and prevalence of cutaneous diseases among the youth such as gender, personal hygiene, quality of skin care, and diet. In some instances, patients appear to produce their skin lesions as an outlet for nervous tensions arising from interpersonal conflicts, situations in the country, and unresolved emotional problems.

However, very few studies have been carried out in the Zhytomyr region to find out the problem of skin diseases and that especially among the medical students.

This study was conducted in January 2023 in Zhytomyr Medical Institute. 18 medical students were chosen from the first year of studies, using a Google questionnaire. The students were briefed about the objective of the study and written informed consent was taken for participation.

Most of the participants (75%) were of the age group 17-19 years and majority were females (86%). The most common hair/skin morbidities suffered in the past one year were acne (65%) and hair loss (61%). Fungal infection and severe type of acne were seen significantly more. Hair loss or split ends of hairs were seen significantly more among female students.

Considering the significant impact on the individual, the family, the social life of patients, and their heavy economical situation, the public health importance of these diseases is underappreciated. This study has shown that various types of skin morbidities are common among medical students. It has been reported that younger adults suffer more social and stress problems as a result of skin problems.

Skin disorders, particularly the cosmetic problems are very common among medical students. Stress was found to significantly influence the development of certain morbidities.

From the findings prevalence of various skin disorders, we conclude that skin morbidities are very common among medical students, particularly cosmetic problems like acne or hair loss.

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#### DRUG ADDICTION AS A CAUSE OF SOCIAL MALADAPTATION

The aim of the study is to characterize whether a person burdened by drug addiction can have such problems as maladaptation in the environment.

The dynamics and challenges of state formation in Ukraine are accompanied by difficulties in the political, economic, social, and spiritual spheres. All these factors may lead to the loss of life guidelines, despair and pessimism in some people and as a result, it can cause addictive behavior in order to escape from the realities of life, to facilitate the perception of existing problems.

Several general psychological theories describe the relationships between social context and individual addictive behavior. Among these, social control theory emphasizes the motivational effects of the bonds between group members, social learning theory emphasizes the importance of role models in the development of substance-related behaviors and attitudes, and stress and coping theory emphasizes the impact of stressors resulting from social disorganization on the coping resources of the individual. [1]

All these approaches describe influence processes moving bidirectionally between individuals and their social setting. [5]

In 1865, German physiologist H. Aubert introduced the term "adaptation". This term was used in biological, medical and psychological literature, where it meant a

change in the sensitivity of the analyzers under the influence of adaptation of the sense organs to the action of stimuli. Later, the term "adaptation" began to be used in psychology, sociology, and pedagogy. The concept of "adaptation" is universal, it covers phenomena from the adaptation of harmful substances to environmental conditions to the complex socio-psychological adaptation of a person, which is the process of his interaction with the environment. [4]

Studying the concept of "adaptation", the famous American scientist T. Shibutani noted that each personality is characterized by a combination of techniques as forms of adaptation. In contrast to the concept of "adjustment", which refers to how an organism adapts to the certain situation, "adaptation" is necessary for more stable solutions - well-organized ways to cope with typical problems, for techniques that crystallize through a repeated series of adaptations. [3]

Joel W. McGlothlin and David N. Fisher examined social selection and the evolution of maladaptation. In their article they presented that maladaptation is most likely when social selection is strongly affected by nonsocial selection and acts in the opposite direction. When social selection is strong and informs nonsocial selection, and/or when there is strong negative correlation in the phenotypes of interacting individuals, the partial increase in population mean fitness may be outweighed by the deterioration of the social environment, leading to maladaptation. [2]

Thus, the state of mental health of drug addicts does not allow them to fully function in society, to satisfy their physical, psychological, and social needs.

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