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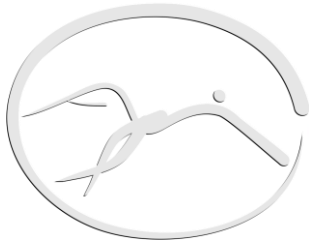
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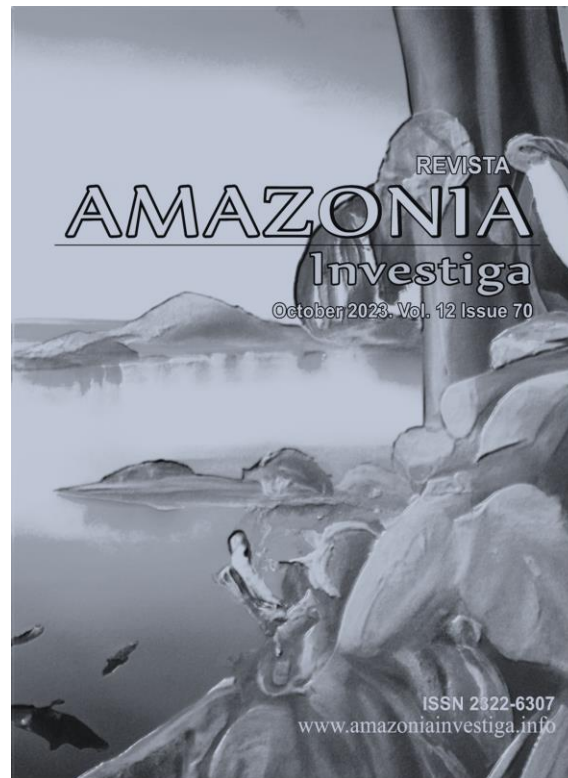
Cover image
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CONTENIDO

The aesthetic function of the natural scenography in Hail City, Kingdom of Saudi Arabia: A regional and global gateway to the arts and cinema

الوظيفة الجمالية للسينوغرافيا الطبيعية في منطقة حائل بالمملكة العربية السعودية كمدخل إقليمي وعالمي للفنون والسينما

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Abstract

This study aims to shed light on the artistic potential of Hail City's natural scenery (KSA), including its formal elements with expressive and symbolic connotations that are unaltered by human intervention. It attempts to highlight the significance of scenography for the fields of theater, film, light, and color shows. The framework of the research is an analytical descriptive approach through two axes: the first is an analysis of the natural scenography in Hail city from an aesthetic and functional standpoint. The second axe involves polling a sample of (15) experts in the arts and film to determine whether natural scenography serves an artistic purpose in Hail city and to what extent it is still relevant to the arts and film. One of the findings of the study is that Hail city's mountainous scenery offers distinctive and lovely natural scenography that may be exploited for a variety of purposes. The study recommends promoting Hail city 's natural beauty through marketing and advertising to highlight its aesthetic features and to profit from the visual treasure the Kingdom of Saudi Arabia has to offer in its charming landscape.

Keywords: Aesthetic Function, Natural Scenography, Hail, Arts, Cinema.

الملخص

تهدف الدراسة إلى توضيح الإمكانات الجمالية للسينوغرافيا الطبيعية في منطقة حائل بالمملكة العربية السعودية بما تتضمنه من جوانب شكلية لها دلالات تعبيرية ورمزية لم تتدخل فيها اليد البشرية، واتجهت الدراسة إلى توضيح الإمكانات الوظيفية التي يمكن أن تقدمها تلك السينوغرافيا لمجالي السينما والفنون المسرحية وفنون عروض الضوء واللون، واستندت الدراسة على المنهج الوصفي التحليلي من خلال اتجاهين: الأول هو التحليل الجمالي والوظيفي للسينوغرافيا الطبيعية في منطقة حائل، والاتجاه الثاني هو استطلاع رأي عينة مكونة من (15) من المتخصصين في مجال الفنون والسينما للتأكد من مدى توافر الوظيفة الجمالية للسينوغرافيا الطبيعية في منطقة حائل ومدى صلاحيتها للفنون والسينما. وكان من نتائج الدراسة احتواء الطبيعة الجبلية في مدينة حائل على سينوغرافيا طبيعية ذات طبيعة جمالية خاصة وفريدة تقدم وظائف متعددة للمهتمين بهذه المجالات، وأوصت الدراسة بالتسويق الإعلاني للسينوغرافيا الطبيعية في منطقة حائل للكشف عن تلك الإمكانات الجمالية والوظيفية، والاستفادة مما تمتلكه المملكة العربية السعودية من ثروات جمالية في طبيعتها الخلابة.

الكلمات المفتاحية: الوظيفة الجمالية ـ السينوغرافيا الطبيعية ـ حائل ـ الفنون والسينما

Introduction

The interaction of human creativity with natural landscapes has long been a major source of inspiration in the arts and film. When the alluring beauty of nature is skillfully combined with creative expressions, it has the capacity to arouse feelings, spark the imagination, and produce life-changing experiences.

Hail City, a cultural precious stone hidden in the Kingdom of Saudi Arabia, exhibits an amazing fusion of the arts and nature. This study examines the aesthetic function of Hail City's natural scenography and considers how it serves as a regional and international entry point for the arts and movies. Hail City is well-known for its

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amazing views, varied terrain, and alluring natural treasures. Hail's natural scenery, which ranges from the enormousness of the Nafud Desert to the majestic mountains and lush valleys, has an allure all its own that has enthralled audiences, movie makers, and artists alike. This research examines how these landscapes have a significant aesthetic influence on Hail's artistic and cinematic productions, shedding light on the ways in which these landscapes support the city's distinctive artistic identity and international acclaim. Hail City's rich visual arts scene serves as a gateway, bringing the local artistic community in line with worldwide trends and inspirations and presenting Saudi Arabia's varied talents and experiences to a global audience.

Attempts are made to shed light on the tremendous aesthetic role that nature plays in shaping the cultural landscape of Hail City by examining the complex relationship between the city's natural scenography and artistic expressions. In order to shed light on the transformative power of Hail's breathtaking scenery in promoting artistic imagination, cultural exchange, and establishing the city as a regional and international the entry point to the arts and cinema, this study will investigate artistic works, films, artist interviews, and audience reception analysis. The natural scenery in Hail City serves an aesthetic purpose that goes beyond simple aesthetic appeal to become an essential component of the city's artistic fabric. By interacting with the stunning scenery and taking cues from the area's natural treasures, filmmakers and artists produce immersive experiences that profoundly connect with viewers. The merging of nature and artistic expression in Hail City continues to captivate, inspire, and transcend cultural boundaries. This is made possible by the city's dedication to fostering the arts as well as its breathtaking natural surroundings.

In short, this paper delves into the aesthetic function of the natural scenography in Hail City, exploring its role as both a regional and global gateway to the arts and cinema. According to the aforementioned, the potency, originality, and distinctiveness of the visual and symbolic connotations produced by nature itself are essential to the success of nature scenography. This study primarily focuses on this field since it is widely believed that it is the responsibility of visual arts researchers to unveil the aesthetic functions of nature and its boundless potential.

Literature Review

Few works have examined various facets of location and nature-themed scenography in theatre and film. One study carried out by Al-Jabas (2021) brought to light the low regard for the open-air theatre in Minya City, Egypt, because of its absence of a direct link to the most important historical waterway in the city's past. This negativity was due to design errors in its construction, neglecting to build impressive visuals for the performances amidst the surrounding natural environment to embody visual and sensory atmospheres. Joslin McKinney (2008) examines how the audience and the scenery communicate with each other. It is the first instance of practice-based research that looks at the specific role that the stenographic plays and how audiences respond to it.

Another study conducted by (Ahmed, 2020) investigates the digital technology tools and applications utilized in designing theatrical scenery as a workable remedy to the issues with design and the process of directing on stage as the technological development in the modern era has a great impact. Technology facilitates the use of theatrical landscape design to provide a scenic image that is in line with the demands of the current historical period. The study concluded that theatrical language has been rehabilitated. Since the theatre shapes collective consciousness by expressing its ideas and content, it seeks to use digital technology as a tool of creative action to create scenography by using computers and contemporary programs to draw up a more creative and expressive scenography. According to a study by Masoud (2021), digital scenography can go beyond the limitations of traditional static theatre and all its traditional techniques. This opens wide horizons for experimentation and innovation in the technical form. The purpose of this aspect is to engage the recipient in the theatrical game text and presentation through his participation in events, virtual reality, and cyberspace. According to the study, to provide the audience with dazzling and enjoyable experiences, it is still needed to learn about the Arab world's theatre-audience interaction culture and modern digital theatre technologies.

Gibson (1979) covers a variety of subjects, including how people perceive events, surfaces, and objects, as well as how movement and action affect perception. Gibson also addresses the connection between perception and how one perceives social affordances, time, and space. John Urry's book (2005) looks at a number of

aspects of the tourist gaze, such as the importance of visuality, how landscapes and attractions are consumed, and how experiences are turned into commodities. In addition, Urry examines the connection between modernity and tourism, highlighting the ways in which tourism is influenced by larger social and economic developments. Allen Carlson (2000) examines the relationship between aesthetics and the environment with a particular emphasis on appreciating art, architecture, and nature. It explores diverse viewpoints on our perceptions of and values for the natural world, as well as the philosophical underpinnings of environmental aesthetics. The book offers insightful information about the aesthetic value of natural scenery and how important it is to improve our awareness of and interaction with the environment. Film theorist Vivian Sobchack (1992) explores the embodied and subjective experience of watching movies. She looks at how interacting with cinematic images and stories affects our perception, physical experiences, and emotional reactions. In her work, Sobchack highlights how the body, perception, and emotions of the audience shape the cinematic experience.

The previous studies have shown how important it is for Arab nations to adopt scenography's modern viewpoint in the arts, particularly in the fields of place and nature-related art. To the researcher's best knowledge, there is a scarcity of studies that address this issue, as not a single study dealing with natural scenography has been recorded. There are various reasons for the paucity of research on natural scenography: the study of natural scenography may not have gotten much attention from academics, especially in places like Hail City. Academic interest and research funding frequently place different priorities on different fields of study, and natural scenography may not have been the main focus in the past. Thus, few if not at all research on this particular subject may have been done as a result. A wide range of academic fields are included in natural scenography, including environmental aesthetics, theater studies, film studies, and landscape architecture. The subject's interdisciplinary nature can occasionally make it difficult to identify a particular research niche or develop precise methodology for study. This could explain why there aren't as many studies on natural scenography as there are. Researching natural scenography frequently calls for cooperation with artists or filmmakers, access to particular locations, and financial and material resources. Restricted access may make it more difficult to conduct research and lead to fewer studies being done. Future studies on natural scenography might surface as it becomes more well-known and intriguing in the artistic and cultural fields. There are fewer studies conducted as a result of cultural norms, language obstacles, or restricted research dissemination.

Nature in general is determined by place and time, and the Kingdom of Saudi Arabia is distinguished by a unique nature in many of its regions. Hail city, the subject of this study, has a mountainous landscape that is as old as recorded history, combining the region's ancient past with its natural beauty. This includes Hail City among the areas of natural scenography that are very special and distinguished and the role that has in the tourism boom and the cultural and entertainment movement. This study aims to clarify this, making it distinct from prior studies that concentrated on traditional scenography. Thus, by defining the term and the field of natural scenography in all its facets and providing a vivid example from the geography of Hail city in the Kingdom of Saudi Arabia, this study becomes the first of its kind.

Methodology

The article's framework is an analytical descriptive technique along two axes: first, it analyzes Hail City's natural scenery from both an aesthetic and practical perspective. The second axis is surveying a sample of fifteen art and cinema professionals to ascertain whether natural scenography in Hail City fulfils an artistic function and how much it still contributes to the arts and movies.

A combination of literature review, data collecting, visual analysis, case studies, comparison analysis, and interpretation make up the methodology used in this study. After the interviews were recorded, important ideas and themes about the aesthetic role of Hail City's natural scenery were found. After being given codes, these themes were categorized. To obtain insights, the coded themes were analyzed by looking at their frequencies, patterns, and variations. Analyses were conducted on visual materials, including pictures, paintings, and movie stills that showed the natural scenery of Hail City. Composition, color, lighting, and symbolism were among the elements that were evaluated according to certain standards. Finding patterns, motifs, and distinctive representations that support the aesthetic function was the main goal of the analysis.

The results were analyzed in light of historical, cultural, and creative contexts. The selection of case studies was predicated on their pertinence to the research subject and their capacity to offer discernments into the artistic role of organic scenery. Information was gathered from sources like critical reviews, production notes, and artist statements. To find the similarities, variations, and distinctive elements of the aesthetic function among the case studies, a comparative analysis was done. The results were combined to create a thorough understanding. Using these methods, the study sheds light on Hail City's regional and international relevance as a gateway to the arts and movies while also examining the special role that the city's natural surroundings play in supporting artistic and cinematic undertakings. Determining the study's scope, research terms, limitations and research objectives is the first step in the methodology. With a particular focus on the aesthetic role of Hail City's natural scenery, the study intends to investigate how the natural surroundings of the city support the growth of art and film on a regional and international level.

The study is to investigate how Hail City's natural surroundings support the growth of art and film on a regional and international dimension, with a particular focus on the aesthetic role of the city's natural scenery. The study attempts to answer the following questions: What are the aesthetic characteristics of the natural scenography in Hail city in Saudi Arabia? What are the possibilities of benefiting from the natural scenography of Hail city in the field of performances and cinema?

Research Objectives

1. Clarifying and rooting the term natural scenography in the realm of visual arts in Saudi society.
2. Identifying the aesthetic characteristics of the natural scenography in the Hail region.
3. Extracting ways to benefit from the natural scenography in the Hail region in the fields of performing arts and cinema.

Limitations of Research Study

The following determines the study:

- Spatial boundaries: Hail region, Saudi Arabia.
- Time limits: Data is collected during the second half of the year 2022.
- Objective limits: The study is limited to the natural scenography in the Hail region.

Search Terms

Scenography: (the Greeks) defined it as "the art of decorating the stage and decorating the colours that result from this technique." It is defined as the art of shaping exhibition space and the scenic image. It is an artistic creative activity that assumes knowledge of drawing and architecture (images, colours, shapes, and sizes), and the techniques used in theatre, lighting, and sound engineering (Shubar, 2014, p. 72).

Procedural scenography: It is all the creative decorative arts, whether traditional or technological, that accompany performances related to the visual scene in theatre and cinema. These intended and studied arts aim to show and complete the desired message from the show through (colours - effects - images - space processing - accessories - and everything related to the visual scene).

Procedural natural scenography: It is all the creative decorative arts, whether traditional or technological, that deal directly with nature, and accompany shows related to the visual scene related to place (such as natural visual theatre shows, cinematic nature scenes, and documentaries related to space and time).

Results and discussion

The results and discussion section are created. For presenting each of the questions and their respective results in this section. To answer the question of the first study, which is what the profitability of natural scenography in Hail is, the following is required:

Examples of natural scenography in Hail:

Hail is characterized by nature that carries the fragrant interpretations of history in addition to its formal and visual distinction, which makes this nature a fertile and distinct source of inspiration and imagination for artists in general, and those interested in the arts of performances and cinema in particular. The study presents a few examples that stand out due to their use of time and space, which are crucial factors in both the performing arts and cinema. For example, the aesthetic side created by nature in the rocks of these mountains creates unique views but, it doesn't get enough attention. A model like this is shaped by wind, rain, and water. These factors give it an exceptional and distinctive aesthetic shape, especially since the nature of the rocks in this region is sandy and sedimentary, as it is subjected to wind erosion with the sand it carries,

in addition to the rain that gives its outer surface an aesthetic and distinctive appearance. The Great Sphinx Rock, shown in Figure 1, is in the village of Aba al-Hiran, about 100 kilometres south of Ha'il City, and was given this name because of its resemblance to the Pharaonic Sphinx sculpture. It also symbolizes the focus of the Ha'il man's attention, who created numerous stories and hypotheses about it.

Fig. 1. The rock of the Great Sphinx in the village of Aba al-Hiran.
Taken from a video posted on YouTube (Alekhbariya TV, 2020)

It bears the features of a face that reminds us of the face of the Great Sphinx in terms of shape and size, as well as posture, and what is meant here is the sitting position that reflects prestige, strength, and solemnity. This is a strange coincidence that combines what is seen from nature, and what was made by a person who belonged to one of the largest ancient civilizations. As a result, this rock structure can greatly influence imaginative and surreal interpretations, especially if the show and cinematic arts intervene in such natural landscapes. This calls for more care, as it contributes to enriching tourism and artistic aspects in general and it is a unique field of natural scenography. In the Sphinx (Egypt), the scenography of sound and light shows was implemented, and the same site was the place for the performances, figure (2), to be a scenography area for performances, cinema, and a field of tourist attractions.

Fig. 2. Natural scenography at the site of the Sphinx
Source: (Photo by Al-Barbari (2023)

The Hail rocks have a wide variety of different formations, sometimes including animal, or even human-like characteristics. A rock structure that was observed at Aga Park resembles a human face or, more particularly, the head of a prehistoric warrior wearing a helmet, as shown in Figure (3). These faces send us to the world of fantasy or also to the world of cinema, history, and myths. How can natural factors mimic the human face in more than one location, such as the Sphinx, the ancient warriors and their distinctive weapons, or strange creatures that may resemble us but differ from us, as if they were aliens? The shapes that nature provides without charge capture our attention in foreign fantasy films, as well as movies and cartoons, and Star Wars flicks where we encounter odd creatures.

Fig. 3. Rocky cavities with suggestive human faces or masks.
Location: Aja Mountains in the Emirate of Hail. Saudi Arabia (Own authorship)

In addition, the nature in Hail includes shapes distinguished by their beauty and peculiarity, which link them to some of the colors utilized in contemporary and subsequent art. Although it is a completely natural form in which no human hand has been involved, The Hanging Rock, which is also located in the village of Aba Al-Hiran, can be categorized within the arts and post-modernism. It alludes to visualizing a variety of forms, just as it alludes to an architecture that has a pleasing equilibrium because it is uncomplicated in its surroundings and avoids being the cause of that balance. Due to the viewer's lack of understanding of the laws of balance, it might have futuristic or space interpretations. How can a rock of this carved shape, which seemed to be made by an artist, maintain its balance on top of a slender and slanted rock column, as if inside this column there is something that guarantees its balance like the concrete buildings that we know today, Figure (4). Its roundness or shape, which takes the form of a disk or a cylinder, also refers to dimensions that we are not familiar with in the world of rocks. Rather, it refers us to the world of living organisms and plants such as champignon. This is a reason to dazzle the viewer, and thus this rock model is no less important than the model of the Great Sphinx since it is adjacent to it in place and perhaps at the time of its formation.

Fig. 4. A supernatural rock architecture, perhaps futuristic or space, where the laws of equilibrium are absent.
Taken from a video posted on YouTube Alekhbariya TV (2020, October 19).

Additionally, we come across shapes in the Hail Mountains, in particular in Aja Mountains, wonderful sculptures that extend from the heights of the Aja Mountains to its foothills. These forms arouse in us a sense of the duality of life and death or the duality of the spontaneous

and the perceptive. It represents a journey into ancient times through rock formations that took shapes reminiscent of the skulls of strange creatures coexisting with forms closer to the animal forms that we know today, as shown in Figure (5). It can easily be seen in a shape reminiscent of the skull of a reptile such as a crocodile or a dinosaur. It is also noticed that, in a space adjacent to this model, the shape of a small animal reminds us of an elephant or a hedgehog. Perhaps the viewer's imagination may go further in imagining other forms within the borders of this image, which represents only a truncated part of an area full of shapes like such unique rock models.

Fig. 5. The picture and the illustration next to it show rock formations that have taken shapes resembling the skulls of strange creatures. It coexists with forms more closely related to animal forms.
Source: (Own authorship).

All these aesthetic elements are a model of what the Hail region abounds in from other natural treasures, such as the crater of the dormant Hatima volcano in the Hail region which is the second largest volcano in the Kingdom of Saudi Arabia. Such a volcano can be a site for shows, movies, and series due to its large size, strange surface, and aesthetic components. This site combines the high rocks that make up the crater of the volcano, which exceeds 150 meters in height, and the flat lands in the middle of the crater, which takes the form of a circle with a diameter of more than 1200 meters. It radiates white in the middle of the blackness of the surrounding rocks, as a result of its components that mix between white salt that mediates the area of the crater (pictures 6, 7), and the black mud that still retains volcanic dust as if the volcano is still active despite the thousands of years that have passed since its dormancy. This volcano also retains water during the fall and winter seasons, which gives the place more splendor, especially through the process of reflection that increases its beauty and magnitude.

Fig. (6,7). Show the crater of the extinct Hatima volcano in the Hail region, which is a distinguished site. Scenography for performances and cinema (Own authorship)

This unique environment could be a good space to produce science fiction films, Star Wars, or other multiple artistic and dramatic works since the spatial framework of some cinematic works is similar to this natural environment. It is like the place where the movie The Neverending Story Big Strong Hands was filmed, whose figure (8) illustrates one of its scenes in which the director of the film combines the privacy of the mountainous spatial framework, and the strange giant figures emanating from it.
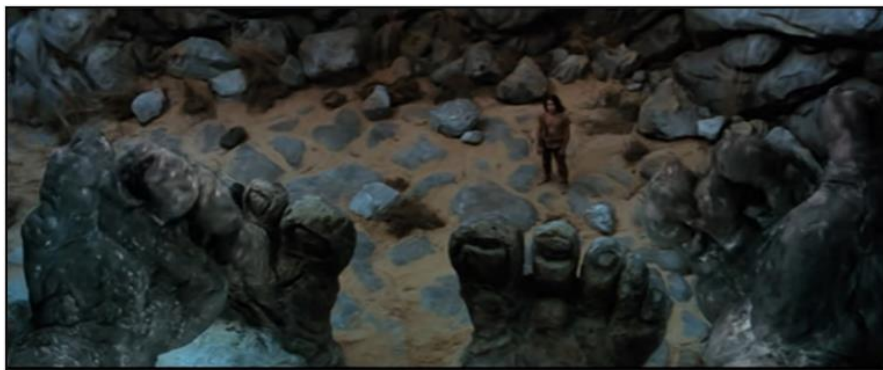
Fig. 8. A picture from a movie scene whose scenography is like the area of a volcano crater. Hatima Al-Khamed in Hail region, taken from a video posted on YouTube. (Movie clips, 2012).

The Hail region has a rich cultural history that dates back thousands of years in addition to its immense natural wealth. This is reflected in the various historical traditions; the most important of which are the rock carvings that embrace the mountains of the Jubbah region and others, which are being studied by Saudi and international researchers. It depicts creatures such as camels, deer, and other animals that have become extinct. It can be concluded that this land has been very rich in natural and cultural aesthetics, which adds an attractive historical and cultural dimension to the nature of this rocky region.

To create scenes of immense splendour and strangeness, one only needs to choose the appropriate time, place, and scenographic framing. The previous presentation is just a sample, as the Hail nature is abundant. It can be said that the natural, cultural, and heritage stock in Hail is no less important than the regions that represent the center of attraction for the largest international film producers and directors. The

director of the famous Avatar movie found in the mountains of China, for example, is a source of inspiration and creativity. We see a mountain forest in this movie that is incredibly majestic and lovely, and the natural scenography used to make this movie had an impact on it. This means that the success of any dramatic work is closely related to the capabilities provided by the natural, cultural, and heritage elements that move the imagination of the creator, thus ensuring the success of the artwork.

The ancient city of Fayd: The city of Fayd in Hail is one of the ancient archaeological and historical cities located east of the city of Hail. Following Basra and Kufa, it is the third city along the storied "Darb Zubaydah" pilgrimage route. Due to its extensive archaeological reserves, "Faid" is regarded as one of the most notable historical archaeological sites in Hail City. According to some historical sources, the city of "Fayd" held a special position during the Abbasid era, as seen in Figure (9).

Fig. 9. The ancient city of Fayd (Abbasid era).
Source: (Alshaie, 2022).

The World Heritage Sites in Hail City: Hail City is characterized by rock art sites that constitute human creativity and form a civilized record of human groups over the various successive eras in the region. The subjects of rock art are distinguished in quantity and quality, and these arts reveal the social, cultural, and religious aspects of those human groups since the Neolithic period, as in the two sites of Umm Sinman in Jubbah and Al-Manjur in Shuwaymis, which are registered in the World Heritage List (UNESCO), and through the historical eras, most notably the period of ancient Arabic writings (Thamudism) during the first millennium BC, and the early Islamic periods Figure (10). Among the most significant and well-known rock art locations in the Kingdom and the entire globe are those at Jabal Umm Sinan in Jubbah, Hail City.

Fig. 10. Rock Art from the World Heritage Sites in Hail.
Source: (Alshaie, 2022)

Elements of natural scenography

This study divides the elements of natural scenography into three frameworks:

1. Spatial framework: This framework includes the natural place, devoid of any additions, and the extent of its suitability and consistency with the construction of the artwork, whether it is a theatrical or cinematic show. The spatial location includes indications, symbols, interpretations, and elements of fascination, or attraction, such as the Hail sites that were referred to in the previous part of this study.
2. Structural frame: It consists of artificial components that can be introduced to the environment to fulfil the work's objective. It may come in the form of three-dimensional structural installations or decorations in which the rules of perspective and colours are used, or mass and space, which are the elements that affect and are affected by the dramatic action that contributes to the formulation of the semantics in the general visual formation. Among the elements of the structural framework are the actor and his related costumes, accessories, and make-up, to transmit information about the time and background of the represented character. Together with the other elements of the scenography, it establishes the overall mood necessary to display the character's emotions, as well as the character's expressive strength, effectiveness, and capacity for improvement. Since it greatly aids the actor in identifying the setting, period, and performance act within the purported text that transforms into a purported show, it is not aesthetically distinct in its work from the actor and his performance in the show.

The scenographer creates, finds, draws, or researches those accessories that help in achieving the theatrical performance and the aesthetic state in addition to the intellectual state. The aesthetic state cannot be attained without several variables and aesthetic foundations, some of which include the following:

− The proportionality between these accessories through the assets of the theatrical or cinematic show, because it is the basis for judging the beauty of things of all kinds. It is necessary in the arts to define beauty in it. The state of proportionality is not only a consistency between the parts but rather a correspondence between the spirit of a thing and its matter or its external form. This principle is the one to which mixed forms of things such as swords, shields, cannons, sticks, pens, helmets, umbrellas, etc. were subjected. Here, it goes beyond the apparent meaning of proportion as a ratio between the height and width of the body or the length and thickness of the leg.

– Diversity in different colours and shapes within the limits of proportionality, in a way that comforts the eye when looking at it. Diversity is the difference in colours and shapes within the limits of proportionality and in a way that comforts the eye when looking at it because diversity is one of the important factors in the recipient's sense of taste and pleasure. Otherwise, the recipient might find it boring. It is said that the shapes of theatrical accessories and their proportionality with their length and body could not be chaotic or arbitrary (by merely mixing a wide range of colours and shapes without a purpose).

– The consistency of being still and remaining steadfast: that is, in the sense of creating angles of vision in steadiness and movement, and from all sides, we may see things in terms of the side view more beautiful than in the front view or vice versa.

– Without obtaining diversity, simplicity is useless. In contrast to how we see cubic objects, we see circular objects differently. Vertical shapes differ from horizontal shapes, and triangular objects differ from square objects, despite the simplicity of the composition. However, we can achieve a variety of forms by including diversity to simplicity.

– Complexity: This element can be traced back to the psychological foundations of interpretation and analysis. Because the passion for the pursuit is ingrained in us from an early age, we can clearly experience this pleasure in hunting. When one accomplishes something difficult, he experiences great pleasure. We mention this example to emphasize that the eye feels a similar pleasure when it sees winding, curved, and overlapping objects and materials (such as complex and compound ornamental shapes). The objective is to first produce the necessary diversity and then, in some circumstances, move away from straight and direct shapes rather than develop complicated shapes and materials for the sake of complication.

– The size: The appendix's size and smallness have an impact on how the recipient of the show perceives it. For this reason, designers lengthen the cloak that the actor wears in the Greek theatre, making sure the stick has an obvious length and size that corresponds to the actor who plays the theatrical role.

Digital framework:

This framework is directly related to the spatial framework of nature. It is the one that would add mechanical movement to some parts of the structural framework, add sound, light, or musical technological effects, or create digital characters and move them within the natural spatial framework. The scenes included in the digital scenography within the scope of the spatial framework can be prepared in several ways. The primary source is computer-generated imagery, which is created with programs like Virus Walk Through Pro. It's a piece of software that can create virtual settings where one can walk about visually. These programs can prepare video files in stereoscopic mode, ready for direct use during a presentation. These scenes range from photographic fidelity realistic simulations to fictitious situations. The second source of imagery is digital actors who appear as holograms that are interpolated into the scene with real actors. Their movements are controlled by actors outside the stage through computer systems. To achieve this, binocular remounted video cameras are installed. Through the simultaneous broadcast of the image from both cameras, spectators see stereoscopic figures moving in the scene, occupying space in the scenographic space of the theatrical performance. Rear projection is also used in the entire background of the scene to enrich the spatial environment. Among the modern techniques of scenography in light of the era of digitization is the use of the hologram which is one of the applications of lasers to produce a virtual stereoscopic reality, and the computer has preceded in this field (Masoud, 2021). Accessory elements, like cinema, are utilized to support the artistic presentation of the many current technologies as well as the use of video technologies, and the mixing of theatrical and cinematic images in the artistic presentation. The technological or digital framework aims to create and innovate intellectual and artistic pleasure in an aesthetic manner in which the connotations and symbols expressed by the various elements of the show harmonize to gain the admiration and response of the recipient to the show as a whole. The technology-based scenography reshapes the theatrical space, eliminating the boundaries between the stage and the audience. It also seeks to establish a spatial and visual relationship between the drama and the audience.

As for the answer to the second research question, which is: What are the possibilities of benefiting from the natural scenography of the Hail region in the field of performances and

cinema? This requires clarifying the appropriate trends, which are:

First: Natural visual theatre:

Natural visual theatre is a field of theatre that requires a connection with the natural setting. This type of performing arts combines natural scenography with digital scenography that relies on technology, sound, light, and colour effects. Among the pioneers in this field is Robert Lepage, who is known as the magician of the stage, and who occupies a prominent place among the names of the five most important theatre directors after the generation of Peter Brook, namely the American Robert Wilson, the German Peter Stein, the Russian Lev Dodon. The French Ariana Manouchkin is one of the pioneers of visual theatre that transforms the public place into a magical place and the magical place into a realistic one. His theatrical work with his troupe "Machina" is based on collective innovation, and the improvisational construction is not in the text, but even in directing if the script is not written by one of the writers. To do this, the band calls for artistic and technical elements from various fields of art, technology, mechanics, and digital devices. To build the theatrical show in a modern way, digital technology combines the world of cinema, video, computers, architecture, sound devices, and modern technical effects. Lepage is even accused by critics of using more technicians than actors. For example, in his play (Senior Hamlet), there were 35 technicians on the stage. Due to the unavailability of a few technicians, the play's performance was first delayed and then completely postponed (Masoud, 2021, p. 306).

Second: Arts for Museum Display: Museology has utilized natural scenography regarding how natural museum exhibits are set up as well as any connected lighting and audiovisual elements. Scenography is an aesthetic perspective related to the visual, experimental, and spatial composition of artistic performance. The Hail region enjoys the nature of its history extending throughout the ages, starting from prehistoric times, and passing through the Islamic civilization. The art of rock painting in the Hail region is characterized by distinctive and special artistic features. The site of the rock paintings in Hail joined the UNESCO World Heritage List in 2015 AD. The historical stages of the rock carvings included 4 stages: the Paleolithic period, which extends from 7 to 12 thousand years BC, the Copper Age from 5600-4500 BC, and the Bronze Age. 2500 BC, and finally the Iron Age before 1500 BC (Alshaie, 2022).

Second: Documentary Films:

Documentary Film: This term refers to a certain type of film production that, in both content and execution, completely focuses on reality and does not pursue financial gain or enjoyment. Rather, it is primarily concerned with achieving special goals related to media, education, culture, or preserving heritage and history. It always addresses the mind in one way or another. It is distinguished by its clarity and directness and frequently has a brief presentation period because it calls for a high level of concentration and is intended for a particular audience. As satellite channels compete more fiercely for viewers, they use various forms of visual and aural glitz to appeal to different societal groups who are yearning for the variety of programming that these channels offer. The documentary film remains an important artistic product due to its characteristics. It derives its material from the reality of the place and the lives of the people who live in it. Therefore, it has a strong influence due to its sincerity. It can instill positive social values, and enhance national belonging (Abdul Latif, 2015).

Third: Television and cinema films:

The researcher Rahmouni Lubna points out that cinematic tourism studies have developed significantly since the early 2000s. These studies are based on conducting quantitative and qualitative research, such as surveying visitors to a particular site to learn why they visit it and whether their visits are primarily motivated by watching a movie or television program about it or if it happened by chance. Studies can be conducted on tourist visits before and after the release of a TV show or movie about a particular destination. There are several instances of how the popularity of popular television shows and movies has influenced tourist destinations. Researchers have frequently discovered that a TV show or film can increase the number of tourists who travel to a particular location, but studies have rarely pinpointed the precise causes of this. For instance, the Peter Jackson trilogy "Lord of the Rings" and "The Lord of the Rings" positively impacted tourism in New Zealand, and the AMC series "The Walking Dead" transformed numerous little Georgian towns into popular tourist attractions as a result of viewing the aforementioned film content. The reason for this, without a doubt, is the image of the tourist destination, which the film or television program focuses on marketing in the best way (Ben Shrad, 2022, p. 56).

Study procedures:

To extract the results of the study and ensure Hail's suitability to the arts of natural scenography according to the descriptive and analytical approach, the researcher developed a questionnaire consisting of two axes:

- The availability of aesthetic characteristics of natural scenography in Hail City.
- The extent to which it is possible to benefit from the natural scenography of Hail City in the

- field of performances and cinema. It also contained the photographic samples included in the images of this study. The study sample consisted of (15) individuals working in the show and film industry who responded to the questionnaire. Their nationalities are from three countries (the Kingdom of Saudi Arabia, Egypt, and Syria). Their jobs and numbers are clear through the following Graph (1):
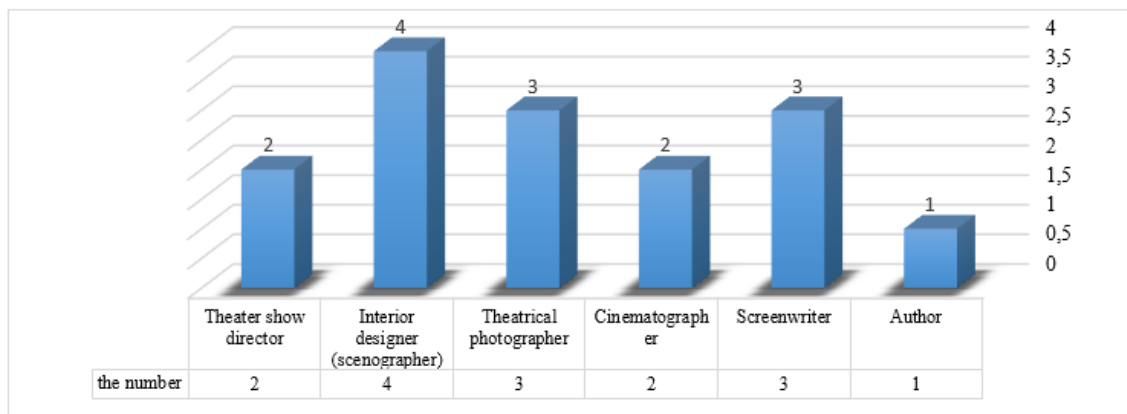
Graph. 1. Characteristics of the Study Sample.

Results

After conducting a quantitative analysis of the data, the study concluded with the following results:

1. All natural images included in the resolution are characterized by a consistent spatial framework suitable for constructing the artistic work, whether it is a theatrical or cinematic performance.
2. The ability of the spatial frames included in the resolution to contain multiple structural frames depends on the characteristics of those frames, which are characterized by artistic and aesthetic foundations such as proportionality, diversity, simplicity, and the ability to be interpreted as a result of the state of consistency between stillness and stability to create viewing angles in stillness and movement.
3. The ability and ease of attaching a technological or digital framework to all the spatial frameworks included in the questionnaire.
4. Suitability of World Heritage sites in the Hail region for cinema, especially documentary and historical films, and museum display arts.

5. The potential of the crater of the extinct volcano, Hetima, to movies and science fiction films.
6. The potential of the rocky cavities in the Aja Mountains for scenography that is concerned with fantasy and mythology films.
7. The ability of the Sphinx Rock located in the village of Aba Al-Hiran to be used for scenography, which is concerned with sound and light shows and science fiction films.
8. Hail has distinguished tourism potential, highlighting the need to activate the role of television and cinema films, to transform Hail into
9. a regional and international tourist destination.
10. The ability of natural scenography in Hail to attract viewers by presenting all forms of visual and audio dazzle and meeting the needs of segments of society who are looking for different content. The study recommends working toward effective advertising to attract the attention of those who are interested in performing arts and film to Hail.

Conclusion

This study has investigated the aesthetic function of the natural scenography in Hail City, Kingdom of Saudi Arabia, and its significance as a regional and international entry point to artistic endeavors and filmmaking. Hail City's unspoiled splendor, which is exemplified by its striking vistas, unusual geological formations, and varied ecosystems, has drawn tourists, artists, and filmmakers from all over the world in addition to the local populace. This research has investigated, using an interdisciplinary approach, how Hail City's natural scenery may be an artistic canvas and an inspiration source. Artists and filmmakers can use the natural landscapes of gigantic sand dunes, enormous deserts, ancient rock formations, and picturesque oases to create visually breathtaking and emotionally stirring works. Furthermore, the study has illuminated the noteworthy function that Hail City fulfils as a local and international entry point for the arts and film. International art festivals, movie screenings, and exhibitions have been established as a result of the city's dedication to supporting artistic efforts and cultural interaction. These gatherings have enhanced the artistic environment in Hail City and beyond by showcasing the abilities of regional artists as well as encouraging intercultural communication and cooperation. The article additionally addressed how the local community and its cultural identity are affected by the natural scenery. Due to their strong ties to the natural world, the inhabitants of Hail City take inspiration from their surroundings and use natural materials in their traditional crafts, storytelling, and artwork. Hail City community's natural scenery serves as a unifying factor, promoting a sense of pride, belonging, and cultural heritage. Briefly said, the natural scenery in Hail City serves an aesthetic purpose more profound than just being aesthetically pleasing. It acts as a stimulant to produce art, a forum for cross-cultural dialogue, and a wellspring of group identification.

Recognizing and protecting the inherent worth of Hail City's natural scenery is essential to ensuring that future generations can continue to be inspired by its beauty and utilize its creative potential as the city develops into a regional and international centre for the arts and film.

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La medición de la PTF y la Economía informal

On TFP accounting and the informal economy size

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Resumen

La medición de la Productividad Total de los Factores (PTF) es un ejercicio en el que generalmente no se considera la presencia de un sector informal. Esto es un problema, ya que las actividades económicas informales ejercen algunas influencias sobre el crecimiento económico. En el presente artículo se usan dos modelos de tecnología que tienen en cuenta la eficiencia del trabajo informal, comparando dos conjuntos de países que difieren sustancialmente en el tamaño de economía informal. Al comparar 24 países de la OCDE con 24 países subdesarrollados en el periodo 1990-2018, observamos diferencias en el crecimiento medido de la PTF, lo que pone de manifiesto que la omisión de este sector resultaría en un error de medición de la PTF. Además, las economías no desarrolladas muestran una tasa de crecimiento de la PTF más alta cuando se incluye el sector informal. En el caso del grupo de la OCDE, la PTF tiende a crecer a un ritmo menor. Estos dos hallazgos resaltan la importancia que tiene el sector informal para el crecimiento económico; un hecho que los policy-makers deberían tener en cuenta.

Palabras clave: PTF, Medición, Economía informal, Tamaño, Tecnología CES.

Abstract

Total Factor Productivity (TFP) measurement is an exercise that usually doesn't consider the presence of an informal sector. This is a concern since informal economic activities can carry out some influences on economic growth. The present paper builds on two technologies that take into account informal labor efficiency by comparing two subset of countries that significantly differ on their informal economy size. Comparing 24 OECD countries with respect to 24 underdeveloped countries during 1990-2018, we observe differences on the measured TFP growth, so that an omission of the informal sector could lead to TFP mismeasurement. Also, non-developed economies display a higher TFP growth rate when the informal sector is included. In the case of the OECD group, TFP tends to grow at a lower rate instead. These two findings highlight the importance informal sector has for economic growth; a fact policy makers should be aware of.

Keywords: TFP, Measurement, Informal economy, Size, CES technology.

Introduction

La Productividad Total de los Factores (PTF) se suele medir sin la presencia de la economía informal o sumergida. Esto es algo a tener en cuenta dado que la actividad económica informal puede provocar efectos positivos y/o negativos en el crecimiento económico. Estas actividades han sido definidas de diversas formas. En general, distintos organismos e instituciones

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oficiales las describen como aquellas actividades de baja productividad que no se encuentran contabilizadas en las estadísticas (Bromley, 1978; Elgin, 2020; OECD, 2002). Que la PTF juegue un papel tan importante en las teorías de crecimiento económico significa que medirla es una importante tarea a realizar (Prescott, 1998). En este sentido, no se debería negar la existencia de sectores informales y el potencial impacto que pueden tener.

El efecto que puede causar la economía sumergida en la PTF y el crecimiento económico sigue siendo desconocido (Williams & Schneider, 2016). Las consecuencias negativas suelen aparecer por las reducciones de ingresos, bienes públicos, o la presencia de empresas ineficientes, generalmente de pequeña escala (Elgin, 2020; Elgin & Birinci, 2016). Por ejemplo, trabajos como los de Leyva & Urrutia (2020) encontraron que un aumento en el número de negocios informales venía a costa de reducir el crecimiento de la PTF, incluso cuando contribuían a absorber shocks en el consumo sobre el sector formal de la economía.

Sin embargo, aun con la baja productividad con las se asocian los negocios informales, numerosas veces se encuentra que contribuyen al crecimiento económico. Esto puede ocurrir mayormente en presencia de externalidades o diferencias de productividad positivas (Ríos-Blanco, 2022; Saunoris, 2018). La clave es entender que los negocios informales se originan por distintos motivos. Por ejemplo, pueden existir algunas empresas con problemas de productividad que deben decidir en qué sector operar, y otras que no alcanzan un nivel de productividad suficiente como para pasar a ser formal. El mismo razonamiento se podría aplicar en el mercado de trabajo. Por ejemplo, un agente decidirá trabajar en el sector informal si no puede conseguir empleo en el sector formal. Por eso, si se elimina el sector informal, no está garantizado que la PTF crezca más rápido (Ulyssea, 2018).

Los estudios previos hasta ahora revisados no se enfocaban en el papel que jugaba el tamaño de la economía sumergida en la medición de la PTF. El hecho de omitir un factor clave supone un problema en la medición del crecimiento económico, ya que las consecuencias económicas de las actividades informales se reflejan a partir de su tamaño relativo. De hecho, un tamaño más grande puede mitigar las fluctuaciones de importantes agregados,

impulsando la PTF incluso en periodos de recesión (Lambert, Pescatori & Toscani, 2020). Los países (sub)desarrollados suelen comprender actividades informales de (mayor) menor tamaño. Los únicos trabajos que miden la PTF con la inclusión del sector informal son Atesagaoglu, Elgin & Oztunali (2017) y Atesagaoglu, Elgin & Turk (2018)[1]. En ellos, se hallaron distintas medidas de la PTF de Turquía en comparación con otros países mediante un modelo donde el trabajo informal está explícitamente presente. Sin embargo, se limitan a remarcar que la PTF debe ser medida correctamente, sin asociar posteriormente su evolución con respecto al tamaño de la economía informal. No obstante, su objetivo es importante, ya que como se ha observado, el sector informal suele ser ignorado en las mediciones de la PTF.

El presente artículo continúa los trabajos anteriormente citados usando un periodo más reciente (1990-2018), con datos actualizados sobre 48 países y con los siguientes objetivos: 1) Probar que existen diferencias en la medición del crecimiento de la PTF, y 2) Comparar analíticamente una medida del crecimiento de la PTF que incluya el sector informal en dos conjuntos de países que difieren de forma substancial en el tamaño de sus sectores informales. Usamos una muestra compuesta de países subdesarrollados y de la OCDE, siendo los primeros los que normalmente tienen una tasa mayor de economía sumergida en las estimaciones más recientes (Elgin et al., 2021; Medina & Schneider, 2019). La metodología usada pertenece a la literatura de la prima de habilidad (*skill premium*) que abarca especificaciones de tecnología CES incluyendo la eficiencia de trabajo informal.

La siguiente sección revisa las metodologías usadas en la medición de la PTF y los intentos por incluir el sector informal. La sección tercera se centra en los datos y la implementación empírica. La cuarta sección analiza los resultados. Finalmente, en la quinta sección se aportan conclusiones y algunas recomendaciones.

Marco Teórico

En este trabajo usaremos los modelos propuestos por Atesagaoglu et al., (2017) y Atesagaoglu et al., (2018). Utilizan dos métodos de Caselli & Coleman II (2002) y Caselli & Coleman II (2006) para incluir el sector informal. Estos modelos

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[1] Este último también aparece publicado como tesis de maestría en Turk & Elgin (2018).

separan la eficiencia del trabajo en dos grupos: personas trabajadoras cualificadas y las que no están relativamente (tan) cualificadas. En Atesagaoglu et al., (2017) y Atesagaoglu et al., (2018) asumen que todo el trabajo del sector formal es cualificado, mientras que identifican el trabajo informal como menos cualificado. Esta es una limitación importante, dado que también pueden existir trabajadores relativamente mejor formados en el sector informal, aunque es cierto que se trata de una primera aproximación (Elgin, 2020). A continuación, procederemos a describir dichos modelos:

Base. La tecnología Cobb-Douglas constituye la forma funcional más habitual:

$$Y_t = K_t^\alpha (A_t L_t)^{1-\alpha}. \quad (1)$$

Donde en el instante t, se tiene que Y_t es la producción total, K_t y L_t son inputs de capital y trabajo, respectivamente, α y $1-\alpha$ son sus respectivas cuotas sobre el producto total. La PTF es entonces

$$A_t = \left(\frac{Y_t}{K_t^\alpha L_t^{1-\alpha}}\right)^{\frac{1}{1-\alpha}}. \quad (2)$$

Las siguientes tecnologías incluyen el trabajo de manera desagregada, separándolo en el sector formal e informal.

CES I.

$$Y_t = K_t^\alpha [(A_t^F L_t^F)^\sigma + (A_t^I L_t^I)^\sigma]^{(1-\alpha)/\sigma}. \quad (3)$$

Aquí, L_t^F es trabajo formal, L_t^I es trabajo informal, A_t^F, A_t^I son sus eficiencias respectivas e Y_t es el output total. La elasticidad de sustitución entre el trabajo formal e informal es $1/(1-\sigma)$.

Para hallar los niveles de eficiencia de cada tipo de trabajo, se propone un sistema de ecuaciones a partir de una asignación óptima. La prima de habilidad se define como la ratio de la productividad marginal de ambos tipos de trabajos, a los que se les paga sus respectivos salarios.

$$\frac{w_t^F}{w_t^I} = \left(\frac{A_t^F}{A_t^I}\right)^\sigma \left(\frac{L_t^F}{L_t^I}\right)^{\sigma-1}. \quad (4)$$

Las ecuaciones (3) y (4) se usan para computar las expresiones de A_t^F y A_t^I.

$$A_t^F = \frac{Y_t^{1/(1-\alpha)} K_t^{-\alpha/(1-\alpha)}}{L_t^F} \left(\frac{w_t^F L_t^F}{w_t^F L_t^F + w_t^I L_t^I}\right)^{1/\sigma}. \quad (5)$$

$$A_t^I = \frac{Y_t^{1/(1-\alpha)} K_t^{-\alpha/(1-\alpha)}}{L_t^I} \left(\frac{w_t^I L_t^I}{w_t^F L_t^F + w_t^I L_t^I}\right)^{1/\sigma}. \quad (6)$$

Por lo tanto, la PTF formal que aparece en (5) será comparada con respecto a la PTF del modelo base en (3). Sin embargo, la sustitución del capital no se hace explícita. La omisión de la sustitución de este input podría suponer un cambio sensible en los resultados debido al potencial sesgo de omisión (Gechert, Havranek, Irsova & Kolcunova, 2022). Por ello, la siguiente tecnología surge como alternativa.

CES II. Esta función, de "naturaleza dual", usa dos agregadores, resultando en la fórmula $Y_t = F_1(L_t^I, F_2(L_t^F, K_t))$, donde F_1 y F_1 son agregadores CES.

$$Y_t = \left\{(A_t^I L_t^I)^\sigma + [(A_t^F L_t^F)^\rho + (A_t^K K_t)^\rho]^{\sigma/\rho}\right\}^{1/\sigma}. \quad (7)$$

Aquí, A_t^K es la eficiencia del capital. La elasticidad de sustitución entre trabajo formal e informal, y entre el capital y el trabajo informal es $1/(1-\sigma)$, mientras que el capital y el trabajo formal se sustituyen con el valor $1/(1-\rho)$. El sistema de ecuaciones tendría tres incógnitas, en particular, A_t^F, A_t^I y A_t^K. Por lo tanto, además de (7) y de la respectiva condición de prima de habilidad, se agrega como tercera ecuación la productividad marginal del capital remunerado por la tasa de interés real más la depreciación[1]. La eficiencia del trabajo formal e informal son descritas respectivamente por:

$$A_t^F = \frac{Y_t}{L_t^F}\left[1 - \frac{r_t \frac{K_t}{Y_t}}{S_t}\right]^{1/\rho} S_t^{1/\sigma}, \quad (8)$$

$$A_t^I = \frac{Y_t}{L_t^I}(1 - S_t)^{1/\sigma}. \quad (9)$$

Donde r_t es la tasa de interés real más la depreciación y S_t se define como:

$$S_t = \frac{\frac{w_t^F L_t^F}{w_t^I L_t^I} + r_t \frac{K_t}{Y_t}}{\frac{w_t^F L_t^F}{w_t^I L_t^I} + 1}. \quad (10)$$

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[1] Ver Caselli & Coleman II (2002) para más detalles sobre la solución completa de dicho sistema.

Metodología

El estudio cubre el periodo entre 1990 y 2018. Seleccionamos dos grupos de economías que difieren significativamente en la ratio de economía informal sobre su PIB. El grupo representativo de un relativo menor tamaño de economía informal es el de países desarrollados, que se conforma por 24 países de la OCDE, incluyéndose solo a aquellos que pertenecían a dicha organización antes de 1990. No se incluye el actual número de miembros de la organización dado que han ingresado en una fecha posterior al del inicio del periodo estudio. Este criterio pretende mantener el mismo número de observaciones durante el periodo.

Las economías subdesarrolladas fueron seleccionadas teniendo en cuenta su tamaño estimado de economía informal sobre PIB. Las estimaciones se obtuvieron de Elgin et al., (2021), donde obtuvieron diferentes medidas actualizadas en el periodo de interés, incluyendo estimaciones mediante modelos de Equilibrio General Dinámicos, que son más parecidos la naturaleza de los métodos empleados en el presente trabajo. Se obtuvieron las 24 economías que mayor tamaño de informalidad presentan, ninguna de las cuales se encuentra en el grupo OECD. Como se puede ver en la Tabla 1, las diferencias del tamaño de la economía sumergida entre un grupo y otro durante el periodo 1990-2018 pueden llegar a ser del 54.40%. Turquía lidera el grupo de la OCDE como el país con más sector informal, mientras que en el grupo de países subdesarrollados lo hace Bolivia.

Tabla 1.
Estimaciones medias del PIB informal y formal por país y grupo (%, 1990–2018).

OCDE		Subdesarrollados	
Turquía	30.7	Bolivia	62.6
Italia	27.2	Georgia	61.5
Grecia	27.0	Zimbabue	61.4
Portugal	23.8	Panamá	58.5
España	22.5	Tanzania	54.9
Bélgica	21.5	Perú	52.9
Noruega	18.1	Azerbaiyán	51.5
Suecia	18.0	Nigeria	51.4
Finlandia	17.2	Tailandia	49.0
Dinamarca	17.1	Guatemala	48.7
Irlanda	16.0	Benín	48.6
Islandia	15.7	Honduras	46.5
Alemania	15.5	Uruguay	46.1
Canadá	15.5	Ucrania	45.3
Francia	14.9	Gabón	45.0
Australia	13.8	Chad	44.5
Países Bajos	13.1	República Centroafricana	44.2
Reino Unido	12.4	Sri Lanka	43.1
Nueva Zelanda	12.3	Moldavia	42.7
Japón	10.6	Nicaragua	42.5
Austria	9.7	Zambia	42.5
Luxemburgo	9.4	Senegal	42.3
Estados Unidos	8.6	Bielorrusia	42.2
Suiza	8.2	Armenia	41.9

Fuente: Elaboración propia con datos de Elgin et al., (2021)

La principal fuente de datos para las series temporales es la Penn World Table 10 (PWT), por Feenstra, Inklaar & Timmer (2015). El output total se calcula como $Y_t = Y_t^F + Y_t^I$. Los salarios en el sector formal (w^F) provienen de la PWT. Los salarios informales (w^I) provienen de los resultados de la estimación por área geográfica de Gindling, Mossaad & Newhouse (2016). La productividad marginal del capital (r_t) se calcula como la suma de la tasa de interés real más el porcentaje de depreciación del capital obtenido de la PWT.

La participación del capital en el output total (α) proviene de la PWT. Para cada país, este parámetro se establece como su media en el periodo de estudio. Los parámetros σ y ρ son relevantes para los modelos CES I y CES II. Sin embargo, el único estudio que parece aportar una estimación real de la elasticidad del trabajo formal/informal es Schramm (2014), donde se concluye que $\sigma = 0.41$. Lo mismo sucede con la elasticidad del capital con respecto al trabajo formal, estableciéndose que $\rho = 0.33$ (Karabarbounis & Neiman, 2014).

A pesar de que el diseño de la investigación se basa en metodologías de carácter cuantitativo, la tipología de modelos que se presenta no dispone de herramientas propias para probar la robustez de los resultados. Esto contrasta con las metodologías de carácter estocástico y que se basan en estimaciones econométricas, a las cuales se les puede implementar pruebas estadísticas específicamente destinadas a comprobar la fiabilidad de los resultados. Por tanto, las implementaciones empíricas sobre el tamaño, los orígenes o efectos de la economía informal suelen presentar problemas a la hora de encontrar un método "global" para probar la robustez, lo cual depende de la naturaleza (estadística o determinista) del modelo escogido (Schneider & Buehn, 2018).

En el presente trabajo se hace uso de modelos deterministas de Equilibrio General, que son cercanos a la literatura de crecimiento económico. Aunque este tipo de metodología carezca de pruebas de robustez, sí se dispone de estrategias para comprobarla. Generalmente, esto se consigue realizando análisis de sensibilidad de resultados respecto a los parámetros críticos del modelo, es decir, aquellos que son característicos y resultan imprescindibles para calibrarlos (Elgin, 2020). En el caso del presente trabajo, los parámetros críticos σ y ρ aparecen en las tecnologías CES I y CES II, por lo que a lo largo del siguiente apartado se realizarán análisis de sensibilidad sobre estos dos parámetros.

Resultados y discusión

Las estimaciones del crecimiento de la PTF usando el modelo base (2), se presenta comparativamente con las del CES I (5) y CES II (8). Primero se discute el caso del grupo de la OCDE. En la Figura 1 apreciamos que existen diferencias significativas en la medida de la PTF cuando se usa el modelo base y el CES I. Estas diferencias se incrementan con el paso del tiempo, especialmente de 2002 en adelante. El crecimiento de la PTF en el modelo base es menor en comparación con el del modelo CES I. Esto significa que los países de la OCDE son más productivos si incluimos el trabajo informal, por lo que la presencia de un sector informal es crucial para la medición de la PTF. Los resultados para $\sigma \pm 0.1$ muestran datos similares.
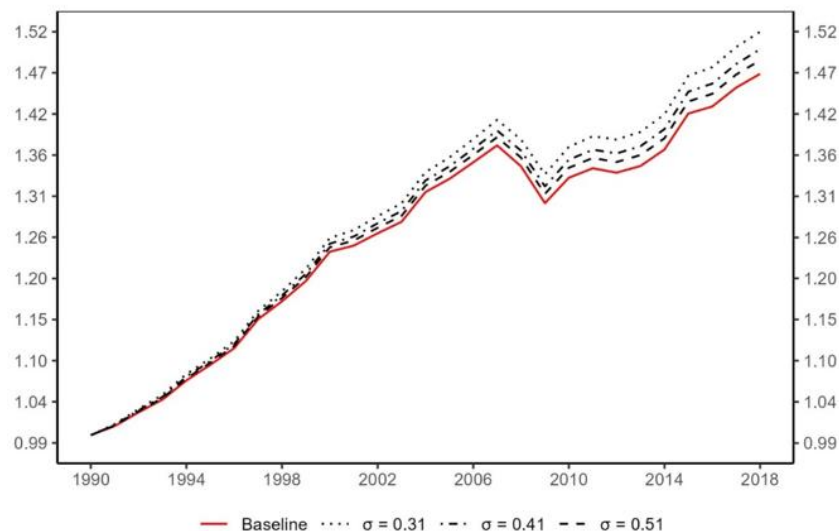
Figura 1. Comparación del crecimiento medio de la PTF del grupo OCDE a partir de los modelos base y CES I (1990 = 1).
Fuente: Elaboración propia.

Teniendo en cuenta la sustitución de capital con respecto al trabajo formal e informal (CES II), se obtienen los resultados de la Figura 2 y 3. A diferencia de los otros modelos, la nueva medida de PTF decrece en ciertos momentos, siendo claramente perceptible entre 1993 y 1997. Desde

entonces, la PTF recupera su crecimiento y replica el patrón del modelo base. Sin embargo, a comienzos de la crisis financiera del 2008, la PTF del CES II tiende a ser contra cíclica con respecto a la PTF del modelo base, provocando que sea mayor en 2009. Simulando con $\sigma \pm 0.1$ se obtienen resultados idénticos. Estos son más sensibles con respecto a cambios en ρ, como muestra la Figura 3. Por tanto, la sustitución del capital y el trabajo formal parece jugar un papel más importante que la sustitución del trabajo formal e informal. En general, teniendo en cuenta este hecho, los resultados de este grupo implican que la medida de PTF incluyendo el sector informal es inferior a la del modelo base, por lo que la omisión del sector informal implica una sobreestimación de esta medida.
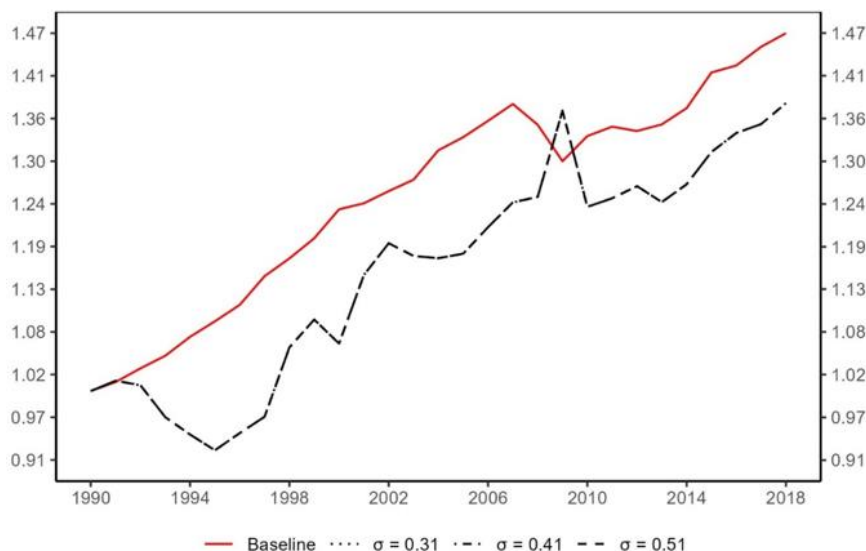
Figura 2. Comparación del crecimiento medio de la PTF del grupo OCDE a partir de los modelos base y CES II (1990 = 1).
Fuente: Elaboración propia.
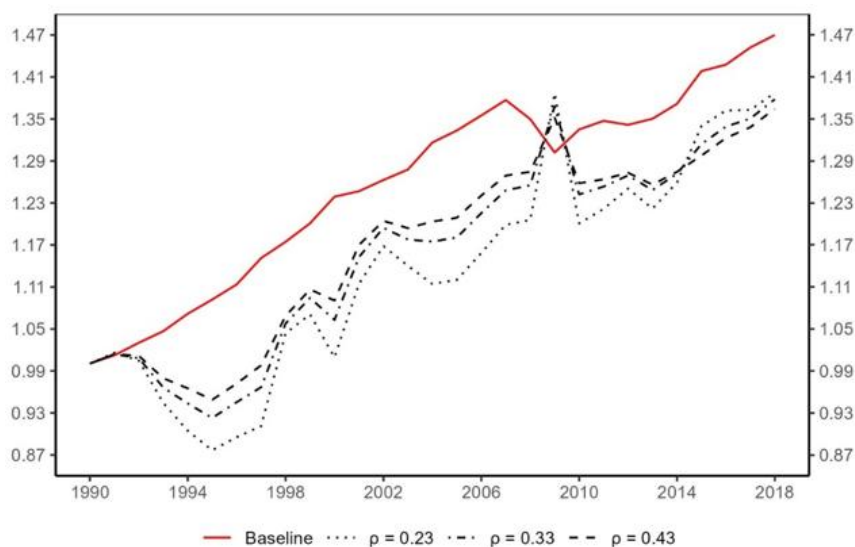
Figura 3. Comparación del crecimiento medio de la PTF del grupo OCDE a partir de los modelos base y CES II (1990 = 1).
Fuente: Elaboración propia.

A continuación, se analiza el caso de los países subdesarrollados como el conjunto de economías con una ratio de informalidad relativamente alta. La Figura 4 muestra la evolución del crecimiento de la PTF considerando las estimaciones del modelo base y del CES I. Al igual que en el grupo de la OCDE, aquí la PTF crece de forma distinta dependiendo de si se incluye o no el trabajo informal. Estas diferencias están presentes en el periodo 1990-2003, y 2006-2018. Sin embargo,

la PTF medida con el modelo base implica una infraestimación en el primer intervalo, mientras que lo contrario ocurre en el segundo. De nuevo,

el análisis de sensibilidad de σ indica resultados similares.
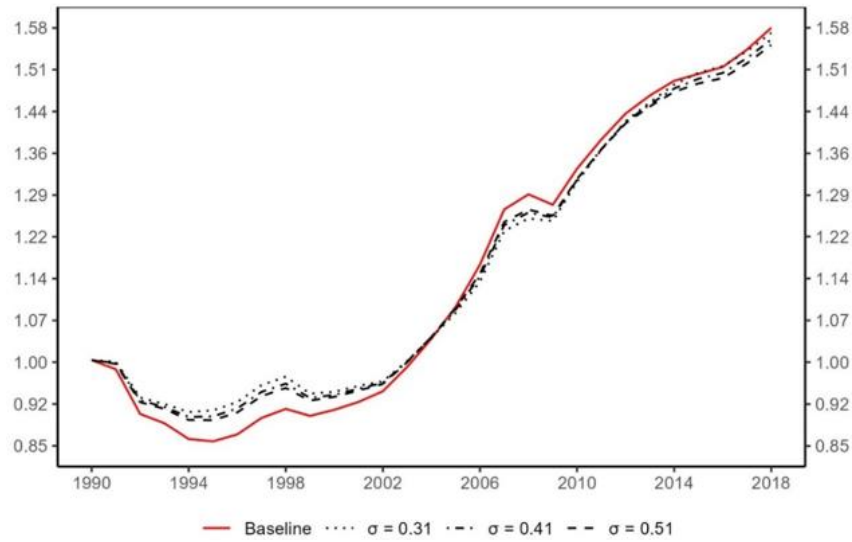
Figura 4. Comparación del crecimiento medio de la PTF del grupo subdesarrollado a partir de los modelos base y CES I (1990 = 1).
Fuente: Elaboración propia.

Con el modelo CES II, se obtienen los resultados mostrados en la Figura 5 y 6. En casi todo el periodo, la medida de PTF crece a un mayor ritmo que en el modelo de referencia, mostrando patrones contra cíclicos con la llegada de la crisis

financiera de 2008. Los resultados son casi idénticos si se eligen otros valores para σ, siendo más sensible con respecto a $\rho \pm 0.1$.
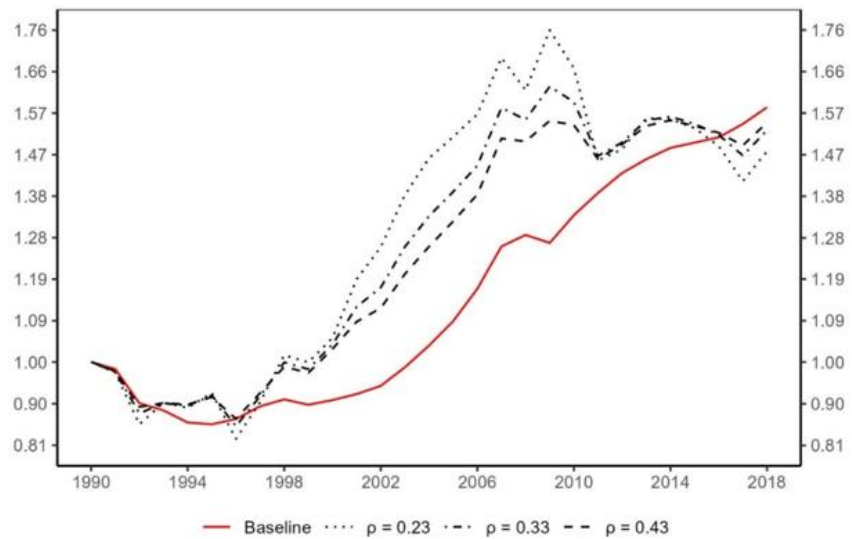
Figura 5. Comparación del crecimiento medio de la PTF del grupo subdesarrollado a partir de los modelos base y CES II (1990 = 1).
Fuente: Elaboración propia.
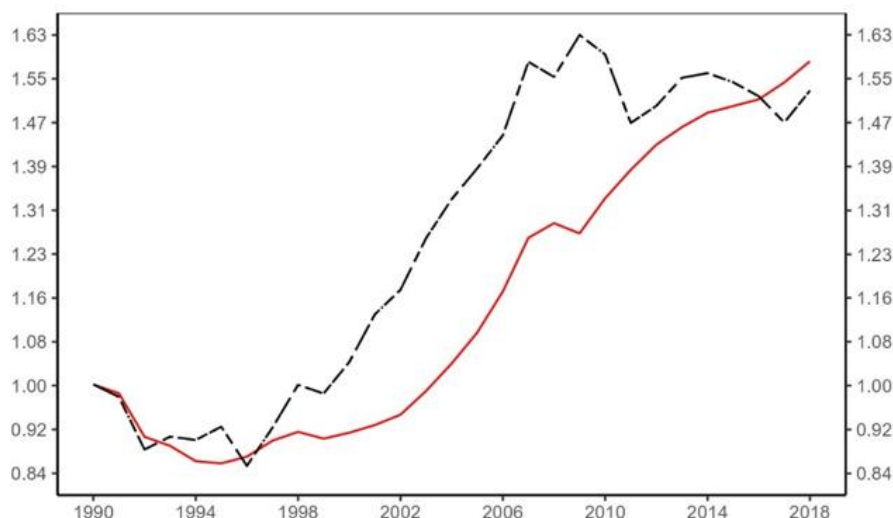
Figura 6. Comparación del crecimiento medio de la PTF del grupo subdesarrollado a partir de los modelos base y CES II (1990 = 1).
Fuente: Elaboración propia.

Ambos grupos de países tienen en común que el patrón de crecimiento de la PTF es diferente, variando significativamente más en el modelo CES II, esto es, cuando se tiene en cuenta la sustitución de capital con respecto al trabajo formal. Este hecho está en consonancia con Atesagaoglu et al., (2017) y Atesagaoglu et al., (2018). También se advierte que ρ hace que los patrones sean más diferentes que cualquier otro. Esto es algo esperable, pues el modelo CES I en (3) se acerca más al modelo base en (1). Obsérvese que si $\sigma = 1$, el trabajo formal e informal son perfectos sustitutos dado que $\lim_{\sigma \to 1^-} 1/(1 - \sigma) = \infty$. De hecho, dando el valor $\sigma = 1$ en (3) resulta en la forma Cobb-Douglas (1), lo que significa que todo el trabajo se transfiere al sector formal por tener una mayor productividad y mejores condiciones laborales con respecto al sector informal (Atesagaoglu et al., 2017). La PTF del modelo CES II incluye la sustitución de capital separada de la del trabajo formal e informal. Por ello, aporta otros resultados no tan parecidos a los del caso Cobb-Douglas.

Debido a que el tamaño de la economía informal es relativamente grande en el grupo de países subdesarrollados, se podría esperar que dichas economías fueran cada vez menos productivas, ya que la definición de la economía informal se refiere precisamente a actividades de productividad relativamente menor con respecto a las formales. El hecho de que la medida de PTF que incluye el sector informal de los países subdesarrollados crezca a un mayor ritmo que al principio del periodo y sea superior al del modelo base, se explica por la inclusión del sector informal. Más concretamente, estos países que tienen un tamaño de economía sumergida relativamente alto poseen a la vez un mayor crecimiento en su productividad, si se tienen en cuenta las actividades informales. Este hallazgo es contrario con algunos de los resultados encontrados en otros trabajos como el de Leyva & Urrutia (2020), aunque sí concuerda con trabajos como Ulyssea (2018) o Lambert et al., (2020). Esto contribuye al debate sobre si las actividades informales son una "bendición" o una "maldición", por constituir posibles beneficios o costes sobre el crecimiento económico. En el caso de los países con un gran tamaño de economía informal, puede conllevar a un mayor crecimiento económico mediante la eficiencia del trabajo informal. Por otro lado, la inclusión de este sector puede ser visto como un coste en economías desarrolladas.

Conclusiones

Este trabajo muestra que existen diferencias en la medición de la PTF dependiendo de si se toma en cuenta el trabajo informal o no, por lo que la omisión de ese sector produce un potencial error en la medición. Estas diferencias están presentes bajo dos tecnologías que añaden el trabajo formal e informal. Además, se han comparado dos conjuntos de economías que diferían sustancialmente en su tamaño relativo de economía sumergida. En el caso de países subdesarrollados mostraron un mayor crecimiento de la PTF al incluir el trabajo informal. Lo contrario se asocia al grupo de la OCDE, cuyas economías muestran una menor medida de PTF sobre todo cuando se hace

explícita la sustitución entre capital y trabajo formal. Estos resultados pueden ayudar a los policy-makers para tener en cuenta las actividades informales y sus potenciales efectos en el crecimiento económico. Es importante recalcar que la función de producción usada para medir la PTF claramente influye en la comparación del crecimiento entre países. Por lo tanto, se recomienda que futuras investigaciones exploren métodos alternativos para demostrar las influencias de la economía sumergida sobre el comportamiento de la PTF y de otros agregados.

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Legal regime stimulating economic activities:
Convergence of Ukrainian legislation with EU law based on SDGs

Стимулюючий правовий режим господарювання:
зближення законодавства України та права ЄС на засадах ЦСР

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Abstract

The purpose of the research is to substantiate ways to improve Ukrainian legislation, defining the features of the functioning of individual elements of SLREA, which will facilitate the achievement of SDGs. The study is based on a review of scientific literature dedicated to specific elements of SLREA (public procurement and state aid), Ukrainian legislation, and specific EU legal acts regarding the application of certain stimulating measures to achieve SDGs. It is argued that, compared to the institution of public procurement, the institution of state aid exhibits a significantly lower degree of actualization and integration into the legal framework supporting SDGs. It is substantiated that the modernization of Ukrainian legislation in the field of state aid should occur based on the model of legal regulation of the state aid system in the EU on the principles of SDGs. The development of SLREA in the context of adapting Ukrainian legislation to EU law should involve the integration of SDGs into the legal toolkit of such a regime.

Keywords: Stimulating legal regime of economic activities, Sustainable Development Goals, Ukrainian Legislation, European Union Law.

Анотація

Метою дослідження виступає обґрунтування шляхів вдосконалення законодавства України, що визначає особливості функціонування окремих елементів СПРГ, що сприятиме досягненню ЦСР. Дослідження базується на огляді наукової літератури, присвяченій окремим елементам СПРГ (публічним закупівлям та державній допомозі), законодавства України та окремих актів права ЄС щодо застосування окремих стимулюючих заходів з метою досягнення ЦСР. Обґрунтовано, що, порівняно із інститутом публічних закупівель, значно меншим ступенем актуалізації та інтегрованості у систему правових засобів сприяння досягненню ЦСР відзначається інститут державної допомоги. Обґрунтовано, що, саме спираючись на модель правового регулювання системи державної допомоги у ЄС на засадах ЦСР, має відбуватися модернізація законодавства України у сфері державної допомоги. Розвиток СПРГ у контексті адаптації законодавства України до права ЄС має передбачати інтеграцію ЦСР у правовий інструментарій такого режиму.

Ключові слова: стимулюючий правовий режим господарювання, Цілі сталого розвитку, законодавство України, право ЄС.

Introduction

This article discusses the need to improve Ukrainian legislation to stimulate economic activities. It is argued that current legislation is not sufficient to achieve the Sustainable Development Goals (SDGs).

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It is probably difficult today to imagine the strategic priorities for the development of any country in the world beyond the worldview paradigm that is based on the concept of sustainable development, which aims to meet the needs of the present generation without compromising the ability of future generations to meet their own needs. This understanding of the essence of sustainable development was reached in the report of the Brundtland Commission (or the World Commission on Environment and Development). The definition proposed by this Commission remains the starting point for countries around the world in determining the direction of further social development.

It is worth noting that in September 2015, during the 70th session of the United Nations (UN) General Assembly in New York, the UN Sustainable Development Summit and the adoption of the Post-2015 Development Agenda took place. During this summit, new development milestones were approved. The final document of the summit, titled "Transforming Our World: The 2030 Agenda for Sustainable Development", included 17 Sustainable Development Goals (SDG) and 169 targets (United Nations in Ukraine, 2023). Ukraine, as a member of the UN, also joined efforts to implement the principles of sustainable development, which were reflected in the adoption of several fundamental documents. At the same time, as indicated in the Voluntary National Review on SDGs in Ukraine not all tasks related to the 17 goals have been accomplished. Progress has been successfully achieved for 15 out of the 17 goals, albeit unevenly. Some goals have already been reached by 80% or more (goals 1, 3, 4, 5), while progress for four goals is within the range of 60-80% (goals 2, 6, 8, and 16). For some goals, progress is within the range of 20-60% (goals 7, 11, 12, 17), and achieving benchmarks for the remaining goals (goals 9, 10, 13, 14, and 15) is currently considered unlikely (less than 20%) compared to the set targets for 2020. Goal 8, "Decent Work and Economic Growth," is recognized in the Voluntary National Review on SDGs in Ukraine as an accelerator for achieving all goals. Therefore, the potential of the stimulating legal regime of economic activity should be utilized to the fullest extent in a series of government reforms (United Nations Ukraine, 2021).

However, due to the high level of declarativeness in the provisions of the Sustainable Development Ukraine 2020, the implementation of reforms in some areas of legal regulation of socio-economic relations varied in terms of effectiveness. In

certain cases, strategic approaches to reforming specific elements of Ukraine's sectoral legislation, which formed the basis of the stimulating legal regime for economic activities, were not initiated at all. In particular, the development vector included the implementation of reforms in economic competition protection (Decree of the President of Ukraine № 5/2015, 2015), an integral element of which is state aid to economic entities. The author considers this as a component of the stimulating legal regime of economic activity. However, as demonstrated in this study, the reform of the system of state aid to economic entities is taking place incrementally in the absence of a unified "roadmap" for improving legislation in this area. At the same time, deeper and more systematic steps by the state are evident in the reform of the public procurement institution, the stimulating effect of which is significant for activating processes of integrating SDGs into various spheres of public life.

Therefore, this research aims to justify ways for further improvement of Ukraine's legislation, which defines the features of the functioning of specific elements of the incentivizing legal regime for economic activities. This will contribute to the achievement of SDGs in various areas of societal relations.

Literature Review

Sustainable development is a development process that meets the needs of the present without compromising the ability of future generations to meet their own needs. The legal regime stimulating economic activities is a set of legal regulations that aim to promote economic development through incentives.

The search for effective legal methods and means to stimulate the transition of countries to sustainable principles of economic, ecological, and societal development holds a significant place in the research conducted by both foreign and domestic scholars.

Particular attention is drawn to the scientific developments of foreign experts who emphasize the advantages and new opportunities created by certain legal instruments for the implementation of state policies on sustainable development. In several scholarly studies, structural changes in the socio-economic and ecological spheres achieved through the regulatory potential of the institution of public procurement have been highlighted. This has been detailed in the scientific works of Aldson F. (2011), Andrecka M. (2017), Caranta R. (2010), Fisher E. (2013),

Hermans F. & Knippenberg L. (2006), Manta O. et al. (2022), Steiner M. (2013), Telles P., Ølykke G.S. (2017), Witjes S. & Lozano R. (2016), and others.

Aldson's (2011) study found that public procurement can be an effective instrument to promote sustainable development by encouraging the purchase of sustainable goods and services. This finding is relevant to the current article because it suggests that Ukraine's legal regime could be modified to promote sustainable public procurement. Public procurement, as emphasized by Andrecka M. (2017), Caranta R. (2010), Fisher E. (2013), Manta O. et al. (2022), Steiner M. (2013), Telles P., Ølykke G.S. (2017), Witjes S. & Lozano R. (2016), should be considered a driver of transformations in the economic sphere that simultaneously contributes to the consideration of social values, environmental standards, and the development of socially responsible business. These mentioned scholarly approaches are crucial to be taken into account in the process of shaping the conceptual principles of developing the stimulating legal regime of economic activity, as creating favorable conditions for sustainable economic activity is essential.

The possibilities of state aid in the context of creating incentives for accelerating the transition to a sustainable development model in various areas of societal relations have been emphasized in the scholarly works of Bartniczak B. (2014), Gupta A. (2023), Rivera-Lirio J.M. & Muñoz-Torres. (2010), Williams M. (1998), and others. In particular, Bartniczak B. (2014) rightly emphasizes that various types of state aid have varying impacts (ranging from positive to negative) on economic relations, and consequently, this can affect the success of implementing SDGs. Such a conclusion is highly valuable, especially in the context of the ongoing reform of the state aid system in Ukraine. The research findings of Gupta A. (2023) are crucial to the concept of this article, highlighting the correlation between different forms of state aid and their impact on achieving ambitious goals outlined in the European Green Deal. In earlier studies, notably in Williams M.'s (1998) article, attention was drawn to both positive and negative consequences of the impact of state aid provided for economic development projects on the natural environment. Environmental issues, as evidenced by the EU experience and recent changes in Ukraine's environmental policy, have become extremely important in the context of SDGs implementation. The prioritization of achieving socially significant results through the

implementation of state aid policy is emphasized in the work of Rivera-Lirio J.M. & Muñoz-Torres (2010). It is worth agreeing with this thesis, as the social impact of economic activity is crucial within the SDGs system.

Particularly noteworthy is the systematic and in-depth study by Hermans F. & Knippenberg L. (2006), which stands out among other attempts by authors in its reliance on the principles of resilience and justice to identify criteria for assessing sustainable development. The scholarly approaches of these authors have influenced the rationale for the author's own proposals.

In domestic research, the issues of legal support for the implementation of SDGs, including through the prism of specific components of the incentivizing legal regime for economic activities, and the creation of prerequisites for societal development based on sustainable development principles, taking into account the progressive experience of foreign countries, are presented in the scholarly works of Gudima T. (2020), Malolitneva V. & Dzhabrailov R. (2019, 2020), Ustymenko V. & Zeldina O. (2019), Shapovalova O.V. (2016), and others. Specifically, the studies of the mentioned authors reflect the issue of improving the legal framework for economic relations in Ukraine at both macro and micro levels, with an emphasis on the implementation of sustainable development principles. In the research by Gudima T. (2020), the features of improving the legal regulation of monetary and credit policies and macroprudential policy based on sustainable development principles are elucidated. The results obtained by the author constitute a comprehensive scientific foundation for assessing the potential of the stimulating legal regime of economic activity in achieving SDGs. The development and evolution of legislation on sustainable public procurement are highlighted in the works of Malolitneva V. & Dzhabrailov R. (2019, 2020). The scientific conclusions drawn by these authors were taken into account during the assessment of the current state and prospects for the development of the public procurement institution as a component of the stimulating legal regime of economic activity. The research of Shapovalova O.V. (2016), Ustymenko V. & Zeldina O. (2019) also hold scientific-practical value, where the peculiarities of adapting Ukraine's economic legislation to EU requirements based on sustainable development principles are disclosed. Additionally, these studies delve into the implementation in Ukrainian legislation of approaches that have

found expression in the EU's investment policy, contributing to the achievement of SDGs.

At the same time, the aforementioned scholarly studies do not provide answers to the questions posed within this article, particularly regarding the determination of the possibilities of the incentivizing legal regime for economic activities in achieving SDGs, taking into account contemporary changes occurring in European Union (EU) law. Indeed, as evidenced by the EU experience, stimulating economic activity is precisely aimed at achieving SDGs, which is reflected in the prioritization of sustainable development policies. This involves supporting the fundamental idea of transitioning to a circular economy, attracting "green" investments, and other initiatives. Accordingly, among the possible means of realizing the potential of the stimulating legal regime of economic activity, public procurement and state aid to economic entities can be recognized. The potential of these instruments is capable of ensuring the implementation of SDGs and is the subject of in-depth investigation in this article.

Additionally, a unique aspect of the article is driven by Ukraine's acquisition of candidate status for membership in the EU, as confirmed by the European Council's decision on June 23, 2022. It is precisely with this consideration in mind that the scholarly material is presented within the scope of this research work.

Methodology

The theoretical foundation of the study is based on the main scientific results presented in the works of the authors, whose analysis is outlined in the literature review. If we briefly summarize their findings, the following key scientific approaches and conclusions can be highlighted:

1) the principles of resilience and justice are crucial for assessing the degree of implementation of sustainable development principles in various areas of societal development. This extrapolates to relationships that are the subject of the stimulating legal regime of economic activity; 2) economic development stimulation should not occur at the expense of diminishing the role and significance of social and environmental goals. Achieving these goals is a guarantee of the harmonious development of society based on sustainable development; 3) the outcome of implementing various stimulating measures should be the formation of a new model of behavior for economic agents, including the widespread

adoption of socially responsible business practices that align with SDGs; 4) sustainable public procurement and effective state aid can act as accelerators for the government's transition to a sustainable development model; 5) the adaptation to EU law, currently a highly relevant task for Ukraine, should occur on systematic principles, involving the modernization of all sectors of legislation to contribute to the achievement of SDGs at macro and micro levels of legal regulation in various spheres of social relations.

These scientific conclusions have been considered in shaping the author's own perspective and preparing scientific proposals. To achieve the research aim, a combination of general scientific and specialized methods of scientific inquiry was employed in the article. These methods include dialectical, comparative legal, analytical-synthetic, formal-logical, and system-structural analysis, as well as predictive methods, among others.

The dialectical method was used to assess qualitative and quantitative indicators of transformations in Ukraine's legislation regarding the integration of SDGs into key directions of state policy. It allowed for an evaluation of the degree of legislative reform in the areas of public procurement and state aid to economic entities, as well as the acquisition of norms within these legal institutions as tools to support the achievement of SDGs.

The comparative legal method was utilized to identify the peculiarities of integrating SDGs into EU legislation, understand the role of state aid institutions in promoting the achievement of sustainable development objectives and formulate proposals for the corresponding improvement of Ukrainian legislation in this area.

The analysis of the statistical, scientific, and empirical information presented in the article, which vividly illustrates shortcomings in the formation of national principles for providing state aid to economic entities as a key element of the incentivizing legal regime for economic activities, was conducted using the analytical-synthetic method.

The formal-logical and system-structural methods were employed to emphasize the weak positioning of the state aid institution to economic entities as an institutional basis for supporting the achievement of sustainable development goals compared to the institution of

public procurement. This was analyzed within the context of the gradual implementation of sustainable development principles.

The predictive method was used to identify opportunities for further improvement of Ukraine's legislation, which defines the functioning of specific elements of the incentivizing legal regime for economic activities in the context of promoting the achievement of SDGs.

The empirical basis of the research consists of national legislative acts, specific legal acts of the EU, statistical and analytical information, and the practices of state authorities and others.

Results and Discussion

In particular, the pace of reforming certain legal institutions, the norms of which are deeply integrated into the structure and content of the incentivizing legal regime for economic activities as an integral component of economic law and legislation, is noteworthy.

Significant progress has been achieved, first and foremost, in the process of improving the institution of public procurement, especially in terms of adapting Ukrainian legislation to EU standards. This consistent legislative work was carried out with a focus on the target indicators established by the Strategy for Reforming the Public Procurement System ("Roadmap"), approved by the Cabinet of Ministers of Ukraine's (CMU) Order No. 175-p., February 24, 2016.

It is important to note that changes in the legal regulation of public procurement also took place in compliance with Ukraine's commitments to achieving the goals and objectives of sustainable development. These goals, as established by established scientific approaches, are aimed at ensuring the balance of sustainable development across three components - environmental, economic, and social (Ustymenko, (Ed.), 2021).

In this context, it is not coincidental that in the national report "Sustainable Development Goals: Ukraine," which presents adapted global sustainable development goals and indicators of their implementation tailored to Ukraine's needs, emphasis is placed on considering the relevant national program documents' tasks, specifically Goal 12.7, which aims to "Promote sustainable practices in public procurement according to national strategies and priorities" within Goal 12,

"Ensuring sustainable consumption and production" (United Nations Ukraine, 2017).

Importantly, as a result of consistent reforms, approaches to the functional purpose of public procurement have changed significantly, leading to the systemic integration of SDGs into public procurement procedures and the inclusion of environmental and social components in the assessment criteria for "tender proposals." According to Article 29 of the Law of Ukraine № 922-VIII "On Public Procurement" dated December 25, 2015 (as amended by the Law of Ukraine dated September 19, 2019, with subsequent amendments), the evaluation criteria include: 1) price; or 2) life cycle cost; or 3) price together *with other evaluation criteria, including payment terms, delivery time, warranty service, technology transfer, and training of managerial, scientific, and production personnel, as well as measures related to environmental protection and/or social protection related to the subject of procurement* (part 3).

The importance of deepening the integration of so-called "horizontal" goals into the public procurement system is highlighted in the scholarly work of V. K. Malolitneva. The scholar suggests applying a value-oriented approach to public procurement in Ukraine, which would involve the implementation of "horizontal" goals within the framework of relevant directions of the country's state policy, particularly in environmental protection, which encompasses the development of "green" public procurement, and in social protection, which includes the realization of employment and training opportunities, the promotion of respect for human rights, and protection (Malolitneva, 2021).

Indeed, the adaptation of legislation in the field of public procurement to the provisions of Directives 2014/24/EU and 89/665/EEC, by Appendices XXI-F, XXI-G, and XXI-H to the Association Agreement between Ukraine and the EU, within the framework of the third stage (January 1-December 31, 2019) of implementing the Action Plan for the Implementation of the Strategy for Reforming the Public Procurement System ("Roadmap") (approved by the CMU's Order No. 175-p, 2016), provided for the reflection in the national legal framework of the conditions for the integration of social and environmental standards and requirements for contractors or products purchased for state needs as characteristics and elements of proposal evaluation in procurement procedures in the

national legal field (Articles 74 and 77 of Directive 2014/24/EU) (Order No. 175-p, 2016). However, the institute of state aid to business entities, the legal norms of which constitute a significant proportion of the stimulating legal regime of economic activity, is much less updated and integrated into the system of legal tools to promote the achievement of sustainable development goals.

Despite the priority declared in the Sustainable Development Ukraine 2020 for the reform of economic competition protection (Decree of the President of Ukraine № 5/2015, 2015), of which state aid to business entities is recognized as a key means of implementation, the state has not taken sufficient measures to direct the potential of state aid to business entities towards achieving sustainable development goals.

It must be noted that, a Strategy ("roadmap") for reforming the system of state aid to economic entities, has not been developed and presented to date, as, for example, it was done in the case of public procurement. In turn, the existing Concept of reforming the system of state aid to economic entities, approved by the CMU's Order No. 81-p, on January 13, 2010 does not take into account the recent changes in Ukraine's legal policy, internal and external strategies, which have occurred due to the Association Agreement between Ukraine and the EU and Ukraine's acquisition of candidate status for EU membership in 2023.

By the way, in EU legislation, the concept of "state aid" is consistently evolving, and it is worth noting that in EU law, unlike domestic legislation, the use of the phrase "state aid" is traditional. This concept is considered one of the key legal instruments capable of ensuring not only the effective use of state or local resources but also directing these resources toward achieving SDGs. The beginning of such fundamental changes in the nature and purpose of state aid was laid down by the European Commission in the Communication EU State Aid Modernisation (Communication SAM) dated May 8, 2012. In particular, the text of Communication SAM repeatedly refers to the Europe 2020: A strategy for smart, sustainable and inclusive growth, also known as the Sustainable Development Strategy (European Union, 2010). (European Union, 2012).

As indicated in this Communication from the European Commission, state aid policy can also actively and positively contribute to the strategy objectives by prompting and supporting

initiatives for more innovative, efficient and greener technologies, while facilitating access to public support for investment, risk capital and funding for research and development (point 3.1) (European Union, 2010).

Since the adoption of the Europe 2020: A strategy for smart, sustainable and inclusive growth, also known as the Sustainable Development Strategy and the implementation of measures to modernize the state aid system, the latter has become an integral means of implementing sustainable development policies in the EU. This is specifically emphasized in the reflection paper "Towards a Sustainable Europe by 2030" prepared by the European Commission, which states: «The EU State Aid policy, especially since its modernization in recent years, has been geared towards sustainability. 94% of total State Aid in the EU was targeted at horizontal objectives of common interest, such as environmental protection, research, development, innovation and regional development. Of total spending, 54% was in support of environmental and energy savings» (European Commission, 2019, January 30).

To create favorable conditions to accelerate the EU's green and digital transitions, the Commission Regulation (EU) 2023/1315 (Official Journal of the European Union, 2023). This regulation introduced amendments, including to Commission Regulation (EU) № 651/2014, declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty (referred to as the General Block Exemption Regulation - GBER) (European Commission. (2014, June 17).

In particular, as mentioned in the European Commission's press release, these innovations provide Member States with more flexibility to develop and implement support measures in sectors crucial for the transition to climate neutrality. This is intended to accelerate investments and funding for the production of clean technologies in Europe in line with the Green Deal Industrial Plan for the Net-Zero Age (European Commission, 2023).

It should be additionally emphasized that the adoption of Commission Regulation (EU) 2023/1315 was a logical outcome of recent changes in various sets of guiding principles for state aid. In the context of Ukraine's integration into the EU and the subsequent adaptation of national legislation to EU law, this holds

significant importance for enhancing domestic legal regulation of state aid to economic entities. In this regard, it is worth noting that the lag in the implementation of legal norms regulating specific categories of state aid from the list classified as stimulating measures in the GBER Commission Regulation (EU) № 651/2014 is significant. This can create substantial challenges in achieving nationally defined indicators for sustainable development goals.

In particular, Article 1(1) of Commission Regulation (EU) № 651/2014 as amended by Commission Regulation (EU) 2023/1315 outlines the list of aid categories covered by its scope and enumerates 16 types (European Commission. (2014, June 17). Meanwhile, Article 6(2) of the Law of Ukraine № 1555-VII, 2014 "On State Aid for Economic Entities" dated July 1, 2014, establishes the provision that the Cabinet of Ministers of Ukraine defines the criteria for assessing the admissibility of individual categories of state aid and designates only 9 types.

As can be seen, the differences in the lists of "compatible with the internal market" and "permissible" state aid categories in terms of the number of types are evident. Additionally, an analysis of the current legislation in Ukraine reveals inconsistencies in the substantive nature, characterized by incomplete or contradictory reproduction of the procedures, conditions, and other aspects related to the provision of relevant categories of aid, which are recognized as "compatible with the internal market" under EU law and "permissible" under national legislation. Sometimes, this can be explained by the lack of proper monitoring by national legislative bodies regarding the current versions of relevant EU legal acts and the failure to take measures for the corresponding update of national legislation.

Indeed, the problems related to adapting national legislation to EU law are most pronounced in the area of environmental protection aid.

According to section 2.2 of the Communication from the European Commission – 2022 Guidelines on State aid for climate, environmental protection and energy, the following categories of aid are considered compatible with the internal market, provided certain requirements are met:

a) aid for the reduction and removal of greenhouse gas emissions, including through support for renewable energy and energy efficiency;

b) aid for the improvement of the energy and environmental performance of buildings;

c) aid for the acquisition and leasing of clean vehicles (used for air, road, rail, inland waterway and maritime transport) and clean mobile service equipment and for the retrofitting of vehicles and mobile service equipment;

d) aid for the deployment of recharging or refuelling infrastructure for clean vehicles;

e) aid for resource efficiency and for supporting the transition towards a circular economy;

f) aid for the prevention or the reduction of pollution other than from greenhouse gases;

g) aid for the remediation of environmental damage, the rehabilitation of natural habitats and ecosystems, the protection or restoration of biodiversity and the implementation of nature-based solutions for climate change adaptation and mitigation;

h) aid in the form of reductions in taxes or parafiscal levies;

i) aid for the security of electricity supply;

j) aid for energy infrastructure;

k) aid for district heating and cooling;

l) aid in the form of reductions from electricity levies for energy-intensive users;

m) aid for the closure of power plants using coal, peat or oil shale and of mining operations relating to coal, peat or oil shale extraction;

n) aid for studies or consultancy services on matters relating to climate, environmental protection and energy (Official Journal of the European Union, 2022).

At the same time, the list of aid categories covered by the Criteria for Assessing the Eligibility of State Aid to Economic Entities for Environmental Protection, approved by the CMU's Resolution No. 1060 dated October 11, 2021, has not been updated and brought into compliance with both the 2022 Guidelines on State aid for climate, environmental protection and energy and the updated version of Commission Regulation (EU) № 651/2014.

There is also a difference in the methodological principles for assessing the compatibility of state aid in the fields of climate, environmental protection, and energy with the internal market. This is essential for developing national approaches to determining the eligibility of state aid measures to business entities for environmental protection.

As stated in point 21 of 2022 Guidelines on State aid for climate, environmental protection and

energy, based on Article 107(3), point (c), of the Treaty, the Commission may consider compatible with the internal market State aid to facilitate the development of certain economic activities within the Union (positive condition), where such aid does not adversely affect trading conditions to an extent contrary to the common interest (negative condition) (Official Journal of the European Union, 2022).

In this regard, the "positive condition" entails the European Commission determining the following circumstances:

identification of the economic activity that is being facilitated by the measure, its positive effects on the society at large and, where applicable, its relevance for specific policies of the Union;
incentive effect of the aid;
absence of breach of any relevant provision of Union law.

On the other hand, the essence of the "negative condition" is revealed through the following elements:

the need for State intervention;
the appropriateness of the aid;
the proportionality of the aid (aid limited to the minimum necessary to attain its objective) including cumulation;
the transparency of the aid;
avoidance of undue negative effects of the aid on competition and trade;
weighing up the positive and negative effects of the aid.

It is important to emphasize certain aspects of the "positive" and "negative" conditions. In particular, a crucial factor in justifying the necessity of providing state aid is the presence of the incentive effect of the aid, as noted in point 26 of the 2022 Guidelines on State aid for climate, environmental protection and energy, «Aid can be considered as facilitating an economic activity only if it has an incentive effect. An incentive effect occurs when the aid induces the beneficiary to change its behaviour, to engage in additional economic activity or in more environmentally-friendly economic activity, which it would not carry out without the aid or would carry out in a restricted or different manner.». Furthermore, the aid must not support the costs of an activity that the aid beneficiary would carry out and must not compensate for the normal business risk of an economic activity (p. 27) (Official Journal of the European Union, 2022).

Evaluating the necessity of state intervention as an element of the "negative condition," point 34 of the 2022 Guidelines on State aid for climate, environmental protection and energy emphasizes that the proposed State aid measure must be targeted towards a situation where it can bring about a material development that the market alone cannot deliver, for example by remedying market failures about the projects or activities for which the aid is awarded. Whilst it is generally accepted that competitive markets tend to bring about efficient results in terms of the development of economic activities, prices, output and use of resources, in the presence of market failures, public intervention in the form of State aid may improve the efficient functioning of markets and thereby contribute to the development of an economic activity to the extent that the market on its own fails to deliver an efficient outcome. The Member State should identify the market failures preventing the achievement of a sufficient level of environmental protection or an efficient internal energy market (Official Journal of the European Union, 2022).

It is worth noting that state aid, both within the framework of 2022 guidelines on State aid for climate, environmental protection and energy and other EU legal acts, is considered a legal instrument to promote the implementation of state policies across various economic, environmental, social, and other development dimensions. Being in systemic connection with other means of implementing state policy, state aid aims to address regulatory deficiencies or so-called market "failures." In this regard, state aid is generally regarded as a legal tool of secondary or discretionary application, where the advantages of this institution are utilized to rectify "residual market failures, i.e., those left unaddressed by such other policies and measures (point 35) (Official Journal of the European Union, 2022). Consequently, it enhances the effectiveness of the legal framework in specific areas of societal relations.

The mentioned context allows us to assert a correlation between the need for state intervention through state aid and its "appropriateness," which, according to point 39 of the 2022 Guidelines on State aid for climate, environmental protection and energy, is defined as follows: "The proposed aid measure must be an appropriate policy instrument to achieve the intended objective of the aid, meaning there should not be a less distortive policy and aid instrument capable of achieving the same results" (Official Journal of the European Union, 2022).

Considering state aid as an appropriate and proper means of implementing state policy, its special role lies in facilitating the transition to a sustainable societal development model. To transform the state aid system into an effective instrument for achieving SDGs, an update of the guiding principles of state aid was envisaged within "The European Green Deal", including the guiding principles of state aid in the field of environmental protection and energy. In particular, as stated in subsection 2.2.2, "Greening national budgets and sending the right price signals", "Evaluations are underway of the relevant State aid guidelines, including the environmental and energy State aid guidelines. The guidelines will be revised by 2021 to reflect the policy objectives of the European Green Deal, supporting a cost-effective transition to climate neutrality by 2050, and will facilitate the phasing out of fossil fuels, especially those that are most polluting, ensuring a level-playing field in the internal market. These revisions are also an opportunity to address market barriers to the deployment of clean products" (European Commission, 2019).

Consequently, as a result of gradual efforts towards shaping an adequate contemporary legal framework to promote the integration of sustainable development principles into key areas of societal activity, the examples provided in this work can be considered instances of substantial updates to a range of EU legal acts that define the principles of state aid compatible with the internal market.

Conclusions

It is argued that the reform of certain legal institutions, the norms of which are deeply integrated into the structure and content of the stimulating legal regime of economic law and legislation, and whose potential could have been utilized to achieve sustainable development goals, occurred at varying paces and with different degrees of adaptation to EU law. Specifically, compared to the institution of public procurement, the institution of state aid to undertakings demonstrates a significantly lesser degree of actualization and integration into the system of legal instruments aimed at promoting the achievement of sustainable development goals.

As evidenced by the analysis of the current legislation of Ukraine, inconsistencies in substantive nature are observed, which manifest as incomplete or contradictory reproduction of the procedures, conditions, and other specific aspects of providing corresponding categories of state aid that are recognized as "compatible with the internal market" under EU legislation and "permissible" under national legislation. Sometimes, this can be explained by the lack of proper monitoring by national legislative bodies regarding the up-to-date versions of relevant EU legal acts and the failure to take measures for the appropriate update of national legislation. The most significant challenges in adapting national legislation to EU law are vividly demonstrated in the case of providing state aid for environmental protection.

The research provides arguments in favor of considering the experience of reforming the state aid system in the EU as a good example of directing the regulatory potential of this legal instrument for implementing state policies toward achieving more comprehensive goals. These goals involve creating conditions for sustainable societal development within secure economic, environmental, and social frameworks, as compared to the primary objectives that focus on ensuring the effective utilization of state and/or local resources without harming free competition.

It is substantiated that it is precisely through this model of legal regulation of the state aid system in the EU that the modernization of Ukraine's legislation in the field of state aid to economic entities should take place, facilitating the use of state and/or local resources to achieve SDGs. Additionally, the importance of prioritizing the compensatory function of the state aid institution in the system of implementing state economic policies in relevant directions is emphasized. This entails utilizing the stimulating potential of state aid in cases where other means of legal influence are incapable of ensuring or cannot fully achieve the objectives of economic, environmental, social, and other aspects of development.

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Public-private collaboration for national security: challenges and opportunities

Співпраця державно-приватного сектору для національної безпеки: виклики та можливості

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Abstract

The purpose of the article is to study public-private collaboration as the main tool to guarantee national security and the sustainability of the State. Research results. The article examines the content, characteristics, and development prospects of public-private collaboration. The system of legal instruments of Ukraine regulating this issue is analyzed. The principles of implementation of the public-private partnership are characterized, as well as the key requirements for its effectiveness. It is summarized that the public-private partnership in the field of national security and defense is a form of cooperation that must guarantee the effectiveness of the implementation of protection and defense measures in the form chosen by the parties in the relevant contracts or agreements. Practical implementation. Public-private collaboration has been used to: build military infrastructure; develop new defense technologies; train military personnel Value/originality. To improve administrative and legal regulation of the public-private partnership, we propose to perform its full transition to online procedures, as it will facilitate the access to information and resources for private companies.

Анотація

Метою статті є вивчення державно-приватного партнерства з дискурсу розуміння його як основного інструменту забезпечення національної безпеки та стійкості держави. Результати дослідження. У статті досліджено зміст, особливості та перспективи розвитку державно-приватного співробітництва. Проаналізовано систему нормативно-правових актів України, що регулюють це питання. Охарактеризовано принципи реалізації державно-приватного партнерства, а також основні вимоги до його ефективності. Узагальнено, що державно-приватне партнерство у сфері національної безпеки і оборони є формою співробітництва, яка має гарантувати ефективність здійснення заходів з охорони та захисту у формі, прописаній сторонами у відповідних договорах чи угодах. Практичне значення. Державно-приватне співробітництво використовувалося для: будівництва військової інфраструктури; розроблення нових оборонних технологій; підготовки військовослужбовців. Цінність/Оригінальність. Для покращення адміністративно-правового регулювання

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державно-приватного партнерства пропонуємо здійснити його повний перехід на онлайн-процедури, оскільки це спростить доступ до інформації та ресурсів для приватних компаній.

Ключові слова: державний сектор, державно-приватне партнерство, національна безпека, оборона, воєнно-промисловий комплекс, приватний сектор.

Introduction

Recently, there has been an increasing focus on relationships between the State and civil society, which is based on updated principles. We agree with the view of those authors who note that a feature of modern management practice is building relationship between the State, civil society and business based on the principles of partnership, effective interaction, transparency and decentralization of public administration. The civil society institutes and business structures are allowed to express more than just their views on certain socially significant issues, but directly participate in the development and adoption of management decisions (Soroka 2020; Danylenko, 2019; Sokyran, 2020).

The rules of state aid work for the implementation of public-private partnership projects and require the State, as a partner, to comply with the conditions for the transfer of budgetary resources to private partners to avoid a ban on the public contracts due to the incompatibility of the State aid with economic competition. As an example, we can name the Plan for the Reconstruction of Ukraine (National Reconstruction Council, 2022), which was drawn up by the Ministry of Economy with a recovery price of $750 billion in budget funds. The implementation of the Plan started with the signing of the Memorandum of Understanding with the International Finance Corporation (IFC), which will help our country to rebuild its transport, logistics, urban, social and energy infrastructure. One of the rather optimistic sections of the memorandum is to attract private investors to the reconstruction of Ukraine's infrastructure within public-private partnerships and concessions.

Therefore, the relevance of the research lies in the fact that progressive development of the economy, increasing social responsibility of business have become prerequisites for the introduction of public-private partnership as a new legal form of market interaction. It is aimed at ensuring the balance of socio-economic interests of various layers of society and the real participation of social partners in the development and implementation of socio-economic policy within the legal forms established by the State through equitable, rule-based cooperation (Aparov & Yatsenko, 2015).

Consequently, the purpose of the article is to study the public-private partnership from the discourse of its understanding as the main tool for ensuring national security and stability of the State. The results of the conducted research are expected to intensify the implementation of public-private partnership in the military sphere to increase the level of national security and defense of Ukraine. To improve its administrative and legal regulation, a full transition to online procedures should be carried out.

Methodology

The research is based on the thorough study of phenomena and their characteristic features, which is ensured by the combined use and application of the rules and principles developed by methodological science. The following methods of scientific knowledge were used to achieve the goal of the research: general philosophical, general scientific and special scientific.

The method of legal hermeneutics was applied during the analysis of the provisions of the current legislation, regulating general and specific principles of public-private partnership implementation in Ukraine.

Monographic method was helpful when analyzing the research by scientist, who considered the issue under study.

With the assistance of logical method the scientific basis for the article was examined and applied.

The use of methods of abstraction, analysis and synthesis contributed to distinguishing the features of public-private partnership in the field of national security.

The methods of induction and deduction served as tools for summarizing the obtained results.

State-legal modeling method helped to identify the ways of optimizing administrative and legal regulation of public-private partnership in Ukraine and the method of generalization was applied to draw the relevant conclusions.

Literature Review

The issue of public-private partnership was highlighted by many scientists. Thus, Yu. Zuieva (2023), having analyzed foreign cases of public-private partnership, states that international experience indicates high efficiency of partnership relations between the State and private sector, as well as the expediency of attracting external investment resources during the implementation of complex large-scale projects in various fields. The author comes to the conclusion that cooperation between the State and private investors in the social sphere (medicine, education), transport sphere (motorways, ports, railway transport) and energy sector (construction of power plants, facilities management) is the most in demand at the present stage.

Aparov and A. Yatsenko (2015), also emphasize that public-private partnership is an important tool on the way to the restoration and modernization of the national economy, solving important socio-economic problems by combining and using the resources of the public and private sectors. Unlike former author, the scientists believe that the scope of public-private partnership is much broader and cite the following: search, exploration of mineral deposits and their extraction, production, transportation and supply of heat and electricity, distribution and supply of natural gas, construction and operation of transport infrastructure facilities, mechanical engineering, collection, purification and distribution of water, security health, tourism, waste management, real estate management, etc.

A rather interesting work is the study by Brailovskyi (2014), who investigated the history of public-private partnership and analyzed the current state of its development in Ukraine, highlighting further prospects. However, the author is a representative of economic science, so the emphasis was precisely on the economic components of the use of public-private partnership in Ukraine.

Speaking about the use of public-private partnership in the context of national security, only few scientists have studied this aspect. As an example, we can name O. Pronevych and S. Pronevych (2015), who believe that a promising direction for the use of public-private partnership in the field of security is the creation of the necessary institutional and legal foundations for the provision of services in the field of private detective (investigative) activities.

Mekh, Horobets and Holovko (2022) focused their attention on the main principles and forms of public-private partnership in the security sector, while pointing out that national security reflects the state of protection of the democratic constitutional system and national interests of Ukraine, therefore it is achieved due to the sustainable development of the national economy, integration into the European economic space, the development of human capital of Ukraine (through the modernization of education and science, health care, culture, social protection, ensuring environmental safety, creating safe conditions for human life), strengthening the capabilities of the national cyber security system by using various tools of influence (including public-private partnership).

Since the public-private partnership in the security and defense area has been working relatively recently, the phenomenon from a management perspective requires research and analysis, development of approaches to management, taking into account the specifics of the industry, systematization of knowledge and research of world experience. Access of non-State legal entities to the defense and industrial complex effectively puts them on the global market. Accordingly, it involves them in the global competition in this area and the "race of innovations" in the market of defense and security goods and services (Kravchenko & Prudkyi, 2023).

The analysts of the National Institute of Strategic Studies, examining the public and private sectors regarding their ability to protect national security, come to the conclusion that there is now a fundamental shift from cooperation between these actors to paternity (Markieieva & Rozvadovskyi, 2021).

The majority of Ukrainian experts note that there are currently a number of specific activities outside the legal field of public-private partnership: security, detective work, intelligence, military consulting, law enforcement, counter-intelligence, anti-terrorist activities, etc. At the same time, the security circumstances in Ukraine require an urgent change in the political and legal conditions in this area.

For example, the activities of private military companies that could provide a wide range of security services have not yet been legally regulated. At the same time, the relevant laws of Ukraine Law No. 959-XII "On foreign economic activities" (Article 4), Law No. 549-IV "On the State Control over International Transfers of Military and Dual-Use Commodities" (Par. 17, Article 1), Law No. 2642-VIII "On mine countermeasures in Ukraine" (Article 36) allow foreign economic entities to зrovide a range of commercial services, which include a significant proportion of those offered by private military companies.

Results and Discussion

Since cooperation between the State and the private sector first appeared in the practice of foreign countries, there are disagreements in the domestic literature on the translation of the term "public-private partnership". As for the CIS countries, this concept is interpreted as "public-private partnership" or "State-private partnership". Such differences in translation are due to the fact that the word "public" in foreign countries is usually understood more broadly than "State". English-Russian Muller's dictionary (2023) provides the following synonyms to interpret the definition of "public": State; national, universal; generally available; communal; open, vowel.

The professional online dictionary Multitran (2023) proposes the next analogues to this term: communal; open; vowel; national; nationwide; State; public law; universal. It should be understood that in the English language there is no difference between the words "state" and "public"; both of these concepts are expressed by the term "public", which is indicative, because the State is not only officials and politicians; the State and power is society, which affects the processes taking place in the country.

Thus, public-private partnership is a form of cooperation between the public sector (institutions and authorities) and the private sector (enterprises and companies), in which both parties jointly direct efforts and resources to solve certain tasks or provide certain services. This may include implementation of infrastructure projects, provision of social services, property management, etc.

Public-private partnership in the sphere of human, society and state security is a complex socio-legal problem. The strategic direction of law-making activity in Ukraine is also the creation of institutional and legal foundations for the establishment of public-private partnership in the field of prevention, response, and minimization of the consequences of man-made, natural and socio-political emergencies (Danylenko, 2019).

The first legal act in which a legal definition of public-private partnership was provided at the legislative level is the Law of Ukraine No. 2404-VI (2010). It was adopted to determine the organizational and legal basis of interaction between State and private partners and is currently the source of the main principles of its implementation.

Undoubtedly, any interaction should be based on certain principles as rules of conduct for all parties of partnership.

Let's clarify that in legal doctrine, principles are general, guiding (basic, main, starting, initial theoretical, general normative, directing) provisions (Sokyran, 2020, p. 41). For the sphere of public-private partnership, the following concepts are established:

1) equality of public and private partners before the law;
2) prohibition of any discrimination against the rights of public or private partners; coordination of the interests of public and private partners for the purpose of mutual benefit;
3) ensuring higher efficiency of activity than in the case of implementation of such activity by a public partner without involving private partner; continuity throughout the period of the contract concluded within public-private partnership, the purpose and form of ownership of objects in the State or communal ownership or belonging to the Autonomous Republic of Crimea, transferred to a private partner;
4) recognizing rights and obligations provided for by the legislation of Ukraine and determined by the terms of the contract concluded within the framework of the state-

private partnership by the public and private partners;

5) fair distribution of risks associated with the performance of contracts concluded within public-private partnership between public and private partners;

6) determining private partner on a competitive basis, except for cases established by law (Soroka, 2020).

Summarizing the principles listed above, we get the following basic rules for its implementation: equality before the law, non-discrimination, efficiency, compliance with legislation and contract terms, fair distribution of risks, competitiveness.

However, it should be noted that researchers define other principles of public-private partnership in the scientific literature. Such principles are not fixed at the legislative level, but they are still important for clarifying the essence of public-private partnership. Thus, the authors single out the following principles of implementation of public-private partnership:

1) the principle of efficiency of budget expenditures;
2) the principle of public interests priority;
3) the imperative principle of social relevance of the State's economic policy;
4) the principle of business social responsibility;
5) the principle of the public nature of social relations management;
6) the principle of information transparency;
7) the principle of ensuring State control.

We agree that it is not possible to define all principles at the legislative level, so they can be specified when concluding a public-private partnership agreement, but some of them are extremely important. After all, as practice (including international one) indicates that the parties do not always adhere to the established principles, which does not have the effect for which the partnership was established.

For example, in 2018, the European Court of Auditors (2018) in its report "Public Private Partnerships in the EU: Widespread shortcomings and limited benefits" stated that despite the potential of this partnership to achieve faster policy implementation and ensure proper service standards, audited projects are not always were effectively managed and did not provide adequate value for money. The potential benefits of public-private partnerships were often not realized as they have been delayed, increased and

underutilized, resulting in inefficient spending. The authors of the report determined that, in addition to bureaucratic delays, the final result was also affected by the lack of proper analysis of strategic approaches to the use of public-private partnerships and the institutional and legal framework.

Thus, in deciding whether to transfer a national security project to partners from the private sector, the public sector should find out if this decision maximizes the value for money, as well as whether it protects public interests (in the context of equal conditions between public-private partnerships and traditional purchases).

In addition to the above, a public-private partnership should include:

1) sharing of risks and responsibilities, where both parties, the public and private sectors, share the risks and responsibilities associated with the implementation of the project or services provision;
2) financial transparency (to comply with it, it is necessary to conclude a detailed agreement on financing and management of funds, which will ensure not only transparency, but also effective use of resources);
3) innovation (the private sector can bring technical know-how and innovation, thereby ensuring a more effective solution to problems);
4) duration, because such partnerships usually involve a long period of cooperation, which ensures stability and long-term benefits for both parties;
5) socio-economic impact (public-private partnerships can contribute to socio-economic development, in particular, by creating new jobs, improving the quality of services and developing infrastructure).

Since public-private partnership is used in many areas, however, specifically in the field of national security and defense, its priority is rarely overlooked (there is no mention of it in the Law of Ukraine "On Public-Private Partnership" (Law of Ukraine No. 2404-VI, 2010).

However, this Law defines: "…by the decision of the state partner, the public-private partnership can be applied in other spheres of activity, providing socially significant services, except for the types of economic activity that, according to the law, are allowed to be carried out exclusively by State enterprises, institutions and organizations". Since national security is always

a socially significant area, it is logical to assume that the provision of services within its borders is a socially significant process".

Thus, the legislator indirectly allows the implementation of public-private partnership projects in the security and defense area. However, there are currently a number of specific activities outside the legal field of public-private partnership: security, detective work, intelligence, military consulting, law enforcement, counterintelligence, anti-terrorist activities, etc. At the same time, the security conditions in which is Ukraine now, require an urgent change in the political and legal circumstances in these areas (Markieieva & Rozvadovskyi, 2021, p. 11).

With the beginning of the full-scale invasion of the Russian Federation on the territory of Ukraine, there was a big problem with the lack of weapons, including drones. At the same time, it gave impetus to the formation of new private enterprises, which not only meet the linear needs of the security and defense sectors, but also create innovative high-precision products.

More than 200 companies producing drones of various types are already operating in Ukraine. Thanks to State programs and charitable funds, most of the contracted drones were manufactured in Ukraine – "Kazhan", R-18, "Vampir", Punisher and others (Honcharova & Danishevska, 2023). Many more both the name and the development itself remain classified. Startups in this field can be conventionally divided into two groups:

hardware, for example, drones, anti-drone guns, tactical headphones, communication systems, etc.;
software: battlefield management systems, gunnery software, training modules, cyber security systems, and more (Soroka, 2022; Kravchenko & Prudkyi, 2023).

One of the few examples of cooperation between public and private partners in the field of national security is the Airlogix official website (2023) project, whose team first developed and created reconnaissance drones "Gor" for ground troops. Thanks to State programs, the initiative of the Ministry of Digital Transformation and the UNITED24 fund, the company was able to receive a state order for the production of such drones. And although the collaboration was not carried out through public-private partnerships, but rather through the State order, this example clearly demonstrates that the public and private

sectors can successfully implement projects even in extreme conditions.

It should be understood that scientific and technical cooperation is becoming an increasingly important and effective form of modern relations both at the national and international level. Given the high rate of scientific and technological progress, any country, no matter how significant its potential in the field of science and technology, can fully satisfy its needs in advanced science and technology for the production of the entire spectrum of scientific products, which is constantly changing and improving. Cooperation in creating high-tech products is the most important part of modern international relations. Knowledge, especially science-based, is critical to turning the increasingly complex problems facing society into opportunities for more sustainable development, achieving the Sustainable Development Goals, and meeting other shared commitments (Soroka, 2020).

Accordingly, within the framework of security and defense, this model vividly describes the synergistic effect of the interaction of the State (mostly the Ministry of Defense), enterprises regardless of ownership, as well as universities, which are, on the one hand, places for generation and testing of new ideas, and on the other – provide qualified personnel to both State agencies and enterprises creating innovative products or providing services for this area.

However, regulatory and legal provision of public-private partnership in the field of national security requires significant modernization (understanding all the complexity of the existing mechanism and considering that a country is in a state of armed conflict does not have time for long procedures existing in peacetime). Therefore, the Government's Priority Action Plan for 2023 determined that it is necessary to develop and submit for approval a draft law on amendments to the Law of Ukraine "On public-private partnership" to create conditions for the development of the defense and industrial complex of Ukraine in order to stimulate the development of the defense-industrial complex using mechanisms of public-private partnership and military technical cooperation with foreign countries for the production of highly effective weapons, military and special equipment, meeting the needs of the Armed Forces, other bodies of the security and defense sector, increasing the export potential of the defense-industrial complex, it is necessary to develop and submit for approval a draft law on amendments

to the Law of Ukraine "On public-private partnership".

In addition to the above, Transparency International Ukraine (2023) in its study "Public-private partnership as a tool for the reconstruction of Ukraine" presented the following conclusions regarding the prerequisites for the successful implementation of public-private partnership:

1) predicted regulatory policy and priorities of the State;
2) investment protection;
3) performance monitoring;
4) determination of the conditions of public-private partnership;
5) project support;
6) research on the impact of public-private partnership;
7) revision of conditions.

In our opinion, in the conditions of global digitalization of public services, as well as in view of the presence of corruption risks in Ukraine, it is necessary to include a full transition to online procedures as part of the successful implementation of public-private partnership in general, including in the field of national security. Moreover, at the end of May 2023, Prime Minister Denys Shmyhal presented the Government's vision for the coming years: Ukraine is a digital country, convenient for people and business, safe and economically strong. Of the four core principles, one of them is public-private partnership, primarily in the military-industrial complex (Mosorko, 2022).

Using the safe direction of the public-private partnership institution in the military-industrial complex is, in our opinion, more promising (provided it is reformed) than short-term investments in startups. After all, its duration will enable the private partner to strategically plan its activities, which is a guarantee of stability and sustainability.

Conclusions

Public-private partnership is a form of cooperation between the public and private sectors to solve certain tasks, projects or provide certain services. In such partnerships, the public and private sectors combine efforts, risks and resources to achieve common goals.

We can summarize that the public-private partnership in the field of national security and defense is a form of cooperation that should ensure the effectiveness of the implementation of protective and defense measures in the manner chosen by the subjects of the relevant contracts or agreements. As a tool for ensuring national security and stability of the State, it has significant potential, because it can bring together a significant number of stakeholders with common goals, solutions of urgent problems or the natural development of legal phenomena and, as a result, - resources for achieving these goals.

The use of the public-private partnership institution in the military-industrial complex (for example, for the development and manufacture of drones) and after the war in rebuilding the country is seen as the most promising directions in the modern conditions in which Ukraine is. This requires modernizing existing legislation to simplify it regarding the access of private actors to public funds and mechanisms for monitoring the effectiveness of the use of their provision.

In addition to the above, it is necessary to make other legislative changes to regulate the access of private actors to the system of ensuring national security and defense, for example, in the following areas: security, detective work, intelligence, military consulting, law enforcement, counter-intelligence, anti-terrorist activities, etc.

To improve administrative and legal regulation of the public-private partnership, we propose to perform its full transition to online procedures that significantly simplify the participation of potential investors in tender procedures, which is undoubtedly a big step forward.

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Application of information technologies and modeling in management operating systems for improving efficiency and safety

Застосування інформаційних технологій та моделювання в операційних системах управління для підвищення ефективності та безпеки

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Abstract

The article examines the essence of information technology in the contemporary world and its impact on management operating systems. The authors define the concept of "information technology" and the basic principles of its functioning. In addition, the paper identifies the most common methods and approaches to modeling management operating systems. The authors analyzed the impact of information technologies on the development of Ukrainian enterprises. They also presented the latest information technologies in enterprise management and their essential contribution to the economy, exports, and employment. The study analyzed the dynamics of IT services development in Ukraine and their impact on its economy. It also presented a general analysis of operating systems in Ukraine and

Анотація

У статті розглядається сутність інформаційних технологій у сучасному світі та їх вплив на операційні системи управління. Авторами визначено поняття «інформаційна технологія» та основні принципи її функціонування. Крім того, визначено найбільш поширені методи та підходи до моделювання управління операційними системами. Автори проаналізували вплив інформаційних технологій на розвиток українських підприємств. Вони також представили новітні інформаційні технології в управлінні підприємствами та їхній вагомий внесок в економіку, експорт та зайнятість. У дослідженні проаналізовано динаміку розвитку ІТ-послуг в Україні та їх вплив на її економіку.

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considered the possibilities of integrating information technology and innovative educational approaches. In addition, the paper examines the impact of information technology on the management of operating systems' security and presents the economic and technological effects that arise from implementing information technologies. This research aims to highlight the importance of information technologies in improving the efficiency and security of management operating systems.

Keywords: information technologies, modeling, management operating system, innovative approaches, entrepreneurship, competitiveness, productivity, management.

Також було представлено загальний аналіз операційних систем в Україні та розглянуто можливості інтеграції інформаційних технологій та інноваційних освітніх підходів. Крім того, у статті розглядається вплив інформаційних технологій на управління безпекою операційних систем і представлені економічні та технологічні ефекти, які виникають від впровадження інформаційних технологій. Це дослідження має на меті підкреслити важливість інформаційних технологій для підвищення ефективності та безпеки операційних систем управління.

Ключові слова: інформаційні технології, моделювання, операційна система управління, інноваційні підходи, підприємництво, конкурентоспроможність, продуктивність, менеджмент.

Introduction

Effective management is more critical than ever in today's fast-paced and competitive world. High competition, globalization, technological development, and the increasing information flow create new challenges for businesses and organizations. One of the key components of successful management is the ability to use information technology and modeling in management operating systems in a timely and effective manner.

Information technologies have become not only a tool for data processing but also a strategic resource that enables informed decision-making, event prediction, and the improvement of business processes. With them, it is possible to enhance efficiency, reduce risks, and increase competitiveness.

Modeling, in turn, provides the capability to analyze scenarios, determine optimal solutions, and evaluate their consequences without a direct impact on real business operations. This tool becomes vital for strategy development, resource planning, and project management. In this context, the issues of using information technology and modeling in management operating systems are becoming relevant and require detailed consideration.

This study aims to review and analyze the use of information technologies and modeling in management operating systems to improve efficiency and security in organizations and enterprises.

The research goals are as follows:

– to substantiate the impact of information technologies on security in management operating systems;
– to analyze examples of effective use of models in management operating systems;
– to formulate requirements for further development of the methodology for implementing information technologies in management operating systems.

Literature review

Implementation of information technologies and the use of modeling in management operating systems are becoming increasingly important aspects in today's business environment. Facilitation of processes, increase in efficiency, and security have become essential tasks for enterprises of all sizes and specializations. Constantly evolving information technologies provide an opportunity to introduce new approaches to managing operational processes. They help to improve the productivity and competitiveness of companies.

Setiawati, R., Eve, J., Syavira, A., Ricardianto, P., and Endri, E. (2022) investigate the relationship between information technologies and business flexibility. Their article aims to explore the aspects of using information technologies and their impact on companies' business flexibility and competitiveness. Scientists consider both internal and external factors, as well as the role

of top management and employees in achieving business flexibility.

The research by Vasylieva, N. V., Vasylieva, O. I., Prylipko, S. M., Kapitanets, S. V., and Fatkhutdinova, O. V. (2020) emphasizes the need for integrating innovative approaches to personnel training in the field of public administration for the successful implementation of decentralization reforms in Ukraine. According to their findings, the new model of public service should be based on transparency, efficiency, and collaboration with the public. Also, this model should be based on innovative methodologies and technologies in the professional development of civil servants. The authors believe it will help curb corruption, increase public trust, and ensure the qualitative delivery of public services.

Shaposhnykov, K., Kochubei, O., Grygor, O., Vyshnevska, O., Protsenko, N., and Dzyubina, A. (2021) examined the dynamics of the growth of Ukrainian information technologies exports. They established a connection between the components of the IT product market and the main and auxiliary stages of its creation. For their development and promotion, the authors proposed a methodology of iterative software development based on prototyping with elements of the Scrum system. Based on a proven flexible development technology, this approach allowed for the introduction of specific mechanisms that helped neutralize several negative factors associated with other methods.

Kotelevets, D. O. (2022) focuses on current trends in the development of the digital economy in Ukraine, particularly regarding the implementation of modern information and communication technologies in the activities of domestic enterprises. The author emphasizes the necessity of digital transformation to ensure the competitiveness of businesses and create favorable conditions for sustainable economic development.

Vyhaniailo, S. M. (2021) investigated the relationship between information technologies and business analysis. He analyzed the key stages of business analysis and classified software for business analysis. The research identified the primary goal of business analysis - to provide business consulting services using modern information technologies. The study also explored the use of IT technologies for contemporary business analysis methods. The author identified the prospects of information technology development to enhance business management system efficiency.

Vankovych, L. Ya., Mysiuk, R. V., Dobush, T. I., Bobko, O. V., Konyk, O. V., Shyian, S. M., and Tsvyk, S. R. (2023) examined key aspects of the impact of information technologies on the functioning and development of enterprises in the contemporary business environment. The authors emphasized the role of IT in providing flexibility and responsiveness to market changes, as well as the automation of labor processes through information technology. They also looked at its influence on costs and productivity, the increased availability of information for managers, and its impact on decision-making processes.

Methods

The following methods were used in the course of this study:

− A literature review was employed to identify key concepts, approaches, and methods related to the use of information technologies and modeling in management operating systems.
− The generalization method was used to analyze the results of the study of Ukrainian information technologies' export dynamics and establish connections between different components of the IT product market.
− Statistical data analysis was employed to assess the trends in information technology development and its impact on management operating systems, as well as to identify patterns in the utilization of these technologies in enhancing efficiency and security.
− Case studies of effective model utilization in management operating systems demonstrated that the implementation of information technologies and modeling can lead to increased productivity and overall security improvement in organizations.

Results

The use of information technologies (IT) has become a necessity in the modern world. In these circumstances, they have evolved into a powerful tool for achieving success in various fields of activity. Information technologies have influenced how we work, learn, communicate, and manage various aspects of life.

Information technology is an organized process of data processing using computer systems and

software aimed at ensuring fast access to information, its processing, storage, and transmission, regardless of its location. Information technologies encompass methods, production processes, as well as software and hardware tools that contribute to optimizing the use of information resources. Besides, they improve the productivity and flexibility of information processes (Setiawati et al., 2022).

The essence and significance of using IT become evident when considering their fundamental principles (see Figure 1). These principles define basic approaches to using technologies and their impact on our internal and external environment. They determine how IT contributes to enhancing efficiency, security, and the development of various spheres of our lives.
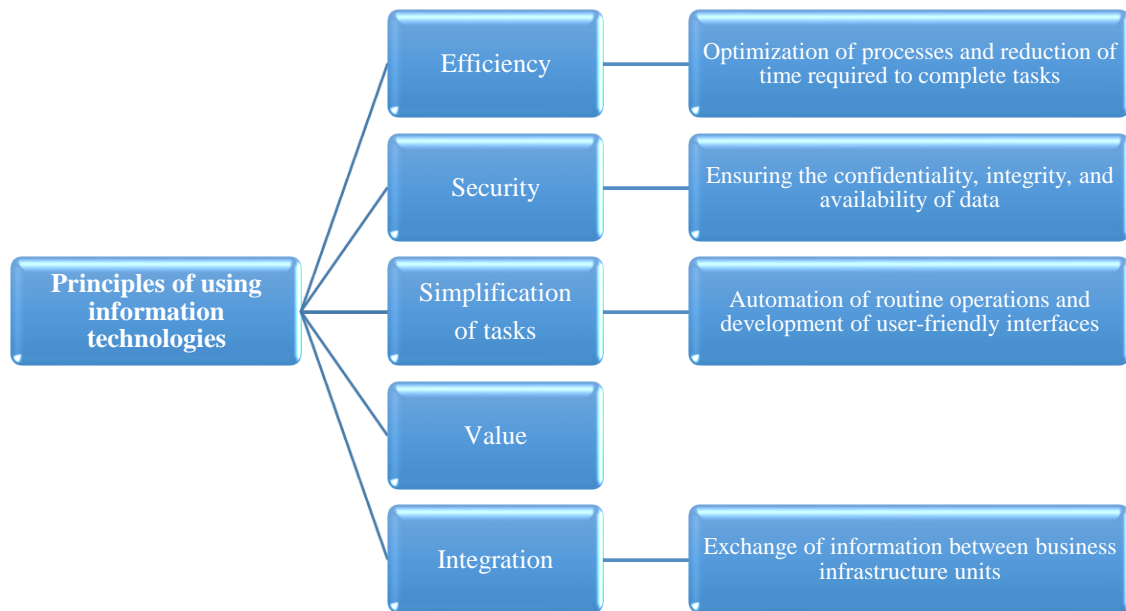
Figure 1. The principles of using information technologies.
Source: Compiled by the authors based on (Tarasiuk, 2011).

Thus, modeling in management operating systems becomes a key tool for achieving a high level of efficiency and competitiveness for organizations. It enables the analysis, optimization, and improvement of various aspects of operational management, including supply, production, logistics, customer service, and many others. In this context, the assessment of methods and approaches to modeling in management operating systems becomes particularly relevant. The use of scientific methods, innovative tools, and advanced software allows for the creation of accurate and realistic models of operational processes, as well as the analysis of their efficiency and improvement (Hrynevych et al., 2020).

According to recent research on the impact of information technologies on the development of enterprises, Ukrainian scientists have concluded that information systems can transform organizations, providing them with greater competitiveness and efficiency. They enable the restructuring of structure, scope, and management tools, transforming work processes, products, and services. New possibilities include global coordination of dispersed teams through the following means:

– email and video conferencing;
– the creation of virtual organizations without physical constraints;
– increased flexibility in responding to market changes;
– the automation of labor processes.

All these means make information technologies powerful tools for achieving success in modern business (Vankovych et al., 2023).

Therefore, the methods and approaches to modeling management operating systems are important tools for improving the efficiency and optimization of business processes in modern companies. The main ones are as follows:

1. System Modeling.

System dynamics allows modeling the behavior of a system over time and determining the relationships between its components. It enables the analysis of the impact of various factors on the system's dynamics and the development of management strategies.

In turn, systems analysis is used to analyze and optimize complex systems, treat the system as a holistic entity, and analyze the interactions between its components.

2. Mathematical Modeling.

Deterministic modeling involves using mathematical equations to model operational processes, allowing for precise analysis and outcome prediction. Conversely, simulation modeling employs stochastic models to replicate real operating systems, with its main advantage being the ability to model random events and uncertainty.

3. Process Modeling.

Business process modeling is used to model business processes and optimize them. It helps determine the sequence of actions, resources, and other aspects of operational systems. Project management and performance analysis also use process modeling.

4. Optimization Modeling.

Linear programming is used to find optimal solutions in cases where the objective function and constraints are linear. Dynamic programming allows solving optimization problems by breaking them down into smaller tasks and finding optimal solutions for each of them.

5. Other approaches.

Expert systems leverage expert knowledge for decision-making and analyzing operational systems. Agent-based modeling employs individual agents that interact with each other to model a system (Klymchuk, 2021).

In addition, the field of information technology is considered the most dynamic, with advancements occurring every day. The use of technical tools provides interactive access for users to information resources. Technological progress is constantly changing; new software is emerging, and new data search and processing methods are being developed. As a part of improving the information technology sector,

cutting-edge information systems have started to evolve in enterprise management, incorporating the use of artificial intelligence (AI) and machine learning. They allow information systems to analyze large volumes of data, make predictions, and make decisions based on analysis. Furthermore, there is a growing trend of transitioning to cloud technologies as they allow real-time data storage and processing, as well as reducing equipment and maintenance costs (Dalyk et al., 2023).

Blockchain technology, on the other hand, offers a high level of security and reliability for transactions and data exchange in information systems. It finds applications in financial management, logistics, and many other fields. Cybersecurity has become extremely important with the increasing number of cyberattacks and threats. Information systems must be protected from potential threats and ensure the confidentiality and integrity of data (Asaul et al., 2019).

It should be noted that currently, some researchers propose an innovative approach to developing and implementing IT products. This approach is based on the methodology of iterative software development, using prototyping principles and Scrum system elements. Like other Lean and Agile methods, Scrum optimizes limited resources and enhances efficiency. This method is developed based on tried and tested flexible development technologies. It allows for the addition of several mechanisms to neutralize several negative factors that are characteristic of other software development approaches. With the help of this approach and the Scrum methodology, software development becomes more flexible and adaptive to changes. It can ensure the successful implementation of a project and meet clients' needs (Shaposhnykov et al., 2021).

It is also important to improve such a methodology within the framework of the growing dynamics of exports of global and, in particular, Ukrainian information technologies. Currently, a connection is being established between the components of the IT product market and the primary and auxiliary stages of their creation. Therefore, it is worth expanding the Scrum methodology, emphasizing strategic planning and collaboration with higher management levels. That will help ensure greater alignment of the developed products with the company's strategic goals.

It is also worth delving into the latest trends in the development of information technology for business analysis. The most effective among them include, for example:

- "Seeneco." It is a cloud service for financial control within the company with integration with banks, revenue, and expense planning, as well as Excel import and export.
- "Tibco Spotfire," an analytical data analysis and visualization platform tailored to specific business processes.
- "Watson Analytics," operating based on the IBM Watson supercomputer with a voice interface (Vyhanailo, 2021).

Therefore, implementing these information technologies into a business allows for the creation of an effective mechanism for financial control and meticulous revenue and expense planning. This, in turn, contributes to maintaining the organization's balanced financial state. In addition, it provides the opportunity to analyze accumulated data and present it in a user-friendly format. This mechanism facilitates a better understanding of the current situation and aids in making informed and strategically important decisions. Automated data analysis processes become more precise thanks to the use of the IBM Watson computer and a voice interface. Thus, technology integration helps businesses enhance financial management efficiency, analyze data for decision-making, and implement innovative approaches to improving business processes (Oliinyk et al., 2021).

Innovative technologies are currently closely linked to the development of the financial technology sector. Fintech impacts the development of information technology by creating a demand for innovative solutions and developing technological infrastructure for modern financial services. However, it is essential to emphasize that this interaction works in both directions. On the one hand, information technologies provide fintech companies with tools for creating and improving financial products and services. On the other hand, these companies are constantly advancing information technologies to enhance their financial solutions' efficiency, speed, and security. They actively implement artificial intelligence, blockchain, big data, and other innovations to automate financial processes and improve the consumer experience (Shevchenko & Rudych, 2020).

Among the most technologically advanced banks in Ukraine, such as Oschadbank, UkrGasBank, Raiffeisen Bank Aval, Alfa-Bank, UkrSibbank, PUMB, OTP Bank, and Megabank, there are numerous collaborative initiatives with fintech companies. An exception to this is PrivatBank, which boasts a significant in-house development center. PrivatBank is actively working on digitalizing its services and financial offerings, which have long extended beyond traditional banking. They are setting a new standard in Ukraine by building a digital ecosystem that integrates financial services, retail trade, and e-commerce (Kholiavko et al., 2022). Additionally, the neobank segment in Ukraine is rapidly evolving, introducing new players to the fintech market. Monobank, which is now a part of Universal Bank, stands out among them. Throughout 2020, there was substantial growth in Ukrainian neobanks, including Sportbank, the launch of O. bank, beta testing of Izibank, and the anticipated debut of Neobank (National Bank of Ukraine, 2020).

A significant step in developing the fintech industry is the active involvement of the National Bank of Ukraine. The bank not only acts as the main regulator but also actively promotes the initiation and development of fintech projects. In January 2020, the National Bank of Ukraine approved the "Strategy for the Development of the Financial Sector of Ukraine until 2025." In this document, one of the strategic directions is the development of the fintech and information technology market (National Bank of Ukraine, 2020).

Today, Ukraine's information technologies sphere remains one of the most dynamic segments of the economy. The export of IT sector services from the country has grown by over 25% in the last five years (see Figure 2). At the international level, there is a significant number of outsourcing companies providing their services in various countries. Moreover, in Ukraine, more than 100 highly qualified companies represent the IT development sector (Prasad, 2022).
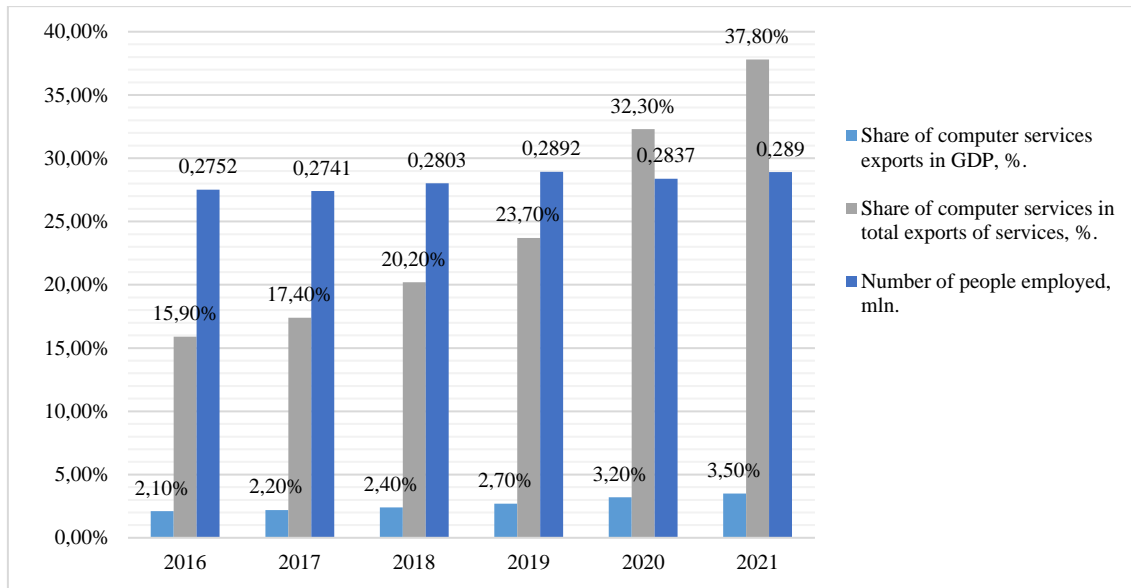
Figure 2. IT in the Ukrainian economy.
Source: (IT Ukraine Association, 2022).

In general, the data in the table indicate a positive trend in the development of IT services in the country and their significant contribution to the economy, exports, and employment. It should be noted that the development of IT is equally vital for the security of management operating systems within the state. It contributes to ensuring the protection of confidential information, minimizing the risks of cyberattacks and data breaches, strengthening control over critical infrastructures, and improving the ability to respond to cyber threats.

A comprehensive analysis of operating systems in Ukraine, including desktop computers, mobile devices, tablets, and game consoles, shows that Windows is the leading operating system. It is favored on 59.8% of the mentioned devices. Windows remains the leader in Ukraine when considering desktop computers separately, as it is used on 83.73% of computers. OS X operating systems are used on 13.1% of devices, while Linux holds a 1.8% share.

In the mobile device segment, preference is given to the Android operating system, which is present on 82.1% of smartphones. The iOS operating system is used on 17.5% of mobile devices. This means that nearly every sixth smartphone operates on this platform. Regarding tablets, the Android operating system also tops the chart and is used on 54.9% of all tablet devices. At the same time, iOS is installed on 44.9% of tablets. It is worth noting the gaming console market, which has gained significant popularity. Today, the Ukrainian market has seen the emergence of PlayStation consoles. They are used on 71.5% of

devices, while Xbox represents 28.42% of all gaming consoles (Yudin, 2020).

With the proliferation of digital technologies, electronic document management, and other information innovations, security has become a top priority in ensuring the stability, efficiency, and resilience of governance within the state. Information technologies serve as a key catalyst for innovative societal and economic development. They unlock new possibilities, such as production flexibility and individualization. However, these advancements bring new challenges, including rapid technological changes and high complexity (Law of Ukraine No. 851-IV, 2003). Ukraine is currently actively integrating into global digitization processes. Yet certain aspects, such as the governmental sector, management, technology accessibility, and the risk associated with investing in the digital sphere, remain less developed in Ukraine (Shlaifer & Todoshchuk, 2022).

Studying the impact of information technologies on the security of management operating systems is a prerequisite for enhancing the effectiveness of state authorities. It ensures resilience against internal and external threats and strengthens societal trust in government institutions (see Table 1). This issue demands in-depth analysis, scientific justification, and the development of specific measures to increase security levels in management operating systems. It also involves the utilization of modern information technologies to improve the quality of public service delivery and achieve strategic goals.

Table 1.

The impact of information technologies on the security and efficiency of management operating systems.

Component	Positive impact	Negative impact
Cyber threats and cyber attacks	- Ensuring better detection and protection against cyber threats - Enhancing monitoring and anomaly detection	- Increase in the number of successful cyberattacks - Threat of data privacy loss
Information confidentiality	- Protection of information confidentiality through encryption and other methods - Ability to restrict access to confidential data	- Risk of confidential information leakage due to security breaches
Information integrity	- Guarantee of data integrity during transmission and storage - Protection against unauthorized data modification	- Threat to data integrity due to malicious attacks
Data access	- Ensuring control over access to critical information - Identification and authentication of users to prevent unauthorized access	- Risk of unauthorized access to confidential data - Possibility of data failure due to loss of identification data
Threat monitoring and detection	- Continuous monitoring of operating systems and detection of potential threats - Responding to anomalies and threats	- Exaggerated alarms and false positives can disrupt monitoring systems
Safety culture	- Increased staff awareness about cyber threats and security measures - Involvement of staff in identifying threats and vulnerabilities	- Ignoring security rules by staff can lead to cyber breaches - Risk of social engineering and phishing

Source: compiled by the authors based on (Kotelevets, 2022).

The impact of information technologies on security in management operating systems is a complex and multifaceted phenomenon. It requires continuous monitoring, analysis, and improvement. The introduction of innovative solutions and the use of information technologies in the field of public administration in Ukraine have yielded certain positive results. Thus, the introduction of information technologies into the sphere of citizen services, document circulation, healthcare, etc. (Kotelevets, 2022) played a crucial role in enhancing the efficiency and security of Ukraine's management operating systems.

According to the findings of Ukrainian researchers, the new model of public service should be based on transparency and active cooperation with the public. Therefore, it is essential to implement information technologies that ensure data accessibility and openness, as well as contribute to improving the quality of public service delivery. Additionally, it is necessary to consider the impact of various information technology innovations as tools for optimization and effective cost savings in the field of management. Innovative methodologies and learning technologies can also play a key role in preparing officials for the challenges associated with decentralization and reforms. They ensure a high level of competence among the staff and prepare them for new tasks in modern management (Vasylieva et al., 2020).

Therefore, the integration of information technologies and innovative learning approaches can become a significant factor in improving the efficiency and security of management operating systems. They can contribute to the successful implementation of decentralization reform in Ukraine. As part of a further study of successful examples of the use of information technology and modeling in management operating systems, it is worth noting that not only the public administration sector but also business representatives have achieved success.

In Ukraine, the information systems implemented in domestic enterprises belong to software products of well-known foreign companies that adhere to the highest global standards. Among these systems are "Oracle Corporation" with its "Oracle Application" system, "SAP AG" with its "SAP R/3" system, "Scala" and "Baan Company" with its "Baan IV" system. These systems are implemented in enterprises of various industries and enable the execution of a standard set of functions represented by a functional module set for effective enterprise management (Svystun, 2021).

In addition to the adoption of foreign solutions, Ukraine has also developed its own ERP system called "IT Enterprise." This system is tailored to the needs of large and medium-sized industrial enterprises. It encompasses a wide range of modules for automating various business

processes, including production management (MRPII, MES, APS), finance, budgeting, controlling, supply chains, quality, maintenance, accounting, tax accounting, personnel management, payroll calculation, OLAP analysis, and other functions that contribute to optimizing enterprise operations.

Such information systems have been applied in various Ukrainian enterprises. Among them are such vital enterprises as "Zorya Gas Turbine Engineering Research and Production Complex" - "Mashproekt," "Nyzhnodniprovskyi Pipe Rolling Plant," "Rosava" (Bila Tserkva), "Azot" (Cherkasy), "Ferrexpo Poltava Mining," "Khimvolokno" (Chernihiv), "Yenakiieve Iron and Steel Works," and many others. The advantages of working with these systems include:

− the availability of qualified team members to implement the system in the regions of Ukraine;
− well-proven business solutions;
− developed methodologies for the successful implementation of complex automation projects at enterprises (Onyshchenko, 2019).

Furthermore, it should be noted that information technologies enable efficient resolution of various tasks. This includes rapid processing of primary documents, automation of calculations, generation of general ledger, balance sheet, and other financial reports. Accounting systems represent comprehensive software solutions designed to automate both individual accounting tasks and complex processes related to planning, monitoring, analysis, management, and decision-making for strategic management. Therefore, the implementation of IT requires systematic monitoring, assessment of their effectiveness, and continuous improvement.

The economic impact of implementing information technologies depends on assessing the cost-effectiveness and productivity of IT utilization. This analysis aspect is based on the correlation between the achieved benefits and the expenses incurred to obtain them. Thus, the main components of the study are the effects arising from information technologies and the costs related to their implementation. It is necessary to consider the complete life cycle of intelligent information technologies to assess their integrated effectiveness fully. Given that most expenses are incurred during the operation phase, it is vital to analyze all stages of the information technology life cycle (Pererva et al., 2021).

In turn, the assessment of the technological effect of implementing information technologies is carried out by comparing labor productivity and production processes when using new software and technical tools with their predecessors. This effect evaluation is based on several criteria, such as technological advancement, innovation, reliability, ease of use, and flexibility. Productivity improvement is considered a key indicator of the technological effect. It is essential to have specialized regulations, methodologies, standards, and norms that help improve information technologies' technical and operational parameters to achieve a positive effect.

In general, the technological effect also has a social impact aimed at improving the working conditions of personnel, enhancing the quality and comfort of life, and promoting the harmonious development of people. Performance indicators determine the suitability of the information system to perform its tasks and the overall optimal level of its functioning. This includes reliability, accuracy, and security, which depend on local indicators (Larchenko, 2020).

Therefore, it should be noted that the successful use of information technologies in the field of management, including public administration and corporate systems, has a significant impact on improving the efficiency and security of operating systems. Innovative solutions and the use of information technologies enable data accessibility and transparency, improve service delivery to citizens, and enhance document management and healthcare management. Besides, they prepare personnel for challenges related to reforms and decentralization.

Discussion

The use of information technologies and modeling in management operating systems has become an essential component in the modern world, where demands for efficiency and safety are constantly growing. In this context, special attention should be paid to the necessity of integrating innovative approaches to training personnel in the field of public administration for the successful implementation of decentralization reforms in Ukraine. Therefore, we agree with the statements of Vasylieva N. V., Vasylieva O. I., Prylipko S. M., Kapitanets S. V., and Fatkhutdinova O. V. (2020) regarding the need for the integration of innovative approaches to personnel training in the field of public administration for the successful implementation

of decentralization reforms in Ukraine. With the help of this new approach to the functioning of the civil service, the quality of services for citizens, document circulation, healthcare, and more has been improved.

We do not fully agree with the statement of Shaposhnykov, K., Kochubei, O., Grygor, O., Vyshnevska, O., Protsenko, N., and Dzyubina, A. (2021) regarding the methodology of iterative software development based on prototyping using elements of the Scrum system as a single and comprehensive solution for the development of Ukrainian information technologies. This is because the choice of software development methodology is a complex task. Also, we cannot assert that the methods of iterative software development based on prototyping using elements of the Scrum system are the only versatile solution for all Ukrainian information technologies.

In addition, we agree with the statement of Kotelevets, D. O. (2022) regarding the current trends in the development of the digital economy in Ukraine and the implementation of modern information and communication technologies in the activities of Ukrainian enterprises. Currently, digital transformation is essential for the competitiveness of enterprises and the creation of conditions for sustainable economic development.

We agree with the conclusion of Vyhaniailo, S. M. (2021) concerning the importance of interconnection between information technologies and business analysis. His research, which included an analysis of the main stages of business analysis and a classification of business analysis software, revealed several key aspects. The prospects for the development of information technologies to improve the efficiency of the business management system demonstrate that this area has great potential to enhance the competitiveness of enterprises and promote their sustainable development.

At the same time, we agree with the statements of Vankovych, L. Ya., Mysiuk, R. V., Dobush, T. I., Bobko, O. V., Konyk, O. V., Shyian, S. M., and Tsvyk, S. R. (2023). Their study identified the points of information technologies' influence on the functioning and development of enterprises in the market. The authors highlighted the role of IT in ensuring the flexibility of enterprises and their ability to respond to changes in the market. In addition, the authors identified the importance of increasing the level of information availability for managers and its impact on the decision-making process in the modern management context.

Conclusions

The use of information technologies and modeling in management operating systems is becoming a key factor in improving efficiency and safety in modern business and other areas of activity. These two aspects interact and influence each other, contributing to higher levels of productivity and reliability in management processes.

The use of information technologies, such as data collection and analysis systems, simplifies the collection and processing of information. This is a key to making informed management decisions. Modeling, in turn, allows analyzing possible scenarios, forecasting results, and determining the best courses of action. Optimization of management operating systems based on the models helps to allocate resources effectively, as well as minimize costs and risks.

The following discussion emphasizes that information technology is becoming the main tool for ensuring security in management operating systems. They help to detect threats, monitor the system's health, and respond to potential risks faster and more efficiently.

In addition, modeling allows for solving complex problems, predicting the consequences of various management decisions, and introducing new approaches to optimizing management systems. This helps to increase overall efficiency and reduce potential risks. Based on this assessment, it can be concluded that the use of information technologies and modeling in management operating systems is an urgent and necessary task for achieving higher efficiency and safety indicators. Such technologies have become a catalyst for the development of modern management. They help companies and organizations achieve their strategic goals in a competitive environment.

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E-democracy in the context of the information society: prospects, challenges and opportunities

Електронна демократія в контексті інформаційного суспільства: перспективи, виклики та можливості

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Abstract

Many factors mark contemporary political processes. The peculiarities of the political system and regime largely determine them. The type of political process, which is characterized by social and political activity of persons and social groups, is democratic. The establishment of such a regime is characterized by gradual steps to introduce democratic principles into the political system, societal institutions, culture, and lifestyle. Such a peaceful transition to a democratic regime can be called democratization. In contemporary public policy, representatives of governing structures seek ways to develop forms of societal participation in decision-making processes. Meanwhile, interested groups, in turn, strive to enhance the quality and legitimacy of the policies enacted. Electronic democracy tools are not a reincarnation of former means of political

Анотація

Сучасні політичні процеси визначаються багатьма факторами. Особливості політичного устрою і режиму значною мірою визначають їх. Типом політичного процесу, який характеризується соціально-політичною активністю осіб і соціальних груп, є демократичний. Встановлення такого режиму характеризується поступовими кроками щодо впровадження демократичних засад у політичну систему, суспільні інститути, культуру та спосіб життя. Такий мирний перехід до демократичного режиму можна назвати демократизацією. У сучасній публічній політиці представники владних структур шукають шляхи розвитку форм участі суспільства в процесах прийняття рішень. Тим часом зацікавлені групи, у свою чергу, прагнуть підвищити якість і легітимність прийнятої політики. Інструменти електронної

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communication. In such cases, it concerns democratization and the neoliberal ideology within civil society. In the virtual environment, electronic participation addresses the issue of societal involvement in political processes and the role of innovations as a whole. Political participation can be seen as a tool for democratization and authoritarian control, including influencing the electorate. The study aims to determine the role of e-democracy in contemporary post-industrial society and the degree of its practical technological implementation. The paper describes the content and role of e-democracy in post-industrial society. The authors analyzed the impact of information and communication technologies on the processes of electronic democratization. It has been shown that an active application of information technologies in everyday social life to form electronic democracy has led to both positive societal trends and negative social consequences.

Keywords: netocracy, e-democracy, e-government, information society, digitalization.

демократії не є реінкарнацією колишніх засобів політичної комунікації. У таких випадках йдеться про демократизацію та неоліберальну ідеологію в громадянському суспільстві. У віртуальному середовищі електронна участь вирішує питання участі суспільства в політичних процесах і ролі інновацій в цілому. Політичну участь можна розглядати як інструмент демократизації та авторитарного контролю, зокрема впливу на електорат. Мета дослідження – визначити роль електронної демократії в сучасному постіндустріальному суспільстві та ступінь її практичної технологічної реалізації. У статті описано зміст і роль електронної демократії в постіндустріальному суспільстві. Автори проаналізували вплив інформаційно-комунікаційних технологій на процеси електронної демократизації. Показано, що активне застосування інформаційних технологій у повсякденному суспільному житті для формування електронної демократії призвело як до позитивних суспільних тенденцій, так і до негативних соціальних наслідків.

Ключові слова: нетократія, електронна демократія, електронний уряд, інформаційне суспільство, цифровізація.

Introduction

In the XXI century, the active utilization of digital technologies has continued across various sectors of the economy. An essential factor for economic growth is the quality of public governance, which has a direct impact on economic development. Government policy must create favorable conditions for economic development by effectively providing public services and protecting citizens and businesses. A more transparent and flexible regulatory system implemented by the government stimulates competition and fosters the development of innovative potential within the country.

The use of digital technologies in public administration has led to the emergence of electronic democracy and e-government. The challenges of the modern era demand solutions to various issues caused by political and social changes, which have posed a crisis for democracy in its classical model. Several theoretical concepts have been formed to overcome this challenge. These concepts formulate the peculiarities of post-industrial society's development based on information and communication technologies. First, these

concepts include the theory of post-industrialism, the idea of "informationalism," and the theory of transitology.

For the first time, Bell (1976) proposed the theory of post-industrial society to understand the essence of the information sphere within a community. It has emerged as the primary factor in transitioning to a new form of democracy. The principles he outlined for the functioning of the information society remain relevant today. Toffler's (1984; 1990) wave theory also emphasized the role of information and communication technologies in transforming modern society's politics, economics, and culture. The concept of "informational capitalism" by Castells (2000) is based on a large amount of empirical material representing the information development of many countries. A broad evidence base allowed the author to formulate a thesis on the emergence of an information-based development mode. This model is closely linked to the spread of global information networks. Castells highlighted the problems of the existing liberal model of democracy. Furthermore, he suggested that the hierarchical system of governance should be

replaced by a decentralized and networked one. According to him, the proposed changes should be implemented by developing local self-government based on building horizontal links between citizens and authorities and intensifying the introduction of e-communications.

Huntington's (1991) theory of democratization waves complement the concept of the "information society." This theory accounts for the main factors such as globalization, informatization, and democratization, as well as their impact on the democracy level.

E-democracy is a phenomenon generated by the rapid development of information and communication technologies. At the same time, it is an advanced system of democratic political decision-making procedures with the broadest possible participation of civil society. It includes opportunities to combine elements of direct and representative democracy flexibly. The latter was not technically possible before.

Literature review

The mid-70s of the XX century marked the digital revolution. At that time, the famous Japanese sociologist Masuda (1980) predicted that the development of information society institutions in the post-industrial era was inevitable. However, initially, it was unknown which social structures would shape the direction of sustainable development.

Not all efforts to create electronic democracy necessarily strengthen liberal democratic politics. They can also be directed toward legitimizing illiberal political practices through electronic democracy. Technologies do not mean value-neutral artifacts. They are rather social practices where values and meaning become central elements (Johnson, 2007). In terms of axiology, contemporary information society is paradoxical. On the one hand, it promotes individualism as a social standard and encourages people to pursue prosperity and selfishness. On the other hand, the government seeks to foster patriotism, compassion, and positive political responsibility in people's political and legal consciousness.

Digital technologies have not led to a greater democratization of life in post-industrial society. The British scholars Moss and Coleman (2014) note that, along with some success stories, e-democracy experiments "have been disappointing, especially when compared to the ambitious rhetoric that surrounded the strategy of using the Internet to support democracy."

The success of e-democracy projects, therefore, is possible only under two conditions: first, by focusing on the protection of human rights, and second, by focusing on sustainable development. Digital technologies of electronic democracy are differently accessible to social groups and classes. The issue of the digital gap concerns more than just the availability of information infrastructure. It also reflects differences in cultural capital between political and social institutions. As a result of digital inequality, many hypotheses and assumptions have been formed around e-democracy. They cannot be verified on a general level and are taken as axioms within social structures with similar cultural capital.

In this context, a study by South Korean scholars on the impact of the Internet on democracy is quite illustrative. It shows that despite the global network's diversity, newspaper readers use online resources, preferring to read them "offline" (Hong & Kim, 2018). American society has a slightly different habit of believing in the "basic human freedoms" that U.S. President Franklin Delano Roosevelt hoped to instill worldwide. However, for Americans, these values were closely linked to the abstract concept of "technological progress" (Lieberman, 2015). Lindner and Aichholzer (2020) analyzed the extent to which Web 2.0 and social media can support the basic democratic functions of public communication, namely public critique, legitimation, and integration, examining the impact of social media use on the quality of discussion, political activism, and political behaviour.

Currently, scientific studies into the categories of the "information society," "electronic democracy," and "e-government" are ongoing. In particular, this means building a digital state and, accordingly, a digital democracy. For example, if a state becomes transparent to society (e-government), it creates opportunities for more involvement of the latter in the political process. This, with a high level of civil society activity, will lead to greater democratization and the emergence of new forms of political participation of citizens (e-democracy).

Aims

The risks of e-democracy and its development opportunities require further study and analysis, even though many studies define this concept. As

of today, there are only a few such studies since most of its authors consider only general aspects of e-democracy. They analyze the content of the "digital democracy" concept in light of modern society's digitalization.

This study aims to determine the role of e-democracy in the modern post-industrial society and the extent of its practical technological implementation.

Achieving this aim is only possible after solving the following tasks:

- to study the content of the "e-democracy" theoretical concept;
- to learn the difference between e-democracy and e-government and to describe the latter;
- to forecast the prospects of e-democracy in the context of a controversial society's development.

Methods

Such general scientific approaches as comparative analysis, system analysis, and dialectical method form the methodological and theoretical basis of this study. When analyzing the phenomenon of e-democracy, the authors relied on the theories of democracy, information society, and communication theory.

The dialectical method was used as the basis for considering the theoretical foundations that reflect the formation of a post-industrial society. The comparative analysis was used to consider approaches for classifying models of e-government development. The system analysis method was used to interpret the risks of e-democracy.

Figure 1 presents the research plan in a generalized form. Given that e-democracy is global, 181 countries in North America, Europe, Africa, South America and Asia were chosen as the object of the study. This approach will make it possible to comprehensively study the outlined issues, in particular, to assess the readiness of governments to implement artificial intelligence in the provision of public services. The main indicators for analysis are 39 indicators in 10 dimensions, which make up 3 pillars: government, technology sector, data and infrastructure.
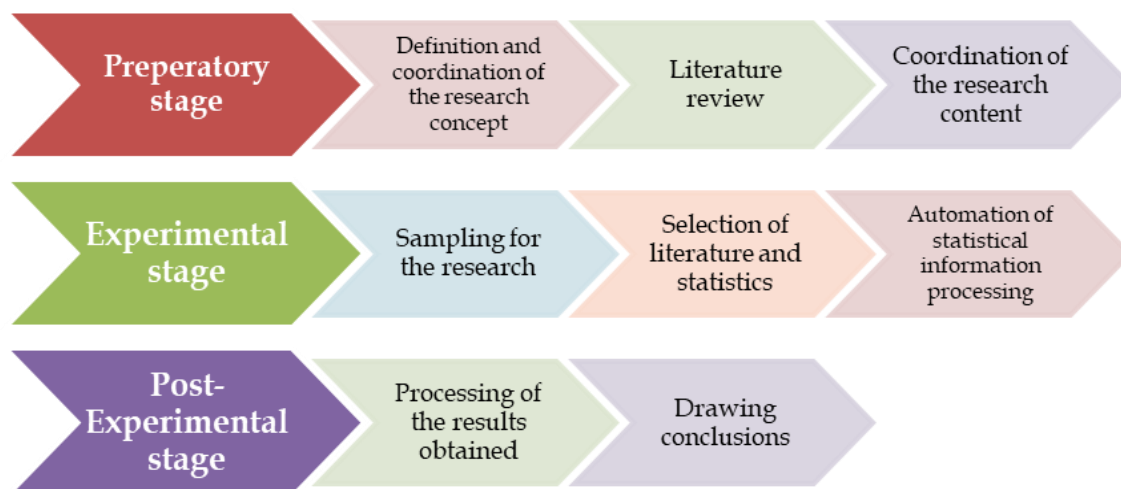
Figure 1. Design of the research abstract.
Source: calculated and built by the authors.

Results

The definition of "electronic democracy" ("e-democracy," "virtual democracy") can be seen as a form of social relations. Within these relations, citizens and organizations are involved in state-building and public administration processes. They are also involved in local self-government through the widespread use of information and communication technologies. This concept is defined alongside the following ones: e-economy, e-commerce, e-services, e-culture, e-education, and e-medicine.

In fact, the content of the term "e-democracy" includes:

- Electronic form of receiving state and municipal services.
- Interagency electronic interaction of public authorities using information technologies.
- Providing citizens with additional opportunities for participation and rule-

making activities using information technologies (public discussion of draft laws and bylaws).

– Participation in the development of solutions and informing the authorities about the problems and shortcomings of governance at all levels of state power (including "e-government").

Mistrust can be overcome by empowering each citizen in the socio-political sphere by using information technologies. Currently, there is widespread "participatory democracy," where public authorities use the virtual space to adhere to principles of openness, transparency, and accountability. They also use this space to enhance the efficiency of their work and for open communication with the public in general, as well as with each citizen individually.

An essential milestone within the political framework of electronic democracy is the Recommendations of the Council of Europe's Committee of Ministers to member states on electronic democracy (e-democracy). These Recommendations consist of 12 guidelines on electronic democracy issues, establishing its fundamental principles, as well as directions and standards for its development (in the Annex). Electronic democracy aims to support democratic institutions and processes of democratization in society. Its role also lies in complementing traditional processes and interactions to preserve democratic, human, and cultural values in society.

While implementing fundamental freedoms, the concept of participatory democracy places high demands on the authorities and voters. They are obliged to discuss issues and come to a consensus with their opponents. Electronic democracy is divided into sectors: e-parliament, e-legislation, e-voting, e-justice, e-mediation, e-ecology, e-elections, e-referendum, e-consultations, e-petitions, e-political campaigns, and e-surveys.

Therefore, electronic democracy involves the participation of citizens at all levels of public governance (from state authorities and local self-government to grassroots self-organization) through information and communication means and technologies. At the same time, e-democracy cannot be seen as a separate policy outside the policy of democratization as such. In other words, the existence of electronic democracy is only possible in the presence of democracy.

E-democracy is based on the following components:

– active presentation of comprehensive, balanced, unbiased information to outline the range and content of social problems, alternatives, opportunities, and decisions in public policy;
– understanding of citizenship, which clearly defines the signs of its establishment;
– participation of citizens and involvement of persons and stakeholder groups (including the business community) in solving social problems;
– empowerment – providing citizens with the necessary resources and powers to participate in public policy;
– discussions.

Informatization and digitization play a significant role in ensuring democracy where it exists and creating conditions for a digital dictatorship when access restrictions are applied and digital control tools are established without the goals of democratic transformation. Therefore, electronic democracy is an integral part of the information society, and we understand it as the practice of democracy supported by digital media in political communication and participation. Electronic participation encompasses all forms of political engagement using digital media, including official institutional mechanisms and informal public participation. Advocates of participatory democracy emphasize the intrinsic value of political involvement and its significant role in the social integration of liberal societies.

The sphere of electronic democracy is quite broad, ranging from more passive forms of engagement (social media or online monitoring for information on societal events, ensuring accessibility and transparency of decision-making processes and essential documents) to more active and cooperative modes (engaging citizens in decision-making through online voting procedures, as well as online spaces for public consultations, debates on critical political issues, and collaborative drafting of political documents).

Many researchers point out that electronic democracy is more advanced than its classical form. In the context of electronic democracy, citizens establish forms of self-control and interaction that become more significant than citizenship in territorially delimited states. The internet and associated information and communication technologies (ICTs) provide an unlimited, time- and territory-neutral platform where anyone can express their democratic views.

The following factors limit the conditions for the effectiveness of electronic democracy:

1. The level of trust citizens have in the state. Mechanisms of electronic democracy require the highest level of trust in the owners of electronic algorithms. Any doubts about the honesty and functionality of these algorithms will lead to a reluctance to participate in the processes and, consequently, to further manipulation and falsifications.
2. A high level of transparency in democratic procedures and the activities of political leaders is required. The state should have a special information policy based on the principles of openness and accessibility, providing citizens with information about the activities of public authorities and the people who represent them.
3. The highest level of motivation of the political class to consider and support this form of decision-making.
4. Peaceful times, as war conditions significantly limit democracy, including electronic ones.

The development of digital technologies brings openness and freedom. However, it gradually becomes a fertile ground for authoritarian regimes. The phenomenon of digital authoritarianism emerges, not so much based on mass violence but on manipulating information with the use of artificial intelligence elements. Therefore, institutions such as a responsible government, parliament, elected president, and an independent judiciary are essential. Only under such conditions can the Internet and other information tools/technologies play a significant role in shaping the democratization of political participation.

Democratic models should be characterized not by the direction of political communication (top-down or bottom-up democracy), cyber-optimism, or cyber-pessimism. Instead, they should focus on citizens rather than institutions that digitally instrumentalize their processes to legitimize their procedures. The key element of e-democracy is e-government, which is being formed evolutionarily through the transformation of the functions of providing administrative services to the population. The legitimacy of e-government is ensured by an actual increase in the effectiveness of public administration, the improvement in the quality of services provided by the state, and the implementation of solid social policies. Electronic democracy differs from e-government since it is broader than the digital administration of public services.

The practical application of digital technologies for providing government services in different countries worldwide has led to the formation of various e-government models, each with its own distinctions. Factors influencing the formation of these models include:

– differences in goals;
– the specificity of traditional public administration, cultural, socio-economic, and political specifics of countries,
– the level of dissemination and use of information and communication technologies in the country,
– financial capabilities, etc.

Based on these features, Anglo-American, European, and Asian models can be distinguished.

The ratings of the United Nations (UN), the International Telecommunication Union (ITU), the World Economic Forum (WEF), and the World Bank (WB) are used to determine the level of information and communication technologies development and maturity of e-government tools in different world countries. Let us consider the United Nations' E-Government Development Index (EGDI). It is compiled once every two years, assessing the level of e-government development in 193 UN member countries. This rating comprises assessments of three aspects, namely:

– electronic services and services provided by public authorities;
– information and communication infrastructure;
– the development of human potential.

The COVID-19 pandemic has served as a kind of litmus test for governments worldwide. It has compelled governments to reevaluate the state's role and has forced them to develop digital solutions to ensure the continuity of public service delivery and societal stability. The pandemic often pushed them beyond existing policies and regulations. This extraordinary event has tested governments for their agility, flexibility, and digital resilience. It helped to open up new opportunities to strengthen multi-level governance in regional and local jurisdictions, as well as expand communicative relationships for all segments of society, ensuring that no one is left behind in the hybrid digital society.

According to the United Nations (2022) data, the global average EGDI has slightly increased from 0.5988 in 2020 to 0.6102 in 2022, mainly due to progress in strengthening telecommunications infrastructure. Europe remains the leader in e-government development (EGDI 0.8305), followed by Asia (0.6493), America (0.6438), Oceania (0.5081), and Africa (0.4054). A comprehensive digital transformation in the public sector has yet to occur. Besides, in most countries, health, education, and social protection remain the top priorities for e-government in online services. The most significant increase was in the number of countries that offer services for users to apply for social protection programs and benefits. These programs include maternity benefits, child benefits, pensions, and housing and food allowances.

Furthermore, the United Nations reports that an increasing number of countries are strengthening their institutional and legal frameworks for e-government development (national e-government or digital government strategy, cybersecurity legislation, personal data protection, national data policy, open government data, and e-participation, as well as online platforms). However, the pandemic has exacerbated the digital gap. Currently, over 3 billion people live in countries with EGDI values below the global average. Most of these countries are concentrated in Africa, Asia, and Oceania. Only 4 out of 54 African countries have EGDI values above the world average (0.6102). Meanwhile, other countries have EGDI values that are sometimes significantly lower.

At the same time, it should be noted that the 15 countries with the highest (VH) rating class in the group with very high EGDI are the leading countries in the 2022 survey. Their values range from 0.8943 to 0.9717 (Denmark, Finland, Republic of Korea, New Zealand, Sweden, Iceland, Australia, Estonia, the Netherlands, the United States, the United Kingdom, Singapore, the United Arab Emirates, Japan, and Malta). These countries share their experiences about the following aspects:

– Inclusion of citizens' voices in policy-making, with specific e-participation measures for vulnerable groups.
– Empowerment of their citizens through investments in digital literacy and competencies.
– How the promotion of inclusive practices by setting standards for how government and public, private, and voluntary sector partners

should maximize the accessibility of digital services.

Despite significant advances in e-government over the past two decades, inclusive design has generally yet to be given sufficient attention. Those groups that have been the easiest to reach have generally benefited the most from the marked progress in e-government. At the same time, many of the poorest and most vulnerable groups have been left behind.

The signing of the "Charter of the Global Information Society" in Okinawa on July 22, 2000, by leaders of the "Group of Eight" (G8) countries played an important role in disseminating the ideas and concepts of e-government on an international scale. This document recognized the state's leading role in developing and implementing information and communication technologies in the political sphere. Therefore, the national governments of the signatory states have committed themselves to making efforts toward creating an information-driven society in their country. Moreover, e-government is a key telecommunications structure of the information society.

There are several approaches to classifying models of e-government development. The first approach, the evolutionary one, is based on the assumption of gradual e-government development. The most popular evolutionary model is the classification proposed by the United Nations, which includes the following stages. Other versions of evolutionary e-government models are generally similar in criteria and development steps. Despite its popularity, the drawbacks of this approach include linearity of development and the universalization of the concept.

The second approach, the geographical one, is based on the assumption that "e-government" develops under specific historical, cultural, and socio-political conditions. For example, there are two main models, namely:

– Western (USA, Canada), which places great emphasis on the development of mechanisms for democratic citizen participation.
– Eastern (Singapore), where the focus is on the development of intra-agency interactions and the provision of services to businesses and the population.

Continental European, Anglo-American, Asian, and other models are also distinguished.

The Government AI Readiness Index is used to define the readiness of governments for artificial intelligence globally. Over 180 countries were analyzed based on 39 indicators. Table 1 shows that according to the Government's AI Readiness Index, the United States has the highest rating as of 2022.

The development of "e-government" is influenced by specific factors of the regional environment.

The third approach, a combined one, involves the following three models:

1) The model of public demand (initiative comes from "bottom-up," a marketing approach to service delivery, e.g., the USA).
2) The model of administrative demand (initiative comes "top-down," with a primary focus on internal bureaucratic processes and combating corruption, strengthening "feedback," e.g., China).
3) The "chasing the leader" model (the lack of public and internal demand, inconsistency in innovation implementation, its symbolic nature).

Table 1.
The Government AI Readiness Index

Country	Global Position	Total Score	Government Pillar	Technology Sector Pillar	Data and Infrastructure Pillar
United States of America	1	85.72	86.21	81.67	89.28
Singapore	2	84.12	89.68	68.50	94.17
United Kingdom	3	78.54	81.81	65.57	88.24
Finland	4	77.59	87.80	58.71	86.27
Canada	5	77.39	84.11	64.41	83.65

Source: (Government AI Readiness Index, 2022).

At the same time, it is worth noting that these variants contain a generalized classification based on the source and nature of the request to implement e-government, but there is no block related to e-citizenship. Not only is there an untapped potential for more online activity when it comes to elections (among EU member states, online voting is only possible in Estonia), but also for public administration services (Grazian & Nahr, 2020).

This gap is partially addressed by the classification proposed by Chadwick & May (2003). This classification is based on the interactions between the state and society. The authors identify three types of e-government development:

1) Managerial, in which the citizen is a client of the "service state," with a primary focus on providing government services.
2) Consultative, where the state interacts with citizens through "feedback mechanisms."
3) Participatory, where e-government is an expression of deliberative democracy and networked governance.

In an attempt to integrate these approaches, researchers assume that the criteria for modeling e-government should directly reflect its structure. In other words, there are internal (e-administration) and external (e-service, e-participation) components. In the first case, it involves the level of penetration of information and communication technologies into the system of public administration. Meanwhile, the second case concerns the status of citizen participation in the functioning of "e-government."

From this perspective, the following classification of models of interactive communication between government authorities and citizens emerges:

1) Administrative-Managerial. Here, more attention is paid to internal informatization. With a relatively high level of participation, the provision of government services through information and communication technologies is possible. A managerial-"service" model is a borderline between administrative and consultative.
2) Consultative-Participatory. It is marked by a high level of ICT channel development for interacting with citizens in decision-making.

3) Limited Participation. In this model, opportunities for citizen participation exist, but due to a low level of e-administration, its potential is limited, and administrative delays and barriers persist.

4) Limited and Imitative. According to the UN, such models can include the initial and extended stages of presence, the "chasing the leader" model.

In this case, e-government is limited either by a low degree of informatization or by the "pretended" nature of the innovation. The most significant issues that hinder the achievement of the highest possible results of e-government and the provision of public services to the population via electronic means include:

- the issue of popularizing the use of services for the provision of state and municipal services digitally;
- the lack of funding for the implementation of the state policy on the provision of public e-services;
- the challenge of "digital inequality" as a barrier to achieving effective and prompt provision of digital services to the public;
- a rather complicated mechanism for the provision of electronic services in terms of legal and regulatory framework and administrative regulations.

Instead, new issues which threaten the existence of e-democracy in the future have emerged.

In today's society, any citizen should be able to implement basic skills in the use of information and communication technologies. While fewer obstacles exist for the younger generation, people of retirement age may face serious difficulties. For example, many older people need help to acquire the skills to work on the Internet or simply with a computer.

Every citizen should have access to information and communication technologies that enable electronic democracy. This access can include personal computers, public access terminals, or something else.

Let us focus on the issues of citizens' equality in this area, primarily the issues of access to the Internet. The constitutional principle of citizens' equality and the duty of public authorities to provide access to legal information to all citizens of the country in the mechanisms of its implementation have a specific set of goal-oriented norms.

Ensuring equal opportunities for using the information and telecommunication network, the Internet, to access open information involves not only the material availability and free access to it but also the ability to use a computer, software, and possession of specific knowledge in this field. Undoubtedly, the presence of these factors in all country residents is a program for the future. However, its implementation is being actualized in connection with the creation of forms of citizens' participation in solving topical issues of state and public life based on the information and telecommunications system of the Internet.

However, it is quite evident that nowadays, the distribution of new technologies' users is uneven. The highest density of such users resides in large cities. Another uneven pattern is in the informatization of local authorities, especially local self-government. Thus, although the forms of public participation in carrying out public administration are enshrined, there are no open mechanisms for their implementation.

The information society has created a new type of social inequality - digital inequality. The concept of the "digital divide" or "digital gap" embodies the limitations in the use of the Internet, television, and mobile communication due to the lack of access to modern means of communication. When it comes to the information world, data should be seen as one of the main resources for balanced human development. Moreover, all people should have access to it. Acquisition of knowledge and information is becoming a value and a new criterion that divides society (as well as societies of different countries) into social groups and classes that are unequal to each other.

Digital inequality manifests itself at different levels of the social hierarchy: between states, between cities and rural settlements, between young and older people, the healthy ones, and persons with specific disabilities. It is caused by generational and age-specific features of socialism in the level of network technologies development ("digital migrants" and "digital natives") (Carr, Hoechsmann & Thésée, 2018).

Other features that cause digital inequality include:

- regional differences in the economy digitalization;
- growth of Internet infrastructure;
- online inclusion of authorities and civil society;

–   the digital culture of citizens;
–   people with disabilities.

In the authors' opinion, the establishment of a single form of exercising a particular type of personal rights limits the exercise of citizens' rights due to the lack of opportunities to use this procedure. It would be advisable to establish additional procedures for sending an expression of will, notification, request, etc. (which contain the necessary data) to the website owners for further data entry into the electronic resource. Alternatively, public authorities should be obliged to organize free access and provide organizational and technical assistance for those wishing to register.

Another issue is related to the unified identification and authentication of citizens, as well as the protection and security of personal data when using information technologies. In this case, it is necessary to create a legislative and regulatory framework aimed directly at solving the problem. Attention should be paid to "electronic attacks" and massive "information dumping" during e-democracy procedures. During the discussion of an important issue, "spam" messages are thrown, and as a result, quarrels occur between participants in discussions and members of online communities. Hence, new technologies offer significant opportunities for manipulating public consciousness, including:

–   digital disinformation, fakes, computerized propaganda;
–   manipulation of preferences using big data and microtargeting;
–   Internet trolling, etc.

Innovations in informatization pose a risk to the state, as they can be used not only for e-democracy but also for anti-state terrorist activities. This circumstance raises doubts about the democratic nature of the emerging information society. In this case, the only way to solve the problem is to involve moderators and controllers who will monitor the atmosphere in this network community and "block" unwanted guests when necessary. Besides, in the context of global informatization, active work should be done to develop preventive measures against external interference.

There is a shortage of specialists in the field of electronic democracy and Internet communications among government officials at both regional and municipal levels. In this case, it is proposed to develop and conduct an examination of specialized educational programs, taking into account national standards and local peculiarities (considering the specifics of each region separately).

It is suggested to enhance the mechanisms of public administration with the active implementation of the electronic democracy system. In this case, it is proposed to create unified tools for public control over the performance of government and municipal officials. It should be based on electronic democracy systems. Such systems should be open resources where citizens can evaluate the performance of specific government officials. In this case, the higher management must respond to the feedback received.

The active introduction of new information technologies into our daily lives can significantly strengthen public control over the government. The state can more easily disseminate information intended for society and manipulate public opinion by using information and communication technologies (for example, through advertising, movies, television shows, computer games, etc.).

At the end of the XX century, a new type of political elite emerged - the information elite or netocracy. This elite controls the sources and channels of information transmission, as well as the technologies for its processing. The power over the rest of the participants in a given society (country, state, or community) is ensured by full access to reliable information and the ability to manipulate it. Such an information and financial oligarchy determines the direction of the prevailing volume of data and financial flows globally.

The concept of netocracy was presented by Bard and Soderqvist (2002) in their book "Netocracy: The New Power Elite and Life After Capitalism." In this book, the authors argued for a forecast of changes in the form of societal governance due to the growing influence of information. The emergence of this concept is symptomatic because the permanent transformation of social relations through the impact of mass media is a global trend of the new century.

The authors use the term "netocracy" to describe a new ruling class that dominates the networked society, replacing the bourgeoisie. Netocrats control access to networks and rely on exclusive use of prestigious networks. In their work, Bard and Soderqvist (2002) use the term "virtual world," but the content is more about the

networked society. The book's authors repeatedly refer readers to online communication experience but do not directly link the concept of "netocracy" to cyberspace specificity.

Netocrats regulate access to more significant networks, leaving the possibility of their exclusive use. It distinguishes netocrats from those who seek profit. By providing access, netocrats invest, and preserving access to exclusive networks guarantees their power.

Finally, information technologies can significantly exacerbate the dangerous gap between the poor and the rich. They transform it into the so-called confrontation between the "information-rich" and the "information-poor."

In this case, it is about the democracy of the global information society. Thus, the potential of information and communication technologies can be used both for the benefit of democracy and against it.

Creating an effective electronic democracy system requires the implementation of appropriate legal norms regulating the use of information and communication technologies while ensuring that all participants in electronic interaction have the relevant rights and responsibilities.

Electronic democracy allows citizens to participate in the work of government institutions. Meanwhile, the latter can respond more quickly and sensitively to the needs of society. This concept includes using an electronic platform for political information in civil society.

One of the legal challenges in using electronic mechanisms in democracy implementation is the insufficiently fixed legal status of the virtual space. There is also a need for more legal regulation of campaigning activities and electronic voting in the election and referendum processes carried out via the Internet.

Today, the problems of material, organizational, technical support, and educational barriers, as well as the issue of psychological preparation of citizens, are relevant for applying electronic mechanisms and achievements of the scientific and technological process in implementing democracy.

There are also risks associated with the implementation of electronic democracy itself, such as:

– Delay in administrative reform.
– Deterioration of the socio-economic situation of the population.
– Lack of political consensus on the priority of electronic democracy.
– Reduced citizen engagement at the national level and limited opportunities for implementing electronic democracy projects.
– Inadequate strategy preparation.
– Disparity in the implementation process of electronic democracy projects at regional and local levels, as well as at the national level.
– Limited budget resources and international aid.

The development of digital technologies brings both openness and freedom but gradually becomes a nurturing environment for authoritarian regimes. The phenomenon of digital authoritarianism is emerging. It is based less on mass violence than on manipulating information by applying elements of artificial intelligence.

From the citizens' perspective, as the main subjects of electronic democracy, there are expectations that ICT (Information and Communication Technologies) can improve democratic processes, particularly citizen participation in shaping public policies. However, there are significant social, economic, and technical barriers to the implementation of electronic democracy, including:

– A lack of information and knowledge about the essence and possibilities of electronic democracy among Internet users.
– Insufficient government utilization of interaction based on social networks, which are currently popular among internet users.
– Limited participation opportunities in electronic democracy for people with inclusive needs and residents with a low level of digital literacy.

In addition, we should not forget about such problems as the danger of manipulating voting data caused by insufficient security and the threat of digital division between those who have information and those who have not. Another issue is the oppression of the principle of electoral democracy and the influence of extremist groups on voters, particularly among young voters. In this way, the formation of e-democracy directly depends on the degree of citizens' participation and their number in the governance process, on their needs, motives,

interests, and the possibility of moving to forms of direct democracy.

A key tool of e-democracy is political crowdsourcing. Crowdsourcing is a term that combines the concepts of "crowd" and "outsourcing." It involves a large group of people coming up with an idea or a solution to a problem. Some companies use this process to rely on the knowledge and opinions of a wide range of Internet users, as well as to create better products and marketing plans or solve other problems. In contrast to outsourcing, which essentially means "hiring," crowdsourcing aims to engage people. Typically, these people are not financially interested in a collaborative and open-ended creative process.

Crowdsourcing projects are developed primarily based on social networks. By their nature, these networks provide quick and widespread participation in any business. However, the main disadvantage of such projects is often their advantage - an unorganized and unprofessional community of people. Yet, this drawback is hardly decisive, as the primary goal of crowdsourcing is to get feedback from as many people as possible, not just from experts. It is worth recognizing that the main success of such projects for the state in identifying public opinion is ensured by the activity and personal interest of the population.

At present, the development of the electronic democracy system is utilizing Web 2.0 technology. It allows users to interact, organize themselves, exchange, and further process information (blogs, social networks, citizen journalism, etc.). The Web 2.0 technology platform is being replaced by a third one, the Web 3.0 (Semantic Web). This platform allows average users to participate in the creation of information content alongside experts and become experts.

In some academic sources, synonyms for electronic democracy also include the following concepts:

– "Network democracy" (broad participation of civil society in the decision-making process via the Internet).
– "Democracy 3.0" (using the Web 3.0 platform).
– "Wiki-democracy" (the principle of citizens working together on decisions, similar to Wikipedia, and general voting on all contentious issues, as in direct democracy).

– The "Liquid democracy" (participants can take part in decision-making).

Blockchain technology continues to be actively researched and applied in e-democracy. One of the promising areas of this technology application is the development of transparent e-voting and decision-making systems on its basis. Blockchain is considered to be a pivotal technology in the development of the Estonian e-state due to its undeniable advantages and potential. From a technical perspective, blockchain technology improves the efficiency, security, and transparency of data transmission.

Data transparency aims to ensure equality of public access to information while ensuring clarity, consistency, and reliability of the data provided. In the context of democratic countries, transparency and accountability often take precedence over data protection. However, prioritizing privacy while ensuring transparency requires sophisticated security protocols. Therefore, it complicates the working process.

Discussion

Citizens' access to information through the use of ICT and their ability to analyze it and make decisions is a process of shaping democratic public opinion. It creates virtual communities that can overcome the hierarchy of real power. In Ukrainian studies, scholars focus on information and communication technologies and study their impact on the process of e-democracy.

There are other views on the formation of e-democracy. For instance, some foreign experts believe that e-democracy technologies are basically unviable because they are based on the ideology of technological determinism. Other scientists focus their attention on the extraordinary capabilities of information technologies. These capabilities make it possible to target the user's personality, allowing for highly fine-tuned public opinion processing.

In disputes, the supporters of different opinions do not consider the fact that ICT is basically an "ambiguous technology" that can both help solve many of the problems existing in society and create new ones." In other words, when discussing the impact of ICT on electronic democratization, it is necessary to consider that the active integration of information technologies into everyday social life carries positive societal trends and negative social consequences.

The spread of new information technologies and their incorporation into public life create technological prerequisites for the development of civil society by ensuring the realization of citizens' rights and duties through free and prompt access to informational resources to advance electronic democracy.

The arguments in favor of electronic democracy are quite evident. However, upon closer examination, they do not withstand criticism. The hypothesis that the Internet can automatically ensure the democratization of authoritarian regimes has not been confirmed (Thornton, 2001). German researchers Keohane & Nye (1998) have confirmed that "authoritarian states face great difficulties in attempting to control their citizens' access to the global network." Nevertheless, an authoritarian country like China effectively circumvents democratization by using administrative and technical means through the application of the Internet (Chase & Mulvenon, 2002).

Furthermore, the assertion regarding reducing the role of socio-political organizations in civil society is also unsubstantiated. On the contrary, in democratic countries, there is a well-developed network of civil society intermediaries (including political parties, civil organizations, media outlets, and other civil society structures) that are interested in increasing their influence. They actively use the Internet during elections, political communication, and in their daily activities.

We agree with the opinion of Davis (1999), who noted that "traditional stakeholder groups will remain major players in political life during the Internet era." The importance of political intermediaries will remain the same in the face of a tremendous increase in the amount of political information. They will become authoritative experts whose opinions are respected by the public (Davis, 1999).

The same is confirmed by the German political scientist Jarren. He emphasizes that communities formed on a virtual basis cannot be a solid basis for social interaction. People perceive information and its analysis differently and depend heavily on the social context. Thus, the process of receiving information is both individual and social. People want to form a community and seek mutual understanding during political communication.

For this reason, they have to limit their aspirations for individualization, including self-

organization. Therefore, the state has to shape the socialization of its citizens. According to Jarren & Donges (2006), Internet communications can support effective interaction in real organizations. However, transitioning from a virtual community to a real one is tricky.

Therefore, online communities are not enough to create communicative democracies.

From institutionalism's perspective, the very idea of creating "e-democracy" as a form of direct democracy based on new information technologies has been criticized quite reasonably. In particular, the American professor Sclove (1995) noted that since all technologies are social structures like social institutions, it is advisable to consider their impact on the democratic form of the political system. Local communities hosting discussions on socially essential issues become the basis of democracy. In fact, the active political role of the vast majority of citizens defines participation in democracy. However, the political activity of citizens is currently declining.

1) Thus, the concepts of "e-democracy" contain significant contradictions and are subject to justified criticism. E-democracy has a great potential for development in democratic countries, but it also carries certain risks for states. For this reason, the concept of "e-government" dominates, and it is currently the basis for reforms in the field of public administration based on electronic communications.

Conclusions

The implementation of information and communication technologies in the public sector occurs in various directions. It appears both within public authorities and in the sphere of interaction among public policy actors. It is expedient to distinguish three directions: e-government, e-services, and e-participation. From the perspective of electronic democracy, establishing e-government is paramount. It provides public access to state-critical information, thereby contributing to government transparency and creating a system of public oversight over its activities via the Internet.

However, there are several practical challenges and discrepancies between the theoretical model and actual political practice. In this way, we can identify the following risks related to the practical implementation of e-democracy principles:

1) Information technologies disrupt established mechanisms of societal relations, which may lead to increased tension and chaos in the political system.

2) New technologies provide extensive opportunities for the dissemination of various forms of destructive and extremist information, as well as manipulation of public opinion.

3) The presence of information inequality can exclude a significant portion of the population from the process of making political decisions.

4) The development of information technologies can transform real political participation into a virtual simulation, reducing society's influence on government.

5) The issue of protecting information from unauthorized access remains unresolved, which is crucial for developing electronic democracy. Reliable data protection is a mandatory requirement for the functioning of government structures.

Therefore, regardless of the level of technological development, the democratic potential of electronic technologies depends on the presence of the political will to implement it.

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Psychological consequences of warfare for combatants: ways of social reintegration and support in Ukraine

Consecuencias psicológicas de la guerra para los combatientes: vías de reintegración social y apoyo en Ucrania

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
Abstract

The aim of the article is to analyse the main ways of social reintegration and support for military personnel in Ukraine through the prism of analysing the main psychological effects on the combatants' mental health. The realisation of this goal involves the use of general scientific methods of analysis and synthesis, content analysis of scientific literature. The results show that the participation of servicemen in war can lead to serious psychological stress, communication, emotional, information stress. Post-traumatic stress disorder is one of the most common mental disorders among war veterans and includes various symptoms that can negatively affect physical and mental health, including repeated flashes of traumatic memories, sense of mirroring, agitation, and avoidance of certain social situations. The

Resumen

El objetivo del artículo es analizar las principales vías de reintegración social y apoyo al personal militar en Ucrania a través del prisma del análisis de los principales efectos psicológicos en la salud mental de los combatientes. La realización de este objetivo implica el uso métodos científicos generales de análisis y síntesis, análisis de contenido de la literatura científica. Los resultados muestran que la participación de militares en la guerra puede provocar estrés psicológico grave, estrés comunicativo, emocional, informativo. El trastorno de estrés postraumático es uno de los trastornos mentales más comunes entre los veteranos de guerra e incluye diversos síntomas que pueden afectar negativamente a la salud física y mental, como recuerdos traumáticos repetidos, sensación de reflejo, agitación y evitación de determinadas situaciones sociales. Para superar los

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following methods are important to overcome the psychological effects of war: cognitive behavioural therapy, support from family and friends, effective communication, regular physical activity, and a balanced diet. It is also important to integrate servicemen and women into society by providing appropriate conditions for retraining, labour guarantees, state support, preferential conditions for admission and training, scholarships, additional educational services in the public space, etc. The conclusions note that it is important to provide legal support and services in the healthcare sector.

Keywords: military personnel, psychological support, society, reintegration, psychological trauma.

efectos psicológicos de guerra son importantes los siguientes métodos: terapia cognitivo-conductual, apoyo de familiares y amigos, comunicación eficaz, actividad física regular y dieta equilibrada. También es importante integrar a militares en la sociedad ofreciéndoles condiciones adecuadas de reciclaje, garantías laborales, apoyo estatal, condiciones preferentes de admisión y formación, becas, servicios educativos adicionales en el espacio público, etc. Las conclusiones señalan que es importante proporcionar apoyo jurídico y servicios en el sector sanitario.

Palabras clave: personal militar, apoyo psicológico, sociedad, reintegración, trauma psicológico.

Introduction

Research problem

Currently, contemporary psychological assistance is characterized by the provision of support to individuals or groups with the aim of restoring their desired psychological well-being, enhancing mental processes, improving behavior and communication, and engaging them in group activities. However, the challenges associated with the psychological rehabilitation and social reintegration of servicemen involved in combat operations, particularly within the complex framework of the ongoing Russian-Ukrainian hybrid war, remain inadequately explored. Brief descriptions of the context of the Russian-Ukrainian hybrid war elucidate the unique challenges faced in this specific scenario. Ukrainian experiences underscore the need for comprehensive research to address both the theoretical and practical aspects of establishing such a field of activity in Ukraine. Furthermore, the development and implementation of a new, adapted system necessitate further exploration and inquiry.

Research focus

This issue is particularly relevant when considering the main psychological consequences of warfare for combatants. Today, as Ukrainian official data show, they face many different problems that often need to be solved without the help of the state or other institutions. Accordingly, the relevance of this study is determined by several important aspects. In particular, the theoretical substantiation of psychological consequences and the development of effective methods of support and reintegration are extremely important tasks for

modern society. At the same time, combatants returning to civilian life may face various psychological and social difficulties, such as post-traumatic stress disorder, depression, loss of social positioning, etc. The study may reveal ways to improve their psychological well-being and reintegration into society. Nevertheless, it should be noted that the results of the study can serve as a basis for the development of programs and policies aimed at improving the psychological well-being of combatants and their social reintegration.

Accordingly, the purpose of this study is to analyze in detail the main ways of social reintegration and support for military personnel in Ukraine through the prism of analyzing the main psychological consequences on the mental health of combatants. The field of research questions includes:

1. Analysis of modern literature on the research problem.
2. Characterization of the main psychological consequences of military operations for combatants.
3. Description of the areas, opportunities, and challenges of social reintegration and support for military personnel.

Theoretical Framework or Literature Review

The persistent hybrid warfare in Ukraine has exacerbated the psychological adversities confronted by combatants, manifesting in escalated levels of violence and destruction. Consequently, heightened stress and trauma have become prevalent among these individuals. Empirical investigations indicate an augmented

susceptibility to specific psychological disorders, notably chronic post-traumatic stress disorder (PTSD), among combatants involved in the Ukrainian hybrid war. Notably, Hrynzovskyi et al., (2022) discerned a diagnosis rate of approximately 20% for chronic PTSD among former ATO participants and those presently engaged in the Joint Forces Operation in Ukraine.

The contemporary scholarly discourse underscores the salience of examining the nexus between warfare and mental and physical health, given the ongoing hybrid war in Ukraine. Scholarly inquiries have systematically delved into the intricacies of the psychological challenges confronting combatants, elucidating various methods for their social reintegration and support (Bowd & Özerdem, 2013; Duel et al., 2019). Current research in this domain elucidates the heightened vulnerability of combat veterans to an array of psychological issues, encompassing post-traumatic stress disorder (PTSD), depression, anxiety, and other mental health complications (Kryvolapchuk & Protsyk, 2020; Kisil et al., 2021).

Given this forecast, there is an urgent need to strengthen rehabilitation efforts by involving scientists, methodologists, medical professionals, social workers, experts from government agencies, and civil-military cooperation (CIMIC) specialists. According to the results of contemporary researchers Shynkarova, (2022) and Malachynska et al., (2022), this joint approach is aimed at responding promptly to combatants' requests for the organization and implementation of comprehensive rehabilitation measures that extend support to the families and loved ones of servicemen and women. The study by Stadnik et al., (2023) identifies the main conditions and features of the formation of the psychological well-being of cadets and Ukrainian youth under martial law. At the same time, Skrypkin (2020) analyzes the internal aspects of the requirements for the reintegration of Ukrainian combatants into civilian life based on research conducted between 2015 and 2019. The focus of this research was on the desire to be understood rather than judged, the desire for social recognition and acceptance, and the impact of high social status (Skrypkin, 2020). In addition, modern research describes the problems that affect the realities of military personnel's civilian life and determine their increased vulnerability to negative social influences (Subedi, 2018). According to Skrypkin (2020) and Andrew Castro & Dursun (2019), social and professional

adaptation can be difficult due to psychological and physical limitations, as well as social stigma. Some problems of adaptation of military personnel to previously familiar everyday life are described in Sayers (2011).

According to the concept of Tymochko (2022), government agencies develop and implement various support programs for combatants in Ukraine. The study by Fossey et al., (2019) characterizes various programs and activities that affect the social support of military personnel. These programs include psychological assistance, vocational training, and other types of support. Also, the peculiarities of cultural influence on the support of mental health of military personnel are described in Truusa & Andrew Castro (2019). The peculiarities of the reintegration of military doctors are analyzed in the analytical article by Stanton et al., (2016). At the same time, the experience of psychological and physical support for military widows is described in detail by Shynkarova (2022).

Subsequent research endeavors may concentrate on the systematic evaluation of the efficacy of support programs tailored for combatants in Ukraine. Such investigations could discern the effectiveness of these programs by gauging their influence on the mental well-being of combatants, their capacity to assimilate into civilian life, and their satisfaction levels with the provided support. Despite extant research shedding light on select dimensions of military reintegration, it is imperative to comprehensively appraise the efficacy and applicability of these programs for implementation. Consequently, the dynamic nature of the (global) Russian-Ukrainian war necessitates ongoing contemplation to address the evolving challenges associated with this issue.

Methodology

General background

The study of the psychological consequences of military operations for combatants through the prism of analyzing the main ways of social reintegration and support in Ukraine was carried out using a theoretical approach based on the analysis of literature and articles from available databases.

Materials and methods

The research methodology utilized in this investigation employs a systematic content analysis of contemporary scientific literature.

The process involves a meticulous examination of scientific articles and other scholarly sources sourced from reputable databases, including Scopus, PubMed, Web of Science, and Google Scholar. The selection of these databases aligns with the intention of ensuring a comprehensive review of the available literature.

The search strategy was methodically crafted around key terms pertinent to the study's focus, namely "social reintegration," "military personnel," "Ukraine," "psychological assistance," and "combatants." This strategic approach aimed to generate a robust dataset for analysis. The search on Google Scholar, based on the specified keywords, yielded a substantial total of 700 results.

To refine the dataset and ensure a more focused analysis, a judicious selection process was employed. Specifically, more than 30 papers, deemed most relevant and valuable to the study objectives, were carefully chosen from the initial pool. The emphasis during this selection process leaned towards empirical studies, contributing to a more nuanced understanding of the psychological implications of military operations.

Consequently, the content analysis procedures involved scrutinizing and synthesizing the information extracted from the selected empirical articles. This methodological approach not only enhanced precision in capturing pertinent insights but also facilitated the derivation of a foundational understanding of the psychological ramifications associated with military operations. The systematic content analysis, grounded in the examination of empirical studies from reputable databases, strengthens the reliability and validity of the research findings.

Results and Discussion

Psychological Challenges of War: Disorders and Ways of Resistance

According to a study conducted by the International Organization for Migration, more than 15 million Ukrainians have reported a deterioration in their mental well-being since the start of the full-scale invasion, and almost one in four Ukrainians (23%) are in need of psychological and psychosocial assistance (Kelly, 2022). Data from the World Health Organization suggests that approximately 22% of people living in conflict-affected regions will experience some type of mental disorder within a decade (Kelly, 2022). These disorders can range

from mild conditions such as depression and anxiety to more serious mental illness. However, it has been found that military personnel who have taken part in combat are most likely to suffer from psychological problems.

Participation in combat operations exposes individuals to a myriad of stressors and challenges that can significantly contribute to the development of psychological disorders. Several factors play a crucial role in influencing the mental health of individuals engaged in combat, including, for example, exposure to life-threatening situations, witnessing violence, and experiencing personal harm or loss can lead to the development of psychological disorders. Traumatic events, such as combat-related incidents, can have a profound impact on mental well-being. The continuous exposure to high-stress environments and prolonged periods of uncertainty can contribute to the development of disorders like post-traumatic stress disorder (PTSD). The unpredictable nature of combat situations can heighten anxiety and erode psychological resilience. Also, the experience of losing comrades or witnessing casualties can evoke intense grief and sorrow. Coping with loss, especially in the context of combat, may lead to complicated grief reactions and contribute to the onset of psychological disorders. Participation in combat operations became a main cause of social isolation. Separation from family and friends, coupled with the unique demands of military life, can result in social isolation. Lack of emotional support and a sense of detachment may exacerbate feelings of loneliness and contribute to the development of mental health issues.

Servicemen and women who participate in combat operations are partly characterized by certain traits that manifest themselves in certain mental states, behaviors, and processes. First of all, it can be a tendency to bad mood, irritability, tension, apathy, signs of depression, anxiety, phobias, guilt, aggressiveness, anger, resentment, etc. In addition, there may be a fixation on losses, problems with falling asleep, nightmares, tremors, and an inability to relieve tension (Yatsenko, 2022). All of this leads to a feeling of severe fatigue and lack of energy, memory loss, difficulties with concentration, addiction to memories of the war, various symptoms of post-traumatic stress disorder, social and psychological maladjustment, and limited communication.

Psychological science generally distinguishes between physiological and psychological stress. At the same time, psychological stress includes

communication, emotional, and information stress. Physiological stress is a stress response that occurs in response to stressful external factors, usually of a non-psychological nature. Psychological stress is defined as a certain reaction to the peculiarities of interaction between an individual and the world around him or her, based on cognitive processes, expression of thoughts, and evaluation situations. In this context, there remains a unifying criterion that allows generalizing a wide range of external influences directed at a person in terms of their psychological essence for a particular individual (Haas et al., 2005). Thus, a causal factor is identified that influences the further development of behavioral and somatovegetative reactions that can affect the formation of a certain psychological state (see Figure 1).
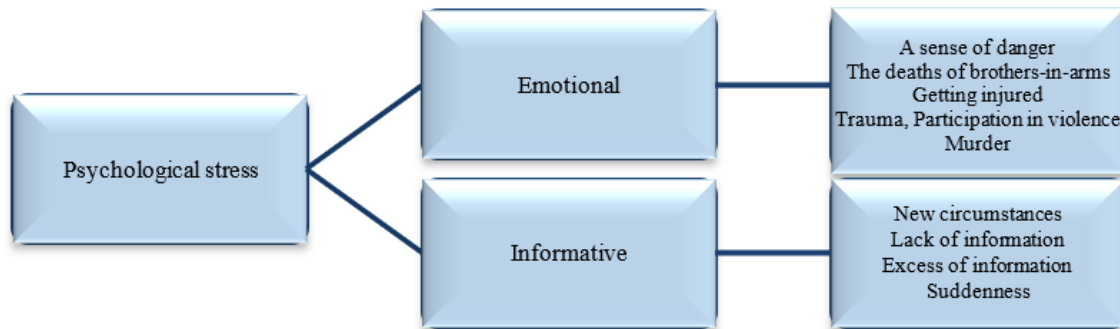
Figure 1. The structure of psychological stress
Source: Kokun et al., (2015).

Post-traumatic stress disorder (PTSD) is one of the most common mental disorders among war veterans (Kharchenko, 2019). It is a condition where a person cannot effectively cope with the stress caused by these events and is characterized by a number of symptoms that affect their physical and mental well-being. These symptoms can include repeated flashes of traumatic memories, feelings of mirroring, agitation, and avoidance of certain social processes (see Figure 2).
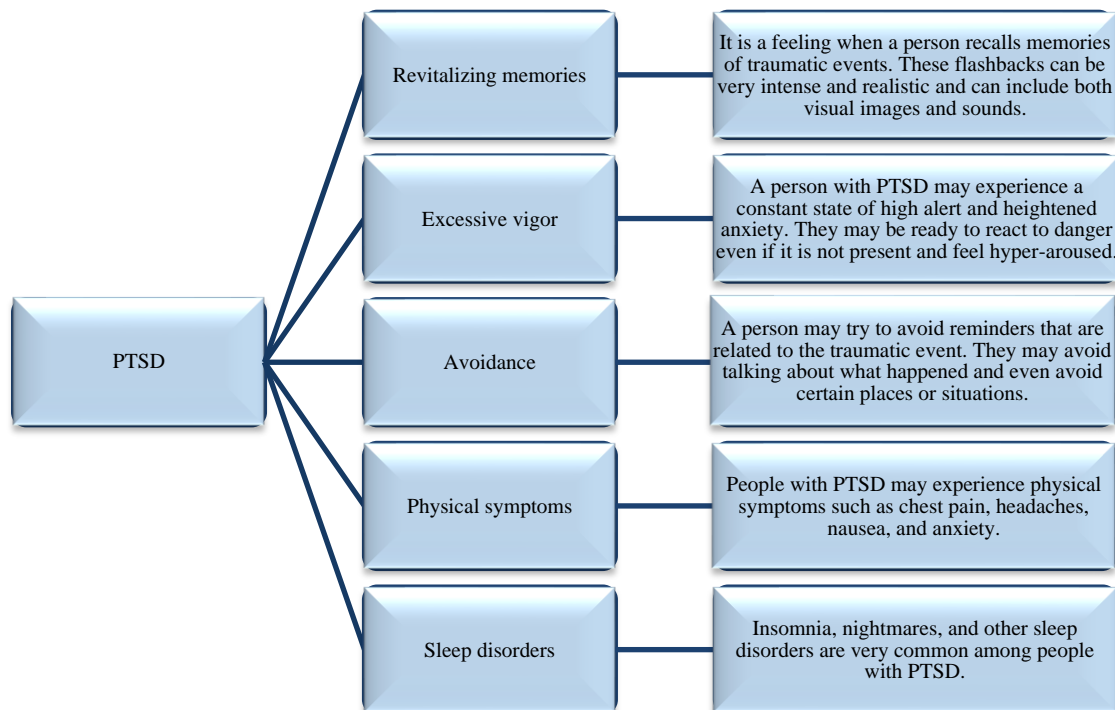
Figure 2. The main features of PTSD
Source: compiled by the authors

PTSD can occur after any type of traumatic event, including war and violence. Treatment includes psychotherapy (e.g., cognitive behavioral therapy or emotionally focused therapy), pharmacological therapy, and support from loved ones. In general, professional care contributes to improved quality and informed support for a person experiencing PTSD and a gradual return to normal life (Pedlar et al., 2019).

At the same time, participation in military operations can cause anxiety reactions and various anxiety disorders, such as generalized anxiety disorder, social anxiety disorder, panic disorder, and phobias. In particular, generalized anxiety disorder (GAD) is characterized by excessive anxiety and worry that can affect a servicemember's ability to concentrate and perform tasks. Social anxiety disorder is an anxiety that occurs in social situations and can lead to isolation and complicate interpersonal relationships (Melnyk et al., 2019). Another serious problem can be depression, which occurs as a result of stress, trauma, and other challenges associated with military service. It can affect the mental state and physical health of military personnel and veterans. Figure 3 shows the main symptoms that indicate depression.
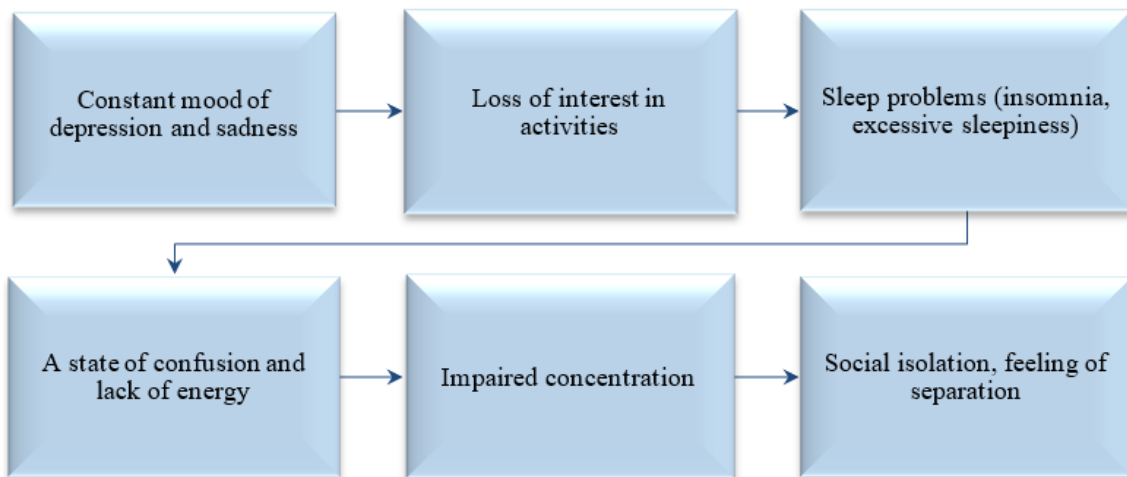
Figure 3. The main symptoms of depression
Source: authors' own development

Concurrently, evidence-based therapeutic modalities, notably cognitive-behavioral therapy (CBT) and exposure therapy, have demonstrated efficacy in equipping service members with adaptive strategies for the management of anxiety and stress stemming from their military experiences (Xu et al., 2023). Cognitive-behavioral therapy focuses on identifying and modifying maladaptive thought patterns and behaviors, while exposure therapy systematically addresses and desensitizes individuals to distressing stimuli associated with traumatic events. Moreover, the pivotal role of familial and social networks in supporting service members with anxiety disorders and depression cannot be overstated. The provision of understanding, support, and open communication within these relationships significantly facilitates the recovery process (Xu et al., 2023). In parallel, recent investigations underscore the positive impact of regular physical activity and a well-balanced diet in mitigating anxiety and stress among military personnel (Walsh & Rosenblum, 2020). Physical health interventions complement psychological treatments, offering a holistic approach to addressing mental health challenges.

Additionally, the implementation of group therapy or support groups tailored for veterans and military personnel presents a valuable avenue for shared experiences and communal support from individuals who have undergone similar challenges. Such group dynamics contribute to a sense of camaraderie and understanding, fostering a supportive environment conducive to the therapeutic process. In the broader context, anxiety disorders and depression within the military are amenable to intervention, and numerous service members experience significant recovery and restoration of their quality of life through appropriately tailored treatments and support mechanisms. The proactive step of seeking professional assistance is integral to this rehabilitative process, underlining the importance of accessing specialized care and expert guidance in the journey toward recovery.

Reintegration of military personnel into civilian life: challenges and opportunities

The success of the reintegration of former combatants, including men, women, and persons with disabilities, depends on various contextual factors. These factors include the length of time spent in the combat zone, the degree of displacement it has caused, and the extent to which normalcy has been restored for other members of the community. Generally, to facilitate a smooth transition, ex-combatants need support in adapting to post-conflict life, enabling them to participate in the competitive labor market alongside civilians. One of the main and urgent problems that modern veterans face after completing their military service is professional self-realization (Semenets-Orlova, 2017). Improving their qualifications, acquiring new skills, or even starting their own business become an important part of their reintegration into civilian life. According to recent studies, more than 40% of veterans change jobs after completing their service, even if they have the opportunity to keep their previous job for a certain transition period (Semenets-Orlova et al., 2021).

Veterans often face employers' reluctance to hire them because of their veteran status and the additional state guarantees associated with it, such as leave and job security (which are usually the responsibility of employers) (Skakun, 2022). In addition, professional adaptation proves to be one of the essential factors for a successful transition to civilian life. In particular, in many countries, such as the United States, Croatia, Bosnia and Herzegovina, and the Netherlands, the state provides benefits and services for veterans in the field of employment, such as professional adaptation, education, and support for starting their own business (McKee & Murphy, 2022). These services include guarantees in the areas of education, employment, job security, and retraining. In the context of Ukrainian realities, these elements require more detailed consideration. In particular, Ukrainian legislation provides for state guarantees and preferential conditions for admission to educational institutions, preferential loans for education, scholarship programs, and additional educational services in the public space. Through this process, the labor retraining of military service veterans is realized, which ensures their active integration into Ukrainian society. The reliability of such mechanisms is backed by the experience of European countries, as well as the United States and Israel, states that have a significant number of military veterans in their structure (Kelly, 2022).

Reintegration into normal active life is also facilitated by a well-established system of physical and mental health care (Vondrušková, 2013). For war veterans who have fulfilled their duty to Ukraine and its people, putting their health and lives at risk, medical care is becoming one of the most pressing issues (Hrynzovskyi et al., 2022). The Law of Ukraine "On the Status of War Veterans and Guarantees of Their Social Protection," as well as some other regulations aimed at these categories of people, provide a number of healthcare guarantees designed to ensure an adequate level of medical care and rehabilitation for military personnel. This includes free medicines and medical products, regular medical examinations, dispensary services, and dental prosthetics, which are an important part of the medical approach to the rehabilitation and resocialization of veterans. It is also worth paying attention to the problem of sanatorium and resort treatment, which is an important factor in restoring and maintaining the proper health of servicemen and women, and veterans. At the same time, the quality of the services provided and the limited opportunities for them to receive sanatorium treatment pose a difficult problem. In particular, under the current conditions of the Ukrainian healthcare system and lack of funding, it is almost impossible to expand the range of services.

An important area of regulation of the rights of veterans in society is to provide them with the necessary legal assistance (Shynkarova, 2022). These benefits are designed to ensure that servicemen and women can use their legal options after the war. War veterans often face the need for legal assistance, especially in matters related to their veteran status, so the right to free legal aid is very important. However, due to the lack of awareness among veterans, limited funding, and overloaded legal aid centers, this benefit is not always fully exercised. According to the European and American experience (Skrypkin, 2020), in order to ensure this benefit more effectively, it is necessary to increase funding for this area, direct efforts to expand the network of free legal aid centres, increase the number of qualified specialists and improve their professional skills through specialized training and courses.

At the same time, there are tangible difficulties that will arise on the way to reintegrating veterans into Ukrainian society. In particular, vocational training and retraining of veterans

contribute to their successful reintegration into a peaceful society. However, in order to achieve maximum effectiveness, it is important to strengthen educational and informational initiatives, including educational opportunities, advanced training, workshops, career counseling, and similar activities. Under current circumstances, the functioning of the healthcare system raises many questions (Skrypkin, 2020). In this regard, it is now necessary to immediately create an expanded set of medical services and establish effective mechanisms to monitor the timely funding of medical institutions that provide such care.

The benefits provided for combatants and persons with war-related disabilities under the Law of Ukraine "On the Status of War Veterans and Guarantees of Their Social Protection" do not include the right to psychological support, assistance, or rehabilitation. Psychological support is also necessary for family members of the deceased, other veterans, or discharged servicemen who face psychological problems, as well as for their family members. Since the field of psychological assistance is particularly sensitive, psychological services should be provided in accordance with established standards, and professionals who provide them should be trained to work with veterans and provide the most effective assistance (Stadnik et al., 2023). As we can see, in the Ukrainian reality, psychological assistance is not seen as a mandatory element of social reintegration and support. This misconception will need to be corrected in the future.

Effective psychological support can take many forms, including individual counseling, facilitating discussions on coping with crises and emergencies with veterans, and involving other military personnel in the process. At the family level, attention is focused on promoting positive interaction and maintaining healthy marital relationships with family members (Fossey et al., 2019). To this end, psychologists explain the challenges and emotions experienced by veterans, as well as how they are perceived by their families. This also includes developing behavioral guidelines for different life situations, formulating effective coping mechanisms and strategies for interacting with family members.

It is important to note that experience with Ukrainian military personnel has shown that positive results can be achieved through joint family activities. These activities can include leisure activities such as visiting museums, exhibitions, concerts, festivals, and nature walks.

In addition, trainings, art therapy (in particular, sand animation, drawing, modeling), relaxation techniques, and active recreation with elements of play have shown their benefits. It is also important to take into account specific characteristics and various factors that affect the psychological well-being of combat veterans, such as family values and how family members respond to new challenges (Subedi, 2018). In addition, family values, traditions, and preconceived notions should be taken into account.

These prospects and difficulties are generally the same as in other countries (Tymochko, 2022). In particular, researchers highlight problems with employment, as some combatants may have difficulty finding a job or keeping a job due to physical limitations or lack of relevant work experience. Housing is also problematic, which, along with other social difficulties, can lead to social isolation and even homelessness. Researchers also note the risk of suicide caused by both insufficient psychological support and society's unwillingness to support combatants (Truusa & Andrew Castro, 2019). An urgent challenge in the United States is bureaucratic difficulties associated with complex procedures and bureaucratic obstacles in obtaining benefits and support (Andrew Castro & Dursun, 2019). This problem is also relevant for Ukraine, as there are no effective mechanisms to monitor and evaluate programs and services for combat veterans to ensure their quality and relevance to the needs of veterans. In such circumstances, it is important to have public pressure that would help actualize these difficulties at the state level.

Conclusions

Hence, the matter of reintegrating servicemen post-participation in hostilities and their subsequent return to civilian life assumes paramount significance within the context of Russian-Ukrainian war. Research has substantiated that a consequential outcome of engaging in warfare is the manifestation of heightened psychological stress, comprising communicative, emotional, and informational stress components. Psychological stress, construed as a reaction to an individual's interaction with the adversarial environment, is intricately shaped by cognitive processes, thought expression, and situational evaluations.

An additional deleterious consequence is the emergence of post-traumatic stress disorder (PTSD), representing the predominant category of mental health disorders observed among war

veterans. Characterized by symptoms that exert a profound impact on both physical and mental well-being, PTSD entails recurrent manifestations of traumatic memories, a pervasive sense of detachment, heightened agitation, and deliberate avoidance of specific social processes.

Mitigating the psychological repercussions of war involves the application of multifaceted strategies, encompassing cognitive-behavioral therapy, familial and social support networks, adept communication, regular physical activity, and adherence to a balanced diet. Furthermore, a pivotal facet of rehabilitation pertains to the integration of servicemen into broader societal frameworks. This necessitates the provision of conducive conditions for retraining, labor assurances, state backing, preferential admission and educational provisions, scholarships, supplementary educational services in the public domain, and legal support. Ensuring comprehensive healthcare, resort facilities, and the provision of essential services also assume significance.

Concurrently, addressing challenges, notably those associated with bureaucratic transformations in the state apparatus and the establishment of robust psychological support mechanisms, constitutes pertinent avenues for subsequent research endeavours.

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International cooperation when collecting evidence in the investigation of transnational organized crime: challenges and opportunities

Організація міжнародного співробітництва під час збирання доказів при розслідуванні транснаціональної організованої злочинності: виклики та можливості

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Abstract

The purpose of the article is to highlight the organizational aspects of international cooperation during the collection of evidence in criminal proceedings related to the investigation of transnational organized crime. The results of the study indicated that international cooperation to collect evidence in criminal proceedings related to transnational organized crime involves a variety of actors, including international organizations, intergovernmental institutions, state and local authorities, judicial and law enforcement agencies, public associations and organizations and individual citizens, the main purpose of which is to detect, investigate, and prevent the commission of criminal offenses by transnational organized criminal groups and criminal organizations, and searching ways to combat such criminal manifestations. One of the types of international cooperation in the area under consideration is the provision of international legal assistance during the

Анотація

Мета статті полягає у висвітленні організаційних аспектів міжнародного співробітництва під час збирання доказів у кримінальному провадженні щодо розслідування транснаціональної організованої злочинності. Результати дослідження показали, що організація міжнародного співробітництва під час збирання доказів у кримінальному провадженні щодо транснаціональної організованої злочинності полягає у спільній діяльності міжнародних організацій, міждержавних інституцій, органів державної влади та місцевого самоврядування, судових та правоохоронних органів, громадських об'єднань та організацій, окремих громадян, основною метою якої є виявлення, розслідування, запобігання та профілактика вчинення кримінальних правопорушень організованими злочинними групами і злочинними організаціями, які мають транснаціональний характер, пошук шляхів

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collection of evidence. Practical implementation. It is established that expansion of international cooperation with foreign countries, improvement of existing international conventions and treaties, national legislation, constant exchange of experience between law enforcement agencies of foreign countries, development of a single mechanism for providing international legal assistance in criminal proceedings in various directions of its implementation are important factors of international cooperation. Value/originality. The study highlights the peculiarities of the organization of international cooperation in the investigation of transnational organized crime; directions for increasing its efficiency are suggested.

Keywords: investigation organization, organized crime, criminal proceedings, international cooperation, transnational crime, evidence.

боротьби із такими злочинними проявами. Одним із видів міжнародного співробітництва у розглядуваній сфері є надання міжнародної правової допомоги під час збирання доказів. Практичне значення. Встановлено, що важливим в процесі організації міжнародного співробітництва під час збирання доказів у кримінальному провадженні про розслідування транснаціональної організованої злочинності є розширення міжнародної співпраці з іноземними державами, удосконалення існуючих міжнародних конвенцій та договорів, національного законодавства, постійний обмін досвідом між правоохоронними органами іноземних держав, розроблення єдиного механізму надання міжнародної правової допомоги в кримінальних провадженнях за різними напрямками її здійснення. Цінність/оригінальність. У дослідженні виокремлено особливості організації міжнародного співробітництва у розслідуванні транснаціональної організованої злочинності; запропоновано напрямки підвищення його ефективності.

Ключові слова: організація розслідування, організована злочинність, кримінальне провадження, міжнародне співробітництво, транснаціональна злочинність, докази.

Introduction

As a result of globalization, States are now increasingly confronted with crime crossing national borders. As a result, enhanced international cooperation is an important component of pre-trial investigation and judicial proceedings. Since criminal activity transcends national borders, it is clear that the international community has recognized the need for enhanced cooperation (Yepes-Enriques & Tabassai, 2002), in particular regarding the collection of evidence that is beyond national State borders. At the same time, its most dangerous form is transnational organized crime.

Transnational organized crime, in particular of a general criminal orientation, covers both the Eastern and Western hemispheres and includes persons with ethnic or cultural ties from Europe, Africa, Asia and the Middle East. Besides, its presence in a certain field represents a significant growing threat to national security in the form of serious consequences for public safety, health care, democratic institutions, economic stability, etc. At the same time, members of organized crime groups constantly seek to corrupt officials both domestically and abroad, penetrate global energy and strategic material markets that are vital to national security interests, and provide logistical and other support to terrorists and foreign intelligence services.

This negative phenomenon constitutes a multifactorial criminal system with a devastating effect on the economic, political, spiritual, social life, psychological state and gene pool of the nation. Members of organized transnational crime operate in different regions of the world, have their own specific specialization, tactics, and use various methods. Although they have different quantitative and ethnic composition, they are united by a single common goal – to obtain extremely high profits from criminal practices, including those combined with formally legal activities. Transnational organized crime poses a significant and growing threat to national and international security, undermines democratic institutions and economic stability around the world. This trend is related to the growing connection of transnational organized communities with government bodies, intelligence services, and high-ranking businessmen.

The increase in the level of transnational organized crime is influenced by the events taking place in Ukraine now. With the beginning of the large-scale invasion of the Russian Federation on the territory of our State, the occupation of port cities, causing the closure or restriction of shipping, the activities of transnational organized groups deepened their activities both on the territory of Ukraine and around the world. In particular, this is an increase in the level of drug and weapon smuggling, illegal import and export of goods, human trafficking, etc. (The Economist, 2023).

The specified scale and global consequences of the activities of transnational criminal groups require the establishment of relations between the States and international organizations to combat such negative manifestations. Over a long period of interaction among subjects of international law in the fight against crime, a rather large array of international legal norms, principles and mechanisms of prevention, counteraction, termination and investigation of transnational organized crime has accumulated both in theory and practice.

The scientific achievements used in our article are of interest and are theoretical basis for conducting further scientific research on the issues related to the organizational aspects of international cooperation during the collection of evidence in criminal proceedings related to the investigation of transnational organized crime. However, considering the constant changes taking place in the world and in Ukraine, the institution of international cooperation in criminal proceedings during the investigation of transnational organized crime needs constant updating and expansion, taking into account the needs of modern times, in particular in terms of the organization of its implementation.

Therefore, the purpose of the article is to highlight the organizational aspects of international cooperation during the collection of evidence in criminal proceedings related to the investigation of transnational organized crime.

The scientific novelty lies in the formation of practical recommendations for increasing the efficiency of the organization of international cooperation during the collection of evidence in criminal proceedings on transnational organized crime.

Literature Review

The issues related to international cooperation in criminal proceedings traditionally attract the interest of the scientific community due to objective reasons related to the need to fight crime, but primarily attention is paid to the activities of the prosecution, the investigation of international crimes, crimes of international nature or other crimes with "international connections".

Scientific achievements by A.B. Antoniuk (2016) are devoted to the study of procedural aspects of international cooperation in the investigation of criminal offenses, the experience of certain foreign countries in the field of international cooperation in the investigation of criminal offenses.

Bilenchuk et al., (2011), considering the issue of investigating transnational crimes, notes that "investigation of this type of crime have a rather specific nature both in terms of typical investigative situations and in terms of their disclosure methods, and draws attention to the fact that international criminal investigation techniques are beginning to emerge in modern conditions. The sources of this methodology should be international agreements along with traditional methods of crime investigation."

The research by Zavydnyak (2021a) is dedicated to the study of legal regulation, levels and types of international cooperation in the criminal process.

A complex scientific work with fundamental theoretical and practical issues of forensic support for pre-trial investigation in cases of crimes of an international nature, belongs to Chornous (2012). The author highlighted the most general provisions relating to the content of international cooperation in the fight against crimes of an international nature, the specifics of conducting separate procedural actions within international legal assistance, technical and tactical forensic support of pre-trial investigation in cases of crimes of an international nature.

Zharovska (2019) revealed scientific approaches to the definition of transnational organized crime, disclosed the structure and dynamics of crimes, allocated the models of criminal groups.

The urgent tasks of improving international cooperation in the investigation of financial fraud are the use of new methods and means of investigation (procedural actions within

international legal assistance, creation of joint investigative teams, etc.); effective interaction with competent bodies of foreign countries and international organizations (Ortynskyi et al., 2018).

At the same time, the establishment of effective cooperation between the authorized bodies of the states involved in such activities, is among the important conditions for success in the investigation of transnational organized crime.

In the context of our research, it should be noted that the organization of international cooperation is an integral component in the activity of investigating transnational organized crime, taking into account its complex nature. At the same time, one can find content-like concepts in normative legal acts and legal literature: "international cooperation", "international legal assistance", "mutual legal assistance", etc.

In accordance with Clause 1, Part 1, Art. 541 of the Criminal Procedure Code of Ukraine, "international legal assistance" is the conduct of proceedings by the competent authorities of one State, the performance of which is necessary for pre-trial investigation, trial or for the sentence imposed by a court of another State or an international judicial institution.

Instead, international cooperation means purposeful and permanent, joint and coordinated, broad in scope and diverse in forms and directions, organizational and legal, investigative, informational in nature, aimed at achieving the tasks set before law enforcement agencies (Zharovska, 2014).

In view of the above, we believe that the concept of international cooperation covers a much wider range of interactions between authorized bodies of different States in their joint efforts to combat crime through international organizations collaboration, intergovernmental institutions, state authorities and local self-government, judicial and law enforcement agencies, public associations and organizations, individual citizens, the main purpose of which is to detect, investigate, and prevent the commission of criminal offenses, finding ways to combat criminal manifestations.

In view of the above, in order to reveal the subject matter of the research, in particular in the context of the investigation of transnational organized crime, we will consider the concept of "international cooperation in criminal proceedings" in the context of the joint activity

of the authorized bodies of the central executive power with judicial and law enforcement agencies, which lies in providing international mutual legal assistance in criminal proceedings during the collection of evidence, conducting procedural actions, handing over documents, etc.

We agree with the view of Zavydnyak (2021b), that it is impossible to ensure collection of evidence abroad; prosecution; protection of human and citizen rights and freedoms in criminal proceedings; compensation for damages, as well as possible confiscation of property without proper organization of international cooperation in proceedings regarding crimes of a transnational nature.

The issue of international cooperation of pre-trial investigation bodies with similar bodies of foreign States has recently become very relevant, since the full implementation of criminal proceedings, in this case, most often depends on their cooperation. Thus, it is possible to distinguish two directions of international cooperation of law enforcement agencies in the fight against transnational organized crime. Firstly, international cooperation providing operational police assistance pending official request without reference to treaties on legal assistance. Such direct contacts between investigators are discouraged or even not allowed, but they allow direct communication with colleagues involved in specific criminal proceedings. These contacts provide an opportunity to quickly receive information on requests in real time and help the investigator to establish the presence of certain facts before seeking official access to evidence through «application letters». It should be noted that direct communication without reference to international instruments violates the assistance procedure. At the same time, such deviation is permitted in exceptional cases where there are serious risks: threats to the life and health of the injured person or his family; irreversible loss of very important information, as well as real grounds for the suspect to abscond or his subsequent identification will be impossible. In such cases, information is provided to the employee of the Interpol National Central Bureau indicating the specific grounds for conducting investigative actions without reference to international treaties; all necessary «application letters» are processed in the usual way. Secondly, international cooperation based on formal «letters of application» filed after the opening of criminal proceedings or formal investigations; in this case, the issues of issuing an arrest warrant, ensuring the right of the

suspect/accused to defense, application for questioning of participants in criminal proceedings are being resolved. It should be noted that increasing the level of operational exchange of information between law enforcement agencies of the States and establishment of its use as evidence at the legislative level of States in criminal proceedings will contribute to the effective fight, disclosure and prosecution of those involved in the commission of this category of crimes (Filianina, 2020, pp. 351-352).

Methodology

The methodology of the scientific article is chosen considering the purpose and tasks, object and subject matter of the research. To reveal the main issues, the authors used general scientific and special methods applied in modern legal science.

Bibliographic method was applied to choose scientific literature corresponding the subject matter of our research.

Dialectical method made it possible to determine the main directions and forms of international cooperation in criminal proceedings in the investigation of transnational organized crime and to identify their subject structure.

Formal and logical methods (induction and deduction, analysis and synthesis, evidence and rebuttal, generalization, etc.), helped to systematize scientific views on the definition of transnational organized crime.

With the help of formal legal method, the analysis of international conventions and treaties, acts of international organizations, as well as domestic legal instruments in the field of international cooperation in criminal proceedings was carried out.

Comparative and legal method made it possible to compare international and national legislation in the field of international cooperation in criminal proceedings on the investigation of transnational organized crime, to determine the main areas of improvement of domestic legal acts in the specified area.

Historical and legal method helped to reveal the meaning of such basic concepts as "international cooperation", "international legal assistance", "mutual legal assistance", "international cooperation in criminal proceedings" and "international cooperation in the field of fighting crime", to highlight the development of scientific views on certain problems.

The method of complex analysis was applied to determine the actual content, main directions and current state of international cooperation in criminal proceedings on the investigation of transnational organized crime.

Using the method of analysis and synthesis, the classification of levels and actors of international cooperation in criminal proceedings on transnational organized crime was carried out. The specified classification helped to distinguish its directions and forms of implementation.

Axiomatic method contributed to the identification of typical features of international cooperation during the collection of evidence in criminal proceedings on transnational organized crime, depending on the form of its conduct.

System and structural method was used to systematize the obtained results and formulate the main conclusions of the scientific research.

Results and discussion

The fight against crime is one of the priority areas of international cooperation. Its growth and internationalization turned this struggle into one of the main social problems and necessitated the interaction of States in its solution.

Transnational crime is a crime that occurs in the jurisdictions of several countries, but its consequences significantly affect other countries. It is crime against the national laws of several countries. The term "transnational crime" was developed by the United Nations (UN) Division of Crime and Criminal Justice in 1974 to guide discussion at a UN conference on crime according to the United Nations Convention against Transnational Organized Crime of 2000. At the same time, crime is considered transnational if, firstly, it is committed in more than one State; secondly, it is committed in one State, but a significant part of its preparation, planning, management, or control is carried out in another one; thirdly, it is committed in one State but involves an organized criminal group engaged in criminal activity in more than one State; finally, it is committed in one state but has significant consequences in another state.

Such crimes should be distinguished from international ones, which are recognized by international law and therefore can be prosecuted under international law, and domestic crimes,

which fall under a single national jurisdiction. To be considered a transnational crime, the crime must involve crossing borders or jurisdictions (Gurule et al., 1996).

Given the fact that Ukraine has become the object of growing interest of international criminal groups, solving important socio-economic, political and other tasks is practically impossible without its participation in international cooperation in the fight against crime, in the activities of international law enforcement organizations. As a result, involving our State in international cooperation in the field of combating crime, based on the rules and principles of international law, is quite important. It is quite clear that such cooperation of Ukraine with the countries of the world and international organizations is a significant condition for the successful solution of many problems not only of a foreign political and economic nature, but also of an internal one (Voitsihovsky, 2010).

Since the criminal activity of transnational organized criminal groups covers the territories of different States, the investigation of the specified category of criminal offenses requires proper and effective organization of international cooperation.

In general, international cooperation in the fight against crime as a direction of the State's criminal policy has various aspects, among which are informational and analytical, organizational and legal, methodical and resource-based (Zozulia, 2014).

In the context of examination of activities for the investigation of criminal offenses, in particular transnational organized crime, an important issue is the coverage of the organizational aspect of international cooperation, which includes a set of legal, procedural, tactical and psychological methods and means by which it is carried out. In addition, it is worth noting that the organization of international cooperation in the field under consideration depends on the levels, directions, forms and actors of its implementation.

Three levels of international cooperation in combating international crime are traditionally distinguished:

1. The level of bilateral cooperation between States, which lies in interaction between States and their competent bodies, diplomatic missions, consular institutions and other authorized persons.

2. Cooperation at the regional level, which is carried out between States provided that they are united on a territorial basis (European Union, Council of Europe) or within the activities of regional international organizations. It is about the implementation of international cooperation within the Organization for Security and Cooperation in Europe, the Organization of American States and other regional international organizations, the tasks of which include the promotion of the fight against international crime.

3. Cooperation at the global level, which involves almost all countries of the world in the fight against international crime with the assistance of world-class international organizations. These are the UN and its specialized agencies, the International Criminal Police Organization – Interpol and others (Cherniavskyi et al., 2019).

Thus, the cooperation of States in criminal proceedings on the investigation of transnational organized crime, including during the collection of evidence, can be carried out at 3 levels: universal, regional and bilateral.

Besides, we believe that the organization of international cooperation during the investigation of transnational organized crime should be carried out considering:

1) legal aspect – based on a set of international and national legal instruments, treaties, etc., on the basis of which foreign States and their institutions interact with each other in the process of detecting, investigating and preventing crime, in particular transnational organized crime;

2) procedural aspect, which lies in the need to comply with the requirements for international cooperation strictly defined by international legal documents and national legislation;

3) tactical and forensic recommendations – a set of basic tactical techniques used during the implementation of international cooperation both at the stage of pre-trial investigation and court proceedings;

4) psychological principles – application of psychological techniques when establishing and building contact between all actors of international interaction.

To reveal the main issues related to the organization of international cooperation during the collection of evidence in criminal proceedings regarding the investigation of

transnational organized crime, it is important to study the legal basis of its implementation.

Interpretation of international treaties of Ukraine and the practice of the ECtHR made it possible to identify the following directions of influence of these sources on the development of science of forensics, elaboration and practical implementation of forensic tools, methods and techniques: ensuring the protection of human rights and freedoms; investigation of criminal offenses taking into account the best international and European experience; increasing the efficiency of implementation of international cooperation measures during criminal proceedings; ensuring effective investigation and trial of international crimes.

The importance of international cooperation during the investigation of transnational organized crime is emphasized in the UN Convention against Transnational Organized Crime (UN General Assembly, 2000). In particular, the Convention defines the term "mutual legal assistance", which includes the provision of the widest possible assistance by States Parties upon request in the investigation, prosecution and trial of crimes defined by the Convention, which is carried out on a mutual basis, provided there are reasonable grounds to suspect that such crime is transnational in nature and, including, the victims, witnesses, proceeds, means of committing crimes or evidence related to the commission of such crimes are located in the requested State Party, and that an organized criminal group is involved in the commission of this crime.

In addition, the specified Convention defines the main goals of international cooperation in the field under consideration. In particular, after analyzing the provisions of clause 3 of Art. 18 of the Convention, providing mutual legal assistance in criminal proceedings regarding transnational organized crime can be grouped according to the following main areas:

1) collecting evidence or requesting information that contains information about the circumstances of a criminal offense (obtaining testimony of witnesses or statements from individuals; providing information, material evidence, and expert assessments; providing originals or certified copies of relevant documents and materials, including government, bank, financial, corporate or commercial documents);

2) conducting investigative (search) actions (searching and seizure or arrest; inspection of objects and sights);
3) execution of court orders (delivery of court documents);
4) other procedural actions (facilitating the voluntary appearance of persons in the authorities of the requesting State-participant, etc.).

Thus, international cooperation during the collection of evidence in criminal proceedings on the investigation of transnational organized crime can include a wide range of procedural actions, during which it is possible to obtain information that can later be used as evidence in court proceedings. Conducting investigative (search) actions; obtaining statements and testimony of witnesses, victims, suspects, accused persons, experts; obtaining information related to criminal proceedings, physical evidence and other documents and information, etc. are among the main sources of obtaining evidence in the process of international cooperation.

The procedure for the implementation of international cooperation during the collection of evidence in criminal proceedings on transnational organized crime is regulated by the norms of the Criminal Procedure Code of Ukraine (Law of Ukraine No. 4651-VI, 2012). It defines the following areas of international cooperation during the investigation of such criminal offenses: service of documents, execution of separate procedural actions, extradition of persons who have committed a criminal offense, temporary transfer of persons, temporary transfer of persons, takeover of criminal proceedings, transfer of convicted persons and execution of sentences.

As for the procedure of collecting evidence as part of international cooperation, the Criminal Procedure Code of Ukraine contains direct provision indicating that evidence can be obtained on the territory of a foreign state as a result of international cooperation in the course of criminal proceedings (Part 4, Art. 93). It should be noted that it is in line with Art. 1 of the European Convention on Mutual Assistance in Criminal Matters (Council of Europe, 1959), which states that the parties undertake to provide each other with the widest possible mutual assistance in the prosecution of offenses, whose punishment at the time of a request for assistance falls within the jurisdiction of the requesting party.

The organization of international cooperation when collecting evidence during the investigation of transnational organized crime is a complex process that requires the coordinated activity of authorized bodies. Subject matter composition should be investigated to highlight the main aspects of its implementation, which in turn will vary according to the level at which such interaction takes place, as well as the legal status of actors involved in procedural actions carried out in the course of international cooperation.

Thus, we identify the following actors depending on the levels of international cooperation at the global level: the UN International Court of Justice, the International Criminal Court (hereinafter – the ICC), the International Criminal Police Organization Interpol, etc. At the regional level, interaction is carried out between regional groupings of actors: the Council of Europe, the Organization for Security and Cooperation in Europe (OSCE), the Organization of American States (hereinafter referred to as the OAS), the European Union Agency for Criminal Justice Cooperation (hereinafter – Eurojust), the European Police Directorate (hereinafter – Europol). The bilateral level involves the cooperation of the authorized bodies of the competent States that have concluded bilateral agreements on the provision of international legal assistance in criminal proceedings. In Ukraine, international cooperation in criminal proceedings is performed through the Office of the General Prosecutor and the Ministry of Justice of Ukraine.

Besides, it should be noted that the circle of actors of international cooperation is not limited only to competent bodies that are endowed with the relevant powers. Among such actors, parties and other participants in criminal proceedings should also be allocated; in particular, at the regional level of international cooperation in criminal proceedings on transnational organized crime in terms of collecting evidence, the Core International Crimes Evidence Database (hereinafter – CICED) introduced by Eurojust for the preservation, accumulation and analysis of evidence of major international crimes in a protected mode deserves attention.

CICED is a unique ad hoc judicial database created by Eurojust in 2023 to preserve, store and analyze evidence of major international crimes. It consists of three components: secure digital data transmission, secure storage and advanced analysis tools. In addition to the evidence itself, CICED will also contain a register with information on the source of evidence, as well as the event and type of crime to which it relates (Eurojust, 2023).

In accordance with the Proposal for a Regulation of the European parliament and of the council amending Regulation (EU) 2018/1727 of the European Parliament and the Council, as regards the collection, preservation and analysis of evidence relating to genocide, crimes against humanity and war crimes at Eurojust (European Commission, 2022) evidence related to offences cannot be safely stored in the territory where hostilities are taking place, so it is appropriate to establish a central repository in a reliable place. Since the need to preserve such evidence is urgent, they must be stored in an automated data storage facility. Preservation, analysis and storage of such evidence, as well as the access to it when required by national authorities and international judicial authorities, must comply with the highest standards of cyber security and data protection.

Operation of such database will contribute to the deepening of international cooperation in the fight against crime, provide a fast and reliable way of transferring and storing evidence, to which only authorized bodies will have access. At the same time, it is important to further develop a single mechanism of cooperation in the process of using the CICED database, to settle the main issues by enshrining the relevant procedure in international acts and domestic legislation.

However, the most widespread is the implementation of international cooperation in terms of collecting evidence during the investigation of transnational organized crime at the bilateral level, which is regulated by international treaties concluded between the States and national legislation.

Thus, depending on the legal status of the actors of international cooperation during the collection of evidence in criminal proceedings regarding the investigation of transnational organized crime, we distinguish:

– bodies that directly conduct criminal proceedings and request or ensure the provision of international cooperation – court, prosecutor, investigator of the pre-trial investigation body;
– bodies mandated to consider requests and take action to implement them – Office of the Prosecutor General (in pre-trial

investigation), Ministry of Justice of Ukraine (in court proceedings);

– actors with respect of which issues related to the implementation of international cooperation are being resolved – suspects, accused, persons in respect of whom extradition is sought, persons on international wanted list, etc.;

– other entities that the requesting or requested party involves in the process of international cooperation (parties and other participants in criminal proceedings).

We agree with the statement that direct interaction between the competent bodies of the States contributes to increasing the efficiency of cooperation, simplifies the solution of a number of organizational issues. Based on the above, measures to increase the effectiveness of international cooperation in the field of combating crime should include improved direct interaction mechanisms between the competent bodies of the states (Cherniavskyi et al., 2019).

The organization of international cooperation in collecting evidence in criminal proceedings related to the investigation of transnational organized crime, depending on the purpose of the request and the requirements for processing the information received during the provision of international assistance, can be carried out in two forms: official (procedural) and unofficial (non-procedural, consultative). A combination of both these forms is necessary at different stages of the investigation, and understanding their purpose, requirements and limitations is essential for successful international cooperation. Let us consider separately the organizational aspects of international cooperation in the specified forms.

Organizational and tactical features of international cooperation in collecting evidence during the investigation of transnational organized crime differ depending on the form of its implementation. Thus, official form of providing international legal assistance involves strict adherence to the procedural form determined by international conventions or treaties and national legislative acts and is carried out in several stages.

Implementation of official international cooperation during the collection of evidence in criminal proceedings based on the fact of the commission of criminal offenses by organized criminal groups or criminal organizations with transnational features is made by requesting international legal assistance.

Criminal procedural legislation provides a clear manner for its implementation. Thus, in accordance with Part 1, Art. 551 of the Criminal Procedure Code of Ukraine, court, public prosecutor or investigator, with approval of the public prosecutor, shall send to the designated (central) authority of Ukraine a request for international legal assistance in criminal proceedings they conduct. At the same time, the central bodies of Ukraine, authorized to review a request for reasonableness and conformity with the laws and international treaties of Ukraine are: the Office of the Prosecutor General (in criminal proceedings during pre-trial investigation), and the Ministry of Justice of Ukraine (in criminal proceedings during a court trial) (Prokopenko, 2014).

Thus, in the course of a pre-trial investigation of criminal offenses committed by organized criminal groups or criminal organizations with transnational links, investigator or prosecutor, where evidence needs to be collected outside our country and if they cannot be obtained during the conduct of legal proceedings in the territory of Ukraine, applies to the relevant authorities with a request for international legal assistance.

A request for international legal assistance must meet the requirements regarding its procedural content, as well as have a proper justification. It is important to have a link between the criminal proceedings for which international legal assistance is requested and specific procedural actions that must be conducted on the territory of a foreign state.

An investigator conducting pre-trial investigation in criminal proceedings on transnational organized crime submits a request for international legal assistance in connection with the need to collect evidence on the territory of a foreign State in agreement with the prosecutor. To avoid problems with the request return, investigator or prosecutor must pay special attention to compliance with its content and form, which are determined by the Code of Criminal Procedure of Ukraine.

Failure to comply with the requirements for the form and content of a request for legal assistance established by an international treaty or domestic law has significant legal consequences: firstly, it may entail a refusal to provide legal assistance; secondly, it greatly complicates obtaining the requested assistance; thirdly, a request made without taking into account the specifics of the procedural legislation of the requested Party may initiate the receipt of assistance formalized in

such documents which cannot be used as admissible evidence in criminal proceedings. That is, the quality of a request for the provision of legal assistance often determines the quality of the requested proceedings (Zavydnyak, 2021b).

Practical data also indicates that it is the lack of proper substantiation of the connection between the requested procedural actions and the actor of criminal proceedings that causes the corresponding request for international legal assistance to be returned.

Thus, if the request concerns the interrogation of a person as a witness, victim, expert, suspect or accused, then a duly certified extract of the relevant articles of the Criminal Code of Ukraine is attached to it to explain to the person his procedural rights and obligations and a list of issues to be put to him, or information to be obtained. If the request concerns the conduct of a search, inspection of the scene, seizure, seizure or confiscation of property or other procedural actions, the permission for which is granted by the court in accordance with the Criminal Procedure Code of Ukraine, then information about the evidence that substantiates the need for the relevant measures is attached to it (Chornous, 2012).

Besides, in practice there is a problem of recognition of evidence obtained during international cooperation. In particular, some authors point out that in order to recognize "foreign" evidence in a criminal proceedings, two mandatory conditions must be observed: 1) the procedure for obtaining and securing evidence in a foreign State, because based on the norms of international law, the Parties are governed by the procedural legislation of the requested State in the process of executing a request for legal assistance; 2) the order of interaction of national law enforcement agencies with foreign authorized actors (Zavydnyak, 2021c).

In accordance with Art. 3 of the European Convention on Mutual Assistance in Criminal Matters (Council of Europe, 1959), the requested Party executes any judicial instructions related to criminal case and sent to it by the judicial authorities of the requesting Party in the manner provided by its legislation.

At the same time, the Criminal Procedure Code of Ukraine determines that, at the request of a competent body of a foreign State, during the execution of certain procedural actions on the territory of Ukraine, the procedural legislation of

a foreign State may be applied, if it is provided for by the international treaty, to which the Verkhovna Rada has consented, and in the absence of such document – provided that the request is not contrary to the law of Ukraine (Clause 2, Part 1, Art. 558).

Thus, in the process of applying for international legal assistance in criminal proceedings on the investigation of transnational organized crime, competent authorities may request the application of Ukrainian procedural rules. At the same time, the first and foremost important condition for such an appeal is the presence of express reference to the applicability of the law of the foreign State in the international treaty. Besides, to avoid issues related to the inadmissibility of evidence obtained in the course of conducting the requested procedural actions on the territory of a foreign State, in the corresponding request it is necessary to clearly describe the procedure for conducting specific procedural actions, provided for by national legislation, by clarifying terms, as well as references on articles of the Criminal Procedure Code of Ukraine, which must be duly certified and attached to the request materials.

Consequently, to avoid cases of inadmissibility of evidence obtained directly in the process of international legal assistance in criminal proceedings on the investigation of transnational organized crime, authorized subjects should pay attention to the following important conditions:

1) the request is submitted with strict compliance with all requirements regarding its form and content;
2) the body or the official authorized to make a request or to perform procedural actions is specified in the request for international legal assistance;
3) actual data are obtained in compliance with the criminal procedural legislation of the requested Party, and in cases provided for by an international treaty or law of the requesting Party;
4) during the collection of evidence in the process of international cooperation, the rights of the persons who participated in the procedural actions are respected;
5) evidence obtained from reliable sources, using appropriate methods of recording evidentiary information, and ensuring its retention towards the requesting party.

Equally important is the preliminary study of the procedural law of the requested State, their technical and forensic support, etc. by the

investigator, prosecutor. It will help to avoid situations related to differences in procedures in different States, tactical techniques used in the course of certain procedural actions, the competence of authorized bodies of foreign States to carry out certain procedural actions, training of officials of these bodies, the presence of technical and other opportunities.

In addition, the absence of agreements concluded between States is not an obstacle for the organization of international cooperation in the field under consideration. In this case, the submission or receipt of the request is carried out according to the same rules but involving the Ministry of Foreign Affairs of Ukraine on the basis of reciprocity.

Interesting is the analyze of certain provisions of foreign legislation regulating the interaction of law enforcement agencies, conducted by Pavlenko (2022). In particular, the author notes that some States have established provisions providing for extraterritorial jurisdiction allowing State authorities of different countries to investigate their nationals who commit crimes related to human trafficking abroad.

Despite the fact that the provision of official assistance is a rather lengthy process involving certain procedure, any information collected in the course of receiving official international legal assistance is recognized as evidence that can be used in the pre-trial investigation and in the litigation.

On the other hand, the consultative form of international cooperation in collecting evidence during the investigation of similar categories of criminal offenses is extremely important, as it does not require compliance with formalities and is carried out in a fairly short period of time. It is the process whereby pre-trial investigation bodies or prosecutor informally communicate with colleagues or partner agencies of foreign countries to quickly obtain information that may assist in the investigation. Informal assistance may include (but is not limited to) obtaining information from registers, checking information in police databases, etc.

Besides, its importance lies in the fact that the implementation of informal consultations contributes to identifying direction of the investigation, as well as the needs and scope of further official assistance. However, it should be noted that all information obtained in the process of informal cooperation is not evidence and

cannot be further used in pre-trial investigation or court proceedings.

Informal legal aid is based on trust and trusted networks and requires time and effort from all parties involved. Recognizing this, international organizations encourage peer-to-peer networking through international events and promote networking.

An important form of international cooperation in collecting evidence in criminal proceedings in the investigation of transnational organized crime is the creation and operation of joint investigative teams. Their activities are regulated by the Second Additional Protocol to the European Convention on Mutual Assistance in Criminal Matters (Council of Europe, 2001) and by the Criminal Procedure Code of Ukraine, under which joint investigative groups may be set up to conduct pre-trial investigation of circumstances of criminal offences committed in the territories of several States, or where the interests of such States were affected (Art. 571).

At the same time, the norms of the Criminal Code of Ukraine are not in line with the provisions defined in the Second Additional Protocol, which states that by mutual agreement, the competent authorities of two or more Parties may set up a joint investigation team for a specific purpose and a limited period, which may be extended by mutual consent, to carry out criminal investigations in one or more of the Parties setting up the team.

For this purpose, the Draft Law of Ukraine No. 7330 (2022) amending Article 571 of the Criminal Code of Ukraine and clarifying that joint investigative teams can be created to ensure pre-trial investigation and court proceedings, was developed; these amendments are important for criminal proceedings carried out on the territory of one or more States.

Thus, we believe that the introduction of the specified changes is appropriate, especially under Russian Federation's military aggression against Ukraine, as they will facilitate the investigation of criminal offenses.

It is necessary to make changes to Article 571 of the Criminal Code of Ukraine as well, in particular, to enshrine in Part 1 of the Article that joint investigative teams can be created to conduct pre-trial investigation of criminal offenses committed on the territories of one or more States, or if the interests of these States are violated.

The use of psychological techniques to overcome barriers between the actors of interaction in the process of organizing international cooperation during the collection of evidence in criminal proceedings on the investigation of transnational organized crime is no less important. Thus, Ukraine's expansion of international cooperation with foreign countries on different continents in the fight against crime, differences in legal systems, language barriers, etc. necessitate the solution of not only legal, but also organizational, tactical and psychological issues.

Establishing psychological contact in the process of the actors' interaction at the interstate level can be carried out with the help of the following means: proper selection and management of staff; identification of employees with special training for investigating specific types of criminal offenses; study of interpersonal relations in the group and in the international space; education of the necessary qualities (ethical, moral, strong-willed, etc.); perfect command of foreign languages (at least one of them) for communication between authorized persons of competent bodies of different States, etc. In this case, the informal relationships in the team are of particular importance: common interests, friendly and other relations that may affect the effectiveness of the investigation (Sharay, 2022).

Conclusions

Thus, after conducting an analysis of the main international documents and national legislative acts, as well as scientific works of domestic and foreign scientists in the field of international cooperation during the collection of evidence in criminal proceedings on the investigation of transnational organized crime, it should be stated that its content lies in the joint activities of international organizations, interstate institutions, State and local authorities, judicial and law enforcement bodies, public associations and organizations, individual citizens, the main purpose of which is to detect, investigate, and prevent the commission of criminal offenses by organized transnational criminal groups and criminal organizations, seeking ways to combat criminal activities.

One of the types of international cooperation in the field under consideration is the provision of international legal assistance, which may also differ depending on the directions of its implementation, of which collecting evidence in criminal proceedings related to the investigation

of transnational organized crime is of great importance.

The analysis of scientific literature helped to highlight the following main levels and, as appropriate, actors of the international cooperation in the course of investigating transnational organized crime:

universal – the UN International Court of Justice, the International Criminal Court, Interpol, etc.;
regional – Council of Europe, OSCE, Eurojust, Europol;
bilateral – cooperation of the authorized bodies of the competent States based on the concluded bilateral agreements on the provision of international legal assistance in criminal proceedings.

Depending on the legal status, the actors of international cooperation during collecting evidence in criminal proceedings regarding the investigation of transnational organized crime can be classified into:

agencies, which directly conduct criminal proceedings and request or ensure the provision of international cooperation – court, prosecutor, investigator of a pre-trial investigation body;
bodies authorized to consider requests and take measures to fulfill them – Office of the Prosecutor General (in pre-trial investigation), Ministry of Justice of Ukraine (in court proceedings);
entities with respect to whom the issues related to the implementation of international cooperation are addressed – suspect, accused, persons in respect of whom extradition is to be decided, persons on international wanted list, etc.; other entities that the requesting or requested Party involves in the process of international cooperation (parties and other participants in criminal proceedings).

The organization of international cooperation during collection of evidence in criminal proceedings in the investigation of transnational organized crime is carried out considering:

1)   legal aspect – based on a set of international and national legal acts, treaties, etc., on the basis of which foreign States and their institutions interact with each other in the process of detecting, investigating and preventing crime, in particular transnational organized crime;
2)   procedural aspect – lies in the need to comply with the requirements for international cooperation strictly defined by

international legal instruments and national legislation;

3) tactical and forensic recommendations – a set of basic tactical techniques used during the implementation of international cooperation both at the stage of pre-trial investigation and court proceedings;

4) psychological principles – application of psychological tools when establishing and building contact between all actors of international interaction.

To make international cooperation in the investigation of transnational organized crime more effective, it is expedient to implement effective coordination of all pre-trial investigation bodies, because currently various law enforcement agencies are involved in the pre-trial investigation process and due to improper communication there are unjustified delays in the investigation, loss of materials or parts of case materials. Besides, an important aspect of effective interaction is the rapid exchange of information both between the pre-trial investigation bodies themselves and between the pre-trial investigation bodies and other state authorities possessing important information for the investigation. Therefore, the issue of digitization of all pre-trial investigation materials and simplification of bureaucratic procedures is urgent.

Besides, it is appropriate to approve the algorithm for the investigation of international crimes with a detailed description of the implementation of urgent investigative actions. Finally, investigation of international crimes today requires substantial investigative knowledge of IHL and a lot of work with materials from open sources of information, electronic evidence, so it is necessary to introduce training and advanced training for investigators in these areas.

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Open education technologies: an important component of higher education digitalization for quality professional training

Технології відкритої освіти: важлива складова цифровізації вищої освіти для якісної професійної підготовки

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Abstract

The article proved the importance of introducing open education technology as an important component of the informatization of the higher education institution for high-quality training of specialists has been proven and shown. The main goal of open education (preparation of education seekers in the conditions of the information society for effective, full participation in professional and social life) and leading and specific features of open education are clarified, and the main principles of open education are highlighted. Generalizing factors that led to the emergence of open education are emphasized. The role of distance learning in the student's independent work is shown and the main principles of the distance education system are highlighted. The most important services that should be used in the education of a modern institution of higher education are shown. An experimental study was conducted, the purpose of which was: to prove the importance and show the

Анотація

Доведено важливість та показано необхідність упровадження технології відкритої освіти, як важливої складової інформатизації закладу вищої освіти для якісної підготовки фахівців. З'ясовано головну мету відкритої освіти (підготовка в умовах інформаційного суспільства здобувачів освіти до ефективної, повноцінної участі в професійному і суспільному житті) та провідні й специфічні ознаки відкритої освіти, виокремлено основні принципи відкритої освіти. Наголошено на узагальнюючих чинниках, що спричинили появу відкритої освіти. Показано роль дистанційного навчання у самостійній роботі студента та виокремлено головні принципи системи дистанційної освіти. Показано найголовніші сервіси, які варто використовувати в освіті сучасного закладу вищої освіти. Зазначено переваги відкритої

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necessity of introducing open education technologies as an important component of informatization of a higher education institution for high-quality training of specialists, to find out the leading and specific features of open education, to highlight the main principles of open education.

Keywords: technologies of open education, informatization of the higher education institution, high-quality training of specialists, independent work, distance learning.

освіти. Проведено експериментальне дослідження метою якого було : довести важливість та показати необхідність упровадження технологій відкритої освіти, як важливої складової інформатизації закладу вищої освіти для якісної підготовки фахівців, з'ясувати провідні й специфічні ознаки відкритої освіти, виокремити основні принципи відкритої освіти.

Ключові слова: технології відкритої освіти, інформатизація закладу вищої освіти, якісна підготовка фахівців, самостійна робота, дистанційне навчання.

Introduction

In the 21st century, such a set of features has been created for society, where important elements are the globalization of education, politics, economy, culture, the spread of innovative network forms for communication, the use of information and communication technologies, etc. Modern society, as a means of implementing the principle of lifelong learning, emphasizes the development of open education for humanity. To solve a significant number of important tasks, it is necessary to informatize the entire educational space and society as a whole, where the main place at the world level is occupied by the problem of the implementation of open education.

Today, it is open education, remote forms of education, acquired experience in the application of modern innovative information and communication technologies, and mastering the relevant skills, abilities, and competencies of the individual that acquires significant importance. Scientific and practical interest in the phenomenon of open education is connected with new educational opportunities, in particular:

−   deepening democratization (regardless of material and social status, state of health, national, racial, and gender characteristics, ensuring equal access to education for all participants of the educational process based on the use of information and communication technologies);
−   expansion and deepening of educational and research projects, source information base, etc.;
−   individualization of educational activity (the educational process of higher education seekers using innovative information and communication technologies is implemented by specifying the methods and means of learning, the content of education,

and the activation of independent activities of young people based on taking into account the individual characteristics of students);
−   the flexibility of the organization of the educational process (the possibility of applying the spatio-temporal characteristics of the educational process variably: the availability of education for students of higher education at a time convenient for them and regardless of their location).

Therefore, we believe that the main goal of open education is to prepare students in the information society for effective and full participation in professional and social life.

The modern tool of innovative development of education is its informatization, which is the basis for the development of open education. Using the principles of such education makes it possible to significantly expand the potential space of the educational environment, to ensure the formation of an open educational space that is accessible to all participants of the educational process.

Open education is characterized by the availability and improvement of information and resource provision of methodical training systems and the expansion of the range of teaching aids and pedagogical technologies. An open educational environment is potentially unlimited in terms of the amount of resources that can be used in the educational process and the number of users. Technologies of open education diversify the learning process, increase its effectiveness, and contribute to the formation of a personality capable of quickly acquiring new and applying previously acquired knowledge to non-standard situations, thinking creatively and

deeply, rationalizing promising ideas, and their implementation in future activities.

The relevance of the article is related to the informatization and computerization of the education system and is caused by the following factors: lack of special research on the chosen topic; the theoretical, scientific, and practical significance of the topic; the need to transition from the subject paradigm of education to a competent paradigm, which involves the formation of a complete competent personality; the dominance of informational components in the modern system of higher professional education; the need to develop the informational and communicative competence of future specialists under conditions of rapid activation of the technological potential of society; the expediency of developing the skills to adapt in the modern information society; the need to ensure the level of general and professional culture adequate to the needs of the world community.

Modern trends in the development of the educational sector and society direct the efforts of higher education institutions to create a competitive system of constant updating of the competencies and knowledge of future specialists because the economic prosperity of the entire society in the international arena depends on it (Prokopenko, 2020).

A set of features, among which the main ones are the globalization of the economy, education, politics, culture, the spread of network forms of communication, the use of information and communication technologies, etc., are inherent in the society of the 21st century. The means of implementing the principle of education during life is most pronounced in modern society through the development of open education. Informatization of society solves a significant number of tasks, among which the problem of implementing open education occupies an important and leading place at the world level and in individual countries (Osadchuk, 2022).

The modern digital world is becoming increasingly virtual and open. In connection with the development of the modern information society in the system of university education, the acquisition of relevant skills and abilities, the introduction of remote forms of learning and new information technologies into the educational process by students of higher education, the development of the open education system is gaining relevance. The lack of higher education institutions with the appropriate level of readiness for the transition to the principles of openness, the use of open education technology, as a necessary component of the informatization of the higher education institution for high-quality training of specialists, necessitates the study of the issue of improving educational content and high-quality open education (Hurzhii et al., 2021).

Several factors of an internal and external nature, such as inconsistency of the existing quality of education with modern requirements, insufficient degree of implementation in the educational process information technologies, insufficient access to quality education, insufficient efficiency of education financing, deepening of the disparity between the training of specialists and the demand for them in the labor market provides reasons to talk about the need to reform the education system and form a coherent and effective educational and scientific system that fully meets the requirements of the time.

Literature Review

One of the promising ways to overcome the challenges of the information society in the Ukrainian educational system and ensure its progressive development is the implementation of open education. The very application of the latest information technologies and innovative work methods based on these technologies in the educational process at all levels can play a significant positive role in reforming various areas of educational activity – from ensuring effective monitoring to creating integrated systems for ensuring access to educational resources and sharing advanced pedagogical experience and methodical materials.

Various aspects of the use of information and communication technologies in the educational process are presented in publications A. Hurzhii, O. Hlazunova, & T. Voloshyna (2021) analyzed the concept of open education based on the availability of educational resources, principles of informatization of the educational space, flexibility and extraterritoriality of education and identified the features of digital educational content that can be used in open education systems of higher education institutions: electronic manuals, educational games, instructions, methodological recommendations, presentations, tests and questionnaires, screencasts and podcasts, diagrams, graphic images, graphs, video lessons, infographics, virtual and augmented reality resources, video lectures.

Aspects of the formation of an open educational and scientific space and the use of open technologies education for educational purposes are highlighted in the works of scientists.

V. Bykov (2008) from the system positions of open education laid out the foundations of the theory of modeling organizational systems. Based on the analysis of tools for the development of the higher education system, modern approaches, the determined methodological apparatus of organizational systems research, and system presentation, a model of organizational systems was designed for open education.

A significant contribution to the research of open education in universities made by researchers, in particular, such as M. Leshchenko, & A. Yatsyshyn (2014), offer a comparative vision of the examination of the essential characteristics and genesis of open education by domestic and foreign scientists, emphasize the importance of open education, dwell on the integral component of informatization of society, reflect the general trend of the successive transition of education processes from one state to another.

V. Osadchuk (2022) in a retrospective analysis of the development of open education, revealed its weak and strong positions. The author reveals open education as a factor of anticipatory development of society, a modern educational technology aimed at the individual to promote the openness of knowledge.

O. Sagan, S. Yakovleva, E. Anisimova, A. Balokha, & H. Yeremenko (2020) explore the shift towards digital didactics as society evolves and education transforms. It emphasizes the need for a new model and introduces novel principles, methods, and forms of organizing education.

As pointed out by scholars such as A. Kuzminskyi, O. Kuchai, O. Bida, A. Chychuk, I. Sihetii, & T. Kuchai (2021) a key focus of the higher education modernization program amid the COVID-19 pandemic revolves around remote learning. This approach has become feasible due to the presence of information, educational technologies, and communication systems, particularly for enhancing effective education and its oversight within higher education institutions.

The need to analyze the works of scientists is pedagogical the importance of the problem, as well as its insufficient reflection among scientists' researchers, the lack of a justified

methodical system of its formation in institutions of higher education allowed us to cover the problem in more detail in the article open education technologies as an important component of higher education digitalization for quality professional training.

The analysis of literary journals made it possible to find out the main points of consideration of open education technologies by scientists (interpretation of the phenomenon of open education, cloud technologies; showing the necessity of using information technologies in human life, their implementation in the educational innovation process of higher education institutions to provide educational services in conditions of remote and traditional education) and highlight issues that are not sufficiently clarified in the modern educational space. Therefore, our research is aimed at proving the necessity of implementing open education technologies, clarifying the leading and specific features of open education, and highlighting the main principles of open education.

The purpose of the article. To prove the importance and show necessity of introducing open education technology as an important component of the informatization of a higher education institution for high-quality training of specialists.

Methodology

In the conditions of an open education system, an adult person who studies not only acquires certain knowledge but also develops the need for continuous renewal, a creative approach to knowledge throughout his life. Thus, open education is based on worldview and methodological principles of openness and continuity of the learning process.

The methodological substantiation of open education as a new educational paradigm is built in the domestic theory of education on the fundamental principles of modern philosophical concepts, in particular, such as pedagogical synergy, philosophical humanism, and the theory of self-organization.

To realize the goal, the following research methods were used: theoretical – analysis of literature: pedagogical, psychological, methodical on the topic in question, comparison, synthesis, deduction, induction, juxtaposition, analogy, due to which the state of working out the problem was characterized in the scientific

literature, studying documents in the field of education, electronic resources, scientific works, work experience of the best scientific and pedagogical personnel of higher education institutions; modeling, forecasting, generalization, design for theoretical argumentation of quality training of future specialists; empirical – survey, interview, questionnaire, conversation, pedagogical observation, testing to find out the importance of using open education technologies for the informatization of a higher education institution for quality training of specialists.

The implementation of the search for solutions for the implementation of open education technologies for the informatization of the institution of higher education for high-quality training of specialists covers interrelated concepts: methodological, theoretical, and methodical.

The methodological concept presents methods of diagnosing the results of the implementation of open education technologies for the informatization of a higher education institution for quality training of specialists, organization, study, goal setting, and planning of professional training of future specialists. The concept is implemented through the implementation and development of scientific and methodological support for professional quality training of future specialists, improvement of forms, content, means, and methods of training for effective formation of professional competence of future specialists.

In the research work, we used biased sampling in the process of selecting a sample, that is, it is a bias in which the sample is collected in such a way that some members of the target population have a significantly lower than others, or a significantly higher probability of being included in the sample during the experiment. It is this approach that leads to a biased general population of the sample (there may be factors not related to human factors), where not all individuals were equally likely to be selected in an experimental study. Therefore, we took this position into account to eliminate the fallacy of the results, which are attributed to the studied phenomenon, and not to the method of sampling.

The validity of the study of the system of implementation of open education technologies developed by us, as an important component of the informatization of the institution of higher education for the quality training of specialists, indicates that the diagnostic tool of the research

work measured what we expected to measure and proved the achievement of the goal of our research. We are talking about the relevance of the theory (empirical relevance). The internal validity of the methodology indicated how the research items and intended tasks are related to the theoretical propositions that we presented and revealed in the article and proved their effectiveness in our research and compared the results of already developed methods with the results of the diagnostic tool.

In the experimental study, the ethics of the respondents were taken into account, because it is important, necessary, covers mainly regulative aspects of morality in science, is part of one of the aspects of the ethics of science, and justifies the professional morality of the respondents.

After proving the importance and necessity of introducing open education technologies as an important component of informatization of the institution of higher education and clarifying the leading and specific features of open education, highlighting the main principles of open education, a control survey of students and teachers was conducted. In addition, we decided not to significantly change the questions and tasks of the initial cut to track the dynamics of the students' training level.

Comparing the results obtained during the control survey in the experimental group before and after the research and experimental work, it is possible to note changes in the levels of development of the skills of students and teachers in the use of open education technologies. And, by the end of the formative experiment, the number of students with a high level of development of information competence increased by 38.8%; the number of students in the experimental group with a low level of development of information competence decreased by 45%.

The analysis of the results of the data displayed in the table and histogram shows that as the technologies of open education are applied, the percentage of students who have improved their professional qualifications has increased. This makes it possible to characterize education when applying open education technologies to increase its effectiveness.

To prove the effectiveness of research and experimental work, it is necessary to identify a statistically significant trend in the shift (shift) of indicators. To solve similar problems, the

research used a non-parametric difference criterion: the sign criterion.

The results of our work in the experimental group showed that after using open education technologies, the respondents changed their opinion about the influence of various factors on becoming a specialist. Thus, during the re-ranking, work in the electronic library of a higher education institution, searching the Internet, as well as creating electronic presentations took higher positions (30-37%). 60% of students answered that they communicate with teachers using open education technologies.

Results and Discussion

According to the definition of UNESCO, "open educational resources are educational and scientific resources that exist in open access or are released under a license that allows their free use and modification by third parties".

Open education is a global education, an integral world system of high-quality, mostly higher education, which incorporates common traditional components into its being, on a new technological basis. The main goal of open education is to prepare students for effective and full participation in professional and social life in the conditions of the information society (Kovalska et al., 2023).

The leading features of open education are:

– accessibility (access to education of various social groups);
– flexibility (the ability of education seekers to study in a city convenient for them and at a convenient time);
– cost-effectiveness (economy of financial and human resources, material costs through the use of open education technologies);
– parallelism (carrying out educational activities without separation from production, i.e. simultaneously with professional activities);
– coordination (introduction of the function of coordinator of the educational process and creation of the position of mentor-consultant);
– social equality (the use of ideas of social equality in education with the help of equal access to its acquisition);
– internationality (acquiring higher education without leaving one's country in foreign educational institutions, the possibility of providing educational services to compatriots, foreign citizens, and education seekers temporarily living abroad);

– modularity (the formation of an individual curriculum that has a set of independent course modules) (Korzhylova, 2014).

In such a modern system, the educational process provides an opportunity for high-quality learning to become creative and open, with it there is freedom of choice, provision of free access to information resources, an individualized approach, and the creation of conditions for creative joint mastering of the world.

Open education ensures innovative changes like the relations of participants in educational activities and ensures continuity of learning, efficiency, and accessibility in obtaining knowledge throughout life (Stepanova et al., 2023).

Successful experience, the implementation of open education technologies for the informatization of higher education institutions for high-quality training of specialists, innovative methods, approaches to such an educational process, and clear solutions of open education are actively implemented in many countries and regions (Osadchuk, 2022).

Nowadays offers a new dimension of open education. Scientists D. Araya, R. Britez, M. Peters, Sh. Takdeo (Peters et al., 2008) propose a transition to the paradigm of open education, which is an integral component of an open society and digital economy and is not limited to open resources.

Studying the issue of improving educational content and quality open education showed the need for experimental research.

The purpose of the experiment: to prove the importance and necessity of introducing open education technologies as an important component of the informatization of a higher education institution for high-quality training of specialists, to find out the leading and specific features of open education, to highlight the main principles of open education.

A survey of students and teachers was conducted, in which the analysis of the questionnaires made it possible to build a study that allows:

– to assess the influence of several motives on respondents' mastery of modern technologies of open education, as an important component of informatization of a higher education institution;

– determine for what purposes they use open education technologies.

All survey participants answered that mastering open education technologies at the user level is an integral part of any specialist's training.

Many students and teachers (88%) would like to increase their level of mastery of open education technologies and acquire additional professional knowledge, skills, and abilities.

We deliberately did not divide the answers of students and teachers into groups, as they received an equal percentage ratio and turned out to be close in terms of the use of open education technologies in educational activities.

We invited students to rank the main types and forms of student activity in a higher education institution, which significantly influence the formation of students' personalities, their worldviews, becoming a specialist and professionals in their field.

The conclusion of the ascertaining stage of the research and experimental work was the conclusion about the need for the purposeful formation of information competence in future specialists and the increase in the introduction of open education technologies into the education process.

We asked the respondents of higher education institutions the following questions: "Do you think that mastering open education technologies is necessary for a teacher of a higher school and a student?", "Do you use open education technologies as a tool that helps you in preparing for classes, in working with students, in self-education?", "What technologies of open education, in your opinion, must be mastered by a modern worker?".

All respondents who took part in the survey (100%) answered affirmatively to these questions. For the last question, such information technologies as Internet search, communication by e-mail, participation in teleconferences, and services developed by Google were offered (Prokopenko, 2020).

Nowadays, open education is seen by the world community as a complex phenomenon that involves active interaction and participation of education seekers in the dimension of lifelong learning, in addition, to open access to educational resources (life-wide learning) (Lokshyna, 2018).

Let's emphasize the generalizing factors that caused the emergence of open education:

1) caused by the processes of the development of society, which are objective: the emergence of new requirements for the pace and nature of the acquisition of education by those seeking education, for the educational level of all people;
2) caused by the need to create a climate to ensure the personal development of a person and the nature of obtaining a quality education in modern conditions, connected with the emergence of new individual needs of education seekers;
3) caused by the objective processes of human development, which are associated with new educational opportunities and appeared with the advent of the education system (Akhnovska, 2019).

– additional conditions for personal individual development;
– innovative content and pedagogical technologies of learning;
– large-scale informatization of the education system;
– in-depth processes of integration and democratization of education. The mentioned factors complement each other and are mutually dependent. The modern educational paradigm was the reaction of the educational system to the mentioned factors, declared and defined the principles of open education (Bykov, 2008).

Modern open education requires the introduction of distance learning for the constant improvement of the educational space to increase the competitiveness of future specialists, and quality training of specialists (Plakhotnik et al., 2023).

The process of distance education of specialists is ensured by: flexibility; modularity; the importance of the quantitative audience; economy; technology; social equality; renewal of the teaching position; positive impact on the audience; quality level of education; and efficiency (Mala, 2022). So, the main principles of the distance education system are flexibility, openness, modularity, dynamism, continuity, adaptability, and creativity (Yaroshenko, 2019).

Nowadays, in the process of educational and management activities, the use of innovative technologies (cloud-oriented) in institutions of higher education is gaining a global scale, for example, Google company is actively working on the improvement of existing and on the

development and release of new cloud technologies (applications and services).

The advantages of open education, which is an important component of the informatization of a higher education institution for high-quality training of specialists, include:

− providing every individual with educational opportunities at any stage of career and life development;
− elimination of barriers in education (geography, cost, admission requirements, time);
− since open education is implemented through digital technologies, we highlight the promotion of education modernization,
− since open education creates a bridge between informal and formal education, we emphasize the development of education throughout life (Inamorato Dos Santos et al., 2016). An important component of the informatization of a higher education institution for high-

quality training of specialists and innovative support for the independent work of education seekers is the strategy of open education, which provides for the interaction of all interested parties horizontally and vertically at all levels: between the central government, Brussels and member states, educational institutions, regional and local educational bodies; employers and the education sector; educators, students of education, parents, listeners; informal and formal education (Lokshyna, 2018).

According to statistics from the free online course catalog Class Central (Shah, 2018) more than 11,500 courses from more than 900 universities were offered in 2018 alone.

The subject distribution of courses (Fig. 1) shows the popularity among developers of various fields: 20% "Technology", 18% "Business", 11% "Social sciences", the fewest courses (5%) were created from the fields "Art and design" and (3.1%) "Mathematics" etc.
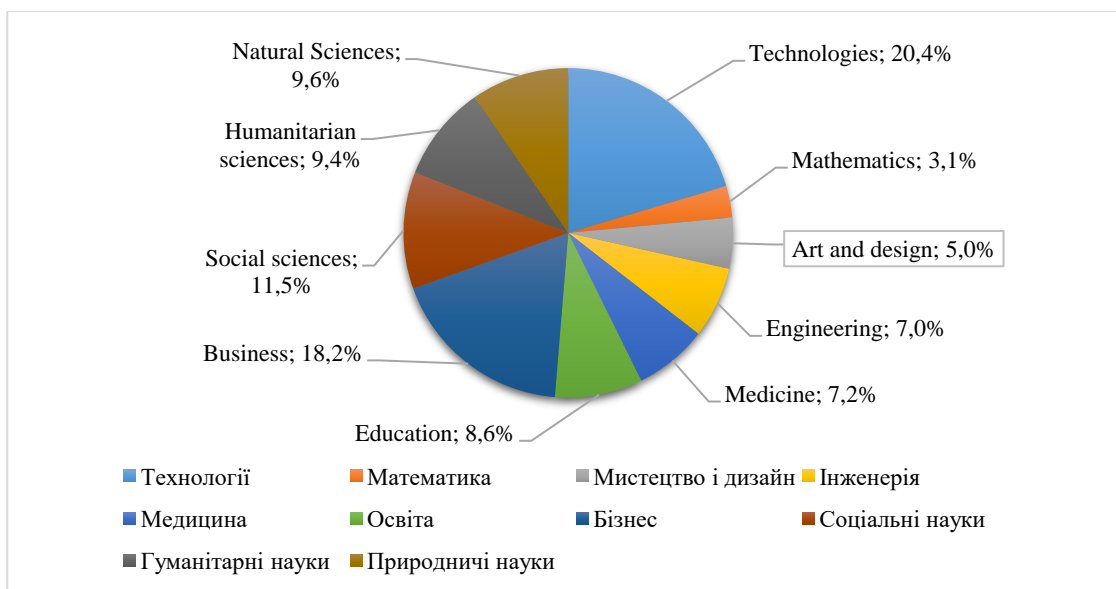
Figure 1. Distribution of courses by fields of knowledge according to ClassCentral research

According to the version of ClassCentral, among the popular platforms for consumers of educational content: FutureLearn – 8.7 million, Udacity – 10 million, XuetangX – 14 million, Edx – 18 million, Coursera – 37 million (Shah, 2018).

At the portal reviews.com "The Best MOOC Platforms for 2018" evaluation is submitted, which is affected by: the presence of integrated forums for social interaction, the ability to review and evaluate completed courses, the quality of materials submitted by the teacher, etc. Coursera received the highest rating of 8.8 out of 10,

followed by Edx with a rating of 7.4 out of 10, and Udemy in sixth place with a rating of 0.4 out of 10. The generalization of the obtained results guided the choice of scientists (Semenikhina et al., 2020) at research of such educational platforms: Edx (www.edx.org), Coursera (www.coursera.org), MIT OpenCourseWare (www.ocw.mit.edu), OpenLearn (www.open.edu), Udemy (www.udemy.com), Prometheus (www.prometheus.org.ua), UoPeople (www.uopeople.edu), Maidan Open University (www.vum.org.ua), OpenLearningInitiative (www.oli.cmu.edu).

Appropriate educational systems are created for practical implementation of the ideas of open education (computer-technological, psychological-pedagogical, organizational-management, normative-legal, financial-economic). It is worth highlighting and emphasizing the importance of the psychological and pedagogical problem, the solution of which is the most difficult task. This problem is the main factor in ensuring the quality of higher education, it is the creation of open education for quality training of specialists (Bykov, 2008).

The main principles of open education include:

– lack of strict regulation in the performance of tasks;
– internal differentiation;
– suitable time for studying;
– conscious learning;
– teaching social interaction;
– the integrity of the learning process;
– orientation to the applied nature of knowledge (Yatsura, 2018).

After proving the importance and necessity of introducing open education technologies as an important component of informatization of the institution of higher education and clarifying the leading and specific features of open education, highlighting the main principles of open education, a control survey of students and teachers was conducted. In addition, we decided not to significantly change the questions and tasks of the initial cut to track the dynamics of the students' training level.

Table 1.
The level of development of students and teachers' skills in the use of open education technologies

Level informative competence	To be held experiment (%)	After conducting experiment (%)
Low	69,4	24,4
Average	26,5	32,7
High	41	42,9

Comparing the results obtained during the control survey in the experimental group before and after the research and experimental work, it is possible to note changes in the levels of development of the skills of students and teachers in the use of open education technologies. And, by the end of the formative experiment, the number of students with a high level of development of information competence increased by 38.8%; the number of students in the experimental group with a low level of development of information competence decreased by 45%.

The analysis of the results of the data displayed in the table and histogram shows that as the technologies of open education are applied, the percentage of students who have improved their professional qualifications has increased. This makes it possible to characterize education when applying open education technologies to increase its effectiveness.

To prove the effectiveness of research and experimental work, it is necessary to identify a statistically significant trend in the shift (shift) of indicators. To solve similar problems, the research used a non-parametric difference criterion: the sign criterion.

In our case, we have that the results of two tests are measured on an interval scale. In these conditions, it is possible to use the sign criterion to identify the tendency to change the state of knowledge of students and teachers after the application of open education technologies, since all the assumptions of this criterion are fulfilled.

A survey was conducted to reveal the opinion of respondents about the need to use open education technologies, the results of the survey analysis are given below.

90% of students believe that the use of open education technologies reduces the time they spend on studying a discipline, promotes quality learning, and helps them remember the main categories more clearly and present their content more deeply, contributing to better assimilation of the material;
92% of students answered that they want the use of open education technologies to take place in all disciplines of subject training;
76% of students are attracted by visuality in the application of open education technologies;
89% – accessibility of the presentation of the material;
59% -the possibility of choosing an "educational route";
75% – logical presentation of the material.

The results of our work in the experimental group showed that after using open education technologies, the respondents changed their opinion about the influence of various factors on becoming a specialist. Thus, during the re-ranking, work in the electronic library of a higher education institution, searching the Internet, as well as creating electronic presentations took higher positions (30-37%). 60% of students answered that they communicate with teachers using open education technologies.

So, the results obtained in the course of research and experimental work indicate that if the educational process is carried out based on substantiated leading and specific features of open education, the main principles of open education are highlighted with the use of the most important services. The level of information competence of students and teachers will increase and will lead to high-quality training of specialists in institutions of higher education (Bykov, 2008).

As teachers and students of higher education get expanded access to digital resources in the conditions of open education, the traditional education tools used for the educational space are changing. Students work with modern digital devices connected to the Internet, which is important for innovative support for the independent work of students, and textbooks are not the main source of information. With this approach, electronic content should be more than just a digitized textbook. Students of higher education must create new resources, interact with digital content, post in a personal digital environment send work for review, and communicate with the teacher and other students of higher education. The teacher can choose resources for the personalized training of each student of higher education, organize the educational activities of students using mixed technology, combine online learning in groups during laboratory work and lectures, and monitor the individual work of the student with resources previously prepared for processing, to organize projects in cooperation with educational space acquirers of other specialties or other groups (Hurzhii et al., 2021).

Conclusions

The introduction into the system of higher education of open education technologies, an important component of the informatization of the institution of higher education for the high-quality training of specialists and innovative support for the independent work of education seekers, will create new educational conditions for the formation of a modern competitive specialist, will contribute to the establishment of a high authority of education in the world, will allow the introduction of innovative reserves of potential progressive development, will contribute to the confident and purposeful entry of any country into the developed countries of Europe and the world.

Open education provides innovative changes like the relationships of participants in educational activities, continuity of learning, efficiency, and accessibility in acquiring knowledge, and innovative support for independent work of education seekers throughout their lives.

The importance of the introduction of open education technology, an important component of the informatization of a higher education institution for the quality training of specialists and innovative support for the independent work of education seekers, is proven and shown.

The main goal of open education and leading and specific features of open education are clarified, and the main principles of open education are highlighted.

The role of the most important services that should be used in the education of a modern institution of higher education is substantiated. The advantages of open education, which is an important component of the informatization of a higher education institution for high-quality training of specialists, are indicated. Generalizing factors that led to the emergence of open education are emphasized.

Prospects for further research consist of the analysis of leading and specific features of open education.

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The effectiveness of justice as a component of the constitutional right to judicial protection of local self-government

Ефективність правосуддя як складова конституційного права на судовий захист місцевого самоврядування

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Abstract

The Ukrainian state, like any state that seeks to assert itself in the international arena and ensure the proper standard of living of the population, has throughout its existence paid and currently pays a lot of attention to the administration of justice. The very state of the administration of justice is an indicator of the state's interest in observing the rights and freedoms of a person, which in turn is the basis for recognizing such a state as a legal state, i.e. one where the laws that establish the basic rights of a person and the responsibility for their non-compliance both for another person and for the state as a whole. The existence of a legal state is impossible without the effective functioning of all institutions of civil society in it, in particular, local self-government, therefore, a special place among the issues of the administration of justice is occupied by the issue of justice within the limits of the protection of the rights of local self-government, in connection with which the topic of the mentioned study is extremely relevant. The goal of this study is to determine the state of the effectiveness of justice in protecting the rights of

Анотація

Українська держава, як і будь-яка держава, що прагне ствердитись на міжнародній арені та забезпечити належний рівень життя населення, протягом всього свого існування приділяла і наразі приділяє чимало уваги здійсненню правосуддя. Саме стан здійснення правосуддя є показником зацікавленості держави в дотриманні прав та свобод особи, що в свою чергу лежить в основі визнання такої держави правовою, тобто такою, де панують закони, що закріплюють основні права особи та відповідальність за їх недотримання як для іншої особи, так і для держави в цілому. Існування правової держави неможливе без ефективного функціонування в ній всіх інститутів громадянського суспільства, зокрема, місцевого самоврядування, тому особливе місце серед питань здійснення правосуддя займають саме питання правосуддя в межах захисту прав місцевого самоврядування, у зв'язку з чим тема зазначено дослідження є вкрай актуальною. Метою даного дослідження є визначення стану ефективності правосуддя щодо захисту прав місцевого самоврядування в Україні.

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local self-government in Ukraine. The authors used dialectical, formal-legal, axiological, logical-legal, hermeneutic methods, as well as the method of content analysis, generalization, modeling, comparison, analogy. The results of the study showed that there are deficiencies in the administration of justice within the framework of the protection of the rights of local self-government. These shortcomings include the politicization of the judiciary, the lack of competence of judges, the complexity of the judicial process and the lack of transparency of the judicial process.

Keywords: rule of law, justice, judiciary, local self-government body, right to legal protection.

Автори використали діалектичний, формально-юридичний, аксіологічний, логіко-юридичний, герменевтичний методи, а також метод змістового аналізу, узагальнення, моделювання, порівняння, аналогії.

Результати дослідження показали наявність недоліків у здійсненні правосуддя в рамках захисту прав місцевого самоврядування. Ці недоліки включають політизацію судової системи, недостатню компетентність суддів, складність судового процесу та відсутність прозорості судового процесу.

Ключові слова: правова держава, правосуддя, судочинство, орган місцевого самоврядування, право на судовий захист.

Introduction

Under the rule of law, as a modern form of activity of state power, we should understand the administrative and legal form of organization and activity of public authorities and society, the value of which is a person, his life, health, honor, dignity, inviolability and other rights and freedoms that are ensured due to the interconnected activities of all branches of government based on the rule of law (Vovk, 2020).

As L. Samofalov et al., (2016) rightly noted, the essence of the rule of law is that legislative, executive, and judicial bodies are closely connected with the law. That is, under the condition of the functioning of each of the branches of government exclusively according to the legislation, which in turn proclaims the privilege of the rights and interests of the individual, it is possible to build a model state, which will be characterized by legal status.

According to Article 1 of the Constitution of Ukraine (Law 254к/96-ВР, 1996), Ukraine is a sovereign and independent, democratic, social, and legal state. By enshrining the specified article in the Basic Law, Ukraine confirmed its obligations to follow the vector of development of legal culture, legal awareness, proper state and local governance, as well as effective justice.

Simultaneously, issues of Ukrainian justice, in particular its effectiveness, are currently causing a lot of discussion and dissatisfaction both within the state itself and among its international partners. Thus, as of 2020, the Ukrainian state took third place among the states that signed the Convention for the Protection of Human Rights and Fundamental Freedoms and recognized the jurisdiction of the European Court of Human Rights (Council of Europe, 1950), in terms of the number of complaints filed to the specified international judicial institution, against Ukraine. At the same time, most of these complaints are based precisely on the expression of mistrust in the decisions of various instances made by national courts, i.e. they are direct evidence of shortcomings in the administration of Ukrainian justice (Zubov, 2020).

Thus, a significant part of public life in the state is covered by the content of local self-government activities, consequently, the spectrum of rights and interests arising in connection with such activities is quite wide, as a result of which judicial protection of such rights constitutes a significant part of the administration of justice in the state as a whole. At the same time, in the administration of justice within the limits of the constitutional right of judicial protection of local self-government, there are tangible features.

The specified features are due, in particular, to the fact that when justice is administered within the framework of the protection of the rights of local self-government, the rights of all members of the relevant territorial community are simultaneously protected, whose interests are represented in court by an authorized official or local self-government body in the relevant procedural role of the plaintiff or defendant.

Given the above, the object of this study is legal relations that arise during the administration of justice within the limits of the constitutional right to judicial protection of local self-government, tangible features are seen.

The tasks of this study are:

1. determination of the optimal approach for objective assessment of the state of the effectiveness of justice concerning the judicial protection of local self-government;
2. establishing the peculiarities of the administration of justice within the constitutional right of judicial protection of local self-government and their influence on its effectiveness.

Theoretical Framework or Literature Review

The study of the indicated problems and the fulfillment of the tasks became possible thanks to the development of a significant theoretical and scientific base, among the creators of which the following should be singled out.

The understanding of the meaning of the rule of law and its relationship with the effectiveness of justice in matters of local self-government protection was facilitated by the works of scientist P. Vovk (2020), in which different domestic scientific approaches to the meaning of the concept of "rule of law" are compared, the analysis of which helped determine the final vision of the specified concept is within the scope of the research subject.

The joint work of L. Samofalov, O. Samofalov, and D. Shevchenko (2016) added to the understanding of the essence of existence and the need for the development of civil society since the mentioned work contains a description of the topical issues of its historical formation and modern features of its formation.

O. Zubov (2020) considered the issue of the development and efficiency of the judiciary in Ukraine by the requirements of international standards, which is especially important in the conditions of Ukraine's active course of European integration. The mentioned work was of considerable importance within the scope of this study, as it allowed us to compare the actual effectiveness of Ukrainian justice in comparison with its model desired by international law.

A remarkable role in the fulfillment of one of the tasks of this study was played by the opinion of L. Moskvych (2010), which was used as the basis for identifying the most optimal approach to determining the criteria for the effectiveness of justice, in contrast, in particular, to the opinion of M. Yasyniuk (2020), which has a somewhat narrower vision of the specified criteria.

Yu. Kamardina and Yu. Koveino (2020), in their research, on the theoretical and legal foundations

of the protection of the rights of local self-government bodies justifiably focused attention on the special public-legal status of local self-government bodies, which should determine the peculiarities of their protection.

Instead, O. Baymuratov (1996) focused on the study of the interaction of local self-government bodies with other authorized subjects of law, within which he established the essence and significance of public interests underlying local self-government, therefore subject to discussion within the limits of the existence of its constitutional right to protection.

The works of O. Leonov (2019, 2020), which thoroughly consider the issues of approaches to understanding the protection of the rights of local self-government, characterize various criteria for their judicial protection, and also analyze international legal standards in the field of protection of local self-government, became a significant platform for achieving the set goals of the research. , which in turn became the basis for modeling the further development vector of local self-government and the judiciary in the direction of increasing the level of efficiency of the latter.

Within the scope of the aforementioned, the work of O. Chernezhenko (2019) also contributed to this research, in which, in continuation of the study of international legal standards for the protection of local self-government, certain guarantees of local self-government, proclaimed by the European Charter of Local Self-Government (Council of Europe, 1985), which should be considered the basis for the formation of the European constitutional model, were considered local self-government, in particular for European integration.

The research of S. Panasyuk (2016) is aimed at studying the practical international experience of the judiciary on the protection of local self-government, which is embodied in the legal positions outlined in the decisions of the European Court of Human Rights, which provides a noteworthy opportunity to compare the national judicial practice with the international one to take into account the recommendations of the latter in activities of national Ukrainian judicial bodies.

The issues of practical protection of the rights of local self-government were raised in the writings of I. Ruschak (2013), considered these issues in terms of appeals against decisions, actions, or inaction of local self-government bodies in the administrative procedure.

Foreign scientists also left their mark in research. In particular, in the works of the Lithuanian scientist V. Kondratienė (2008), the theoretical and practical aspects of the legal regulation of local self-government systems and models in their relationship with the concepts established in European law are considered in detail.

Professor of the Polish University B. Dolnytski (2009), examining local self-government in Poland, investigated in detail the principal purpose of local self-government activities, the main of which he identified as meeting the needs of the community. This point of view was supported by P. Dzekanski and A. Olak (2014), as well as K. Pavlovska (2013). Thus, this approach is the most appropriate, as it reveals the major goal of building and developing local self-government.

Scientist and practitioner Karol Kiczka (2018) rightly noted the importance of the state guaranteeing the functioning of an impartial, independent, and effective judiciary in matters of organization and activities of local self-government.

Like Ukrainian scholars, the German scholar B. Schaffarzik (2002) paid a lot of attention to the European Charter of Local Self-Government, recognizing it as the primacy in matters of ensuring the protection of local self-government. Previous studies have shown that the effectiveness of justice in protecting the rights of local self-government is a complex and multifaceted issue that requires more detailed investigation. This motivated the authors of this article to conduct research.

Methodology

An objective and thorough study of the chosen topic and, as a result, the fulfillment of the assigned tasks became possible thanks to the comprehensive use of a set of general scientific and special methods of scientific knowledge.

In particular, with the help of the dialectical method, a general vision and understanding of the peculiarities of the protection of the rights of local self-government was formed, which became possible thanks to the clarification of the properties and relationships that arise in the legal relations associated with such protection.

The formal legal method was used to determine the legal content of the main concepts within the scope of this study, the main of which is the concept of local self-government.

The specified method in combination with the method of content analysis, which consists of the possibility of comparing the provisions of various legal sources, helped to determine the essence of the specified concept through the comparison of its interpretations in various regulatory and legal acts.

Understanding the essence and meaning of local self-government and the importance of its protection was also served by the axiological method, which revealed the main value characteristics of the existence and proper functioning of local self-government in the state, through which many functions are performed in the interests of the entire society in the person of the relevant territorial community.

The method of system-structural analysis was used to determine the relationship between such concepts as local self-government, the right of local self-government, and the protection of local self-government.

Thanks to the method of generalization, it was possible to single out the relevant features and shortcomings of justice within the protection of local self-government, which, in turn, made it possible to follow the dynamics of the effectiveness of the judiciary.

Using the logical-legal method, several proposals were formulated to improve the efficiency of justice in matters of local self-government protection, in particular, it was proposed to regulate the criteria for evaluating the effectiveness of justice at the normative level and to raise the level of qualifications of judges considering cases involving local self-government, etc.

The modeling method was used to provide examples of real-life situations involving local self-government bodies, which can be seen from the judicial practice placed in the Unified State Register of Court Decisions. The specified method allowed us to assume the occurrence of possible negative consequences in the absence of a timely and proper response to the deficiencies in justice regarding the protection of the rights of local self-government.

The comparison method was widely used, in particular, to find out the optimal approach to determining the criteria for judicial efficiency. Consequently, thanks to the comparison of various concepts currently offered by the theory of law to the specified criteria, it became possible to choose the exact scientific understanding that

best meets the research goal and allows the most complete assessment of the effectiveness of the judiciary in protecting the rights of local self-government.

The method of analogy made it possible to take into account in this research on the protection of the rights of local self-government the use of the provisions contained in the legislative framework and judicial practice, in particular of the Constitutional Court of Ukraine, regarding the protection of the right to judicial protection of a person.

The hermeneutic method served as a basis for identifying and studying the meaning of specific procedural and legal conflicts in the protection of the rights of local self-government, which exist in the theoretical plane and are manifested in practice, as well as negatively affect the effectiveness of justice within the scope of the study.

Results and Discussion

Regarding the first task of the research, it is significant to note that efficiency as a characteristic of justice is a relative and evaluative concept, which gives rise to the presence in theory and practice of different approaches to its understanding and definition and, as a result, different evaluation criteria.

In particular, the scientific research of L. Moskvych (2010) seems interesting within the scope of the mentioned issue, as a result of which the scientist concluded the expediency of distinguishing four main groups of efficiency criteria:

1. those that reflect the standards of the organization of the judicial system;
2. criteria that make it possible to assess the quality of the work of the judicial system and are related to the achievement of the positive goals of justice;
3. those that reflect the standards of professionalism of judges and court employees;
4. criteria for assessing the level of legitimacy of the court institution in society (p. 32).

Thus, in the opinion of the specified scientist, the first category of efficiency criteria should include the following criteria: accessibility of the judicial system, independence of the court, specialization of the judicial system, and unity of judicial practice. To the second group, she assigned the criteria of fairness, impartiality, and timeliness of the trial. The third category of efficiency criteria is represented by the professionalism of judges and court staff, and the fourth by the legitimacy of the court and its authority as a court (Moskvych, 2010).

This vision of the approach to evaluating the effectiveness of the judicial activity, in contrast to many others, that are included in the theoretical base of the study of justice, is quite apt, since it does not give preference to quantitative indicators, as can be seen from the study of Yasyniuk M.M. (2020), who, although he mentions the presence of qualitative indicators of justice, in particular, noting that the effectiveness of the judicial system is not limited to statistical data, although they reproduce individual qualitative indicators, but focuses on the quantitative expressions of that or other phenomenon in the judicial sphere, which characterizes the effectiveness of justice in general.

As a rule, justice in the state as a whole is evaluated for effectiveness, however, the study of the administration of justice in certain spheres of social life is characterized by the presence of certain features that are not reflected in the general vision of the state of justice, but are important for its further improvement, since the gradual identification and elimination of shortcomings individual court proceedings will lead to an increase in the general level of justice efficiency within the entire state.

Therefore, the determination of the most optimal approach to establishing the criteria for evaluating the effectiveness of justice is mandatory *for the fulfillment of the second task of the research,* within which it is worth noting the following.

As already mentioned above, a significant part of public life in the state is covered by the content of local self-government activities.

In European law, local self-government is the right and ability of local self-government bodies to manage and manage the main part of state affairs under the competence established by law, taking full responsibility for this and being guided by the interests of local self-government (Kondratienė, 2008).

All tasks of local self-government have the character of social tasks in the sense that they serve to meet the collective needs of the entire society (Dolnytski, 2009).

International legal norms position local self-government as an influential and permanent element of the organizational structure of a modern state, whose place in the system of government bodies is primarily determined by the national legislator (Kiczka, 2018).

Part 1 of Article 140 of the Constitution of Ukraine declares that local self-government is the right of a territorial community – residents of a village or a voluntary association of residents of several villages, towns, and cities into a rural community - to independently resolve issues of local importance within the limits of the Constitution and laws of Ukraine (Law 254к/96-ВР, 1996).

In turn, under part 3 of Article 140 of the specified normative legal act of the highest force, local self-government is carried out by the territorial community per the procedure established by law, both directly and through local self-government bodies: village, settlement, city councils and their executive bodies (Law 254к/96-ВР, 1996).

Thus, local self-government can be considered in two main aspects: as the right of a person to participate in solving issues of local importance (conditionally – the right to local self-government) and as the right of persons or bodies authorized by the relevant territorial community to perform the functions of local self-government.

Article 145 of the Basic Law stipulates that the rights of local self-government are protected in court (Law 254к/96-ВР, 1996). Hence, taking into account the above conditional division of the right of local self-government according to the interpretation of its content, the judicial protection of the specified right can also be considered from two sides: the judicial protection of the right of a person to participate in local self-government and the judicial protection of the exercise of local self-government itself.

The current legislation of Ukraine provides for several forms of individual participation in local self-government, among which direct and indirect methods are distinguished. Direct participation in the organization and activities of local self-government bodies by being elected to an elected local voting body (active method) or voting in local elections as a voter (passive participation) is a direct way of exercising a person's right to local self-government.

This form of relationship with local self-government in the political sense involves the honorable participation of individuals in the performance of specific management tasks, the so-called personal self-government (Dzekanski, & Olak, 2014).

In contrast to direct methods aimed at participation in local self-government within a wide range of issues of local importance, indirect methods are represented by various forms of participation in solving those issues that arise in each specific situation and can be expressed in the organization or participation in public initiatives, thematic forums and meetings, general meetings, rallies, surveys, preparation and submission of appeals, proposals, petitions, etc.

Each of the specified rights-opportunities is subject to judicial protection of the constitutional right of local self-government, which takes place according to the rules of administrative proceedings, since in any case, it is of a public-law nature, while the most regulated is the judicial proceedings regarding direct ways of implementing the right of local self-government, which includes, in particular, the election process.

The peculiarity of the administration of justice within the protection of the specified component of the right of local self-government is that at the same time the protection of electoral rights guaranteed by separate provisions, in particular, of the Constitution of Ukraine, which in turn can be regarded as a positive indicator for the effectiveness of justice, as it testifies to the economic efficiency of the judicial process.

The effectiveness of justice within the limits of the specified disputes is also positively affected by the presence of legally defined features of the consideration of the specified category of cases regarding the jurisdiction of the court competent to resolve the specified dispute, the terms of submitting a statement to the court about the violation of the right to vote (in the case of contesting local elections, also the right to local self-government), terms of their consideration by the court, as well as other procedural issues regarding the announcement and delivery of the court decision, notification of the parties, etc. (Law 2747-IV, 2005).

The consideration of disputes related to the second component of the law of local self-government – the direct implementation by officials and local self-government bodies of the

functions provided by law to resolve issues of local importance – has a more extensive impact on the effectiveness of justice as a whole.

Nonetheless, there is no definition of the concept of "protection of the rights of local self-government bodies" in the national municipal legislation, so it is appropriate to consider the specified legal category in the context of the concept of "protection of the rights of local self-government" (Kamardina, & Koveyno, 2020).

An analysis of the current legislation of Ukraine, in particular the provisions of the Law of Ukraine "On Local Self-Government in Ukraine" (Law 280/97-BP, 1997), makes it possible to conclude a significant range of own and delegated powers possessed by local self-government in Ukraine. Therefore, the rights of local self-government are manifested in each of the spheres of public life when authorized bodies or persons exercise the relevant powers and are accompanied by certain sectoral rights of local self-government depending on the sphere of performance of its functions, while cases of violation of the specified rights, the restoration of which requires judicial intervention, are not included.

Judicial protection of the rights of local self-government involves taking into account particular specific interests that are systematically and permanently produced in the field of local self-government at the level of the relevant territorial community by its residents-members. As M. Baymuratov (1996) rightly noted, these interests appear in the form of three interconnected groups of public interests: the interests of the territory on which the territorial community functions, the interests of the territorial community itself, and the interests of a specific resident-member of the territorial community.

Thus, the Constitution of Ukraine provides for direct judicial protection of the rights of the territorial community (the rights of local self-government) and not only judicial protection of local self-government bodies (Leonov, 2019).

It is significant that the importance of protecting the rights of local self-government is emphasized not only at the level of the Basic Law of the state, but is also reflected in international legal regulation, in particular in Article 11 of the European Charter of Local Self-Government, 1985, which aims to protect local self-government as an institution (Schaffarzik, 2002).

It should be noted that Ukraine, being a member of the Council of Europe and a signatory of the Charter, which, by the way, it ratified (Law 452/97-BP, 1997), undertook to implement it in full and without reservations (Panasyuk, 2016, p 67).

Thus, local self-government is an essential basis of any democratic government and makes an extraordinary contribution to the development of democracy, effective administration, and decentralization of power, consequently, the state must protect it as an institution, and therefore it must be special constitutional protection (Chernezhenko, 2019).

It is worth noting that in the practice of the Constitutional Court of Ukraine, there are no decisions regarding the application of Article 145 of the Constitution of Ukraine, nevertheless, decisions were made regarding the interpretation of the general right to personal protection (Decision 9-zp, 1997), which may be applied in terms of the fact that local self-government protects the rights of a whole group of persons at once, each of whom has the right to protection.

Instead, the effectiveness of justice in protecting the constitutional right of local self-government should be evaluated within the scope of consideration of real disputes involving local self-government, in which local self-government bodies can act as both plaintiff and defendant.

Thus, an official or a local self-government body has the right, which corresponds to the corresponding duty, to carry out public self-government following the requirements of the law. At the same time, individual entities often prevent such management, in particular by trying to persuade the self-governing entity to perform its functions contrary to the law by applying to the court.

At the same time, within the scope of the implementation of such justice, a paradox arises, which consists in the fact that the interests of one person - a specific representative of a territorial community (or group of people) are opposed by the interests of the entire territorial community, which is represented by an authorized body of local self-government or an official, and, in such in court proceedings, the concretely established right of one person is countered by the theoretical collective right of local self-government to unhindered implementation of public administration in the manner established by law. Moreover, taking into account that the local self-government body is a subject of power, which

only performs the functions provided by law, does not have any personal interest, and does not bear personal losses, justice is often meticulous about such a body and gives priority to specific individual rights, regulating it the fact that the local self-government body will not suffer if it deviates relatively from the rule of law to satisfy the interests of the individual. However, at the same time, the court does not take into account the above-mentioned right of local self-government in terms of the right to proper public administration, which violates the rights of the entire territorial community to resolve the relevant personal issues of a specific person who is a party to a court case.

Another problem of the judiciary, which negatively impacts the efficiency of justice, lies in the area of its resource personnel support, namely, it concerns the professionalism of judges. This statement in no way calls into question their qualification, however, a large number of social legal relations in which the right of local self-government is implemented cover various spheres of public life, which are regulated by a significant array of normative legal acts and are accompanied by significant features of the procedures for the implementation of the functions of local self-government in practice, in which it is not easy for judges to deal with the case in a relatively short time, taking into account the workload of other cases. Thus, the sphere of activity of local self-government includes, in particular, the fields of education, construction, trade, land resources, registration and management of real property rights, registration of place of residence, etc., within which many separate procedures for granting licenses, permits, approvals, other social and administrative services, etc., within which controversial issues arise that require intervention to protect the relevant law of judicial institutions.

Concurrently, the modern legislation of Ukraine, to a certain extent, does not take into account the peculiarities of the functioning and methods of decision-making by local self-government bodies (Ruschak, 2013), just as the judicial system does not have a detailed division by sphere of social relations by jurisdiction, in connection with than judges (as a rule of courts of administrative direction, since the local self-government in most cases appears in the case as a subject of authority in matters of its performance of public-authority management) has to independently investigate the intricacies of certain legal relations to make a legal, and fair decision. In this case, cases of the court making

an unsatisfactory decision related to the lack of sufficient knowledge of the judge about the performance of certain functions by the local self-government and their features may not be an exception, which in turn indicates insufficient effectiveness of justice in matters of protection of local self-government.

A solution to the specified problem can be the systematic holding of educational seminars or training for acting judges by specialists in the relevant field of local self-government on specific issues of the performance of their powers by local self-government bodies in each specific field to replenish the theoretical knowledge of judges obtained from the relevant regulatory and legal framework, and familiarization with the practical side of local self-government.

The variety of spheres in which local self-government is involved gives rise to a large number of different legal relations, which, unfortunately, can be interpreted and considered by judges in different ways, considering that one of the urgent problems of the judiciary, which negatively affects the effectiveness of justice, is the different interpretation of the rules jurisdictional subject matter jurisdiction of disputes regarding violation of the rights of local self-government.

Thus, the scope of powers of local self-government defined by law, although accompanied by a public-law component, is often related to the rights of individuals or legal entities of a civil-law nature. For example, disposal of real estate objects of a communal form of ownership (entering into a lease agreement, privatization, etc.) results in the emergence of housing or other property rights in a person, which are protected in civil proceedings under paragraph 1 of part 1 of article 19 of the Civil Procedure Code of Ukraine (Law 1618-IV, 2004). At once, the local self-government body in these legal relations remains a subject of power, which carries out public management, that is, it is a subject of administrative law, but given the subject of the dispute, such a dispute with the subject of power will not be resolved according to the rules of administrative jurisdiction.

However, in practice, not all disputes with the subject of authority can be easily and correctly distributed by jurisdiction, which in turn leads to a violation of jurisdiction, consideration by courts of different jurisdictions of disputes similar in substance, or, in general, simultaneous

consideration in several jurisdictions of the same and the same dispute.

For example, according to the provisions of the Law of Ukraine (Law 280/97-BP, 1997) "On Local Self-Government in Ukraine" (1997), in particular, according to clause 7 of part 1 of article 2, the authority to register the place of residence of individuals is delegated to local self-government bodies - the relevant executive bodies of the village, settlement or city council. At the same time, from the selective analysis of depersonalized decisions of the Unified State Register of Court Decisions, it can be seen that the registration of the place of residence by society in general, as well as by the court in particular, is still perceived as the basis for the emergence of housing rights for individuals, in connection with which the lion's share of cases regarding the implementation by the body registration of the place of residence of natural persons with relevant powers is interpreted as a matter related to residential rights and is considered according to the rules of civil procedural legislation.

In turn, the registration of the place of residence does not give rise to housing rights in a person, as well as any other rights of a civil law nature. Therefore, taking into account that the body of registration of the place of residence is a subject of authority, the action, decision, or inaction of which is contested within the administrative proceedings, as evidenced by clause 1 of part 1 of article 19 of the Code of Administrative Procedure of Ukraine (Law 2747-IV, 2005), it is the courts of administrative jurisdiction that have to consider disputes arising between a person and a local self-government body regarding issues of registration of place of residence.

This position is also reflected in judicial practice since the Unified State Register of Court Decisions is full of decisions of administrative courts of various instances, adopted within the limits of the specified type of the subject of the dispute. That is, two different judicial practices are formed based on similar disputes: within civil and administrative proceedings.

However, the wider the judicial practice, the more generalizations, clarifications, and reviews of it are, made by higher judicial authorities, the more comprehensive and detailed the legal regulation and regulation of the activities of local self-government, its subjects, and bodies, and therefore the more it is easier and faster not only to issue court decisions on specific issues of protection of local self-government but also to

make changes and additions to the current legislation or adopt new laws regarding local self-government more quickly (Leonov, 2020). Hence, the result of the activity of the courts should be, in particular, the presence in the legal circulation of only those legal acts that do not violate the rights of local self-government (Pavlovska, 2013).

Taking into account the above, the current state of judicial practice regarding the protection of local self-government is a vivid example of the presence of significant shortcomings in the administration of justice, which inhibits not only the development of the judiciary but also local self-government.

Conclusions

Completion of the first task led to the formation of the opinion that equal attention to both quantitative and qualitative criteria of the effectiveness of justice will allow to provide it with a comprehensive assessment, taking into account the organizational and fundamental foundations of the judicial system, as a separate branch of government, represented by the relevant bodies-courts, normatively - the procedural basis of the specified system, which includes the assessment of the court decisions themselves, the timeliness of their adoption and compliance with the legislation, the resource provision of justice of a material and personnel nature, the level of trust in the judiciary, etc. Therefore, to objectively evaluate the effectiveness of justice in the state at the normative level, a generally recognized approach to the evaluation of justice must be developed, which will serve as an example of maintaining a balance between different, but equally important, aspects of justice, which are necessary for forming a judgment about its effectiveness, because exclusively aggregate analysis of indicators according to the above criteria will allow determining the actual state of the judicial branch of government in the state and, if necessary, to form a further plan of necessary and sufficient measures to increase the level of the revealed state of justice.

Within the framework of the second task, it became possible to conclude that, unfortunately, in practice, the effectiveness of justice in the protection of the rights of local self-government in such disputes cannot be considered exemplary for the following reasons:

– the right of local self-government to proper public administration by judicial authorities

is often identified exclusively with the rights and obligations of the relevant local self-government body, and not of the entire territorial community, the representative of which is such a body, especially when the latter acts in the procedural status of the defendant, which prevents the court from carrying out a fair consideration of the relevant case;

– uncertainty regarding the jurisdiction of the dispute leads to the consideration of the case by courts of different jurisdictions, which have opposite views on the dispute given its nature (protection of housing rights or protection against an unlawful decision of a local self-government body), which are expressed in completely different motivational parts of decisions when resolving similar disputes, which is a significant obstacle to the formation of a unified judicial practice;

– a significant range of powers of local self-government and their imperfect normative and legal regulation leads to complications for judges when considering relevant cases, due to their limited knowledge of material and procedural features of the functioning of local self-government.

Several steps can be taken to implement improvements in the evaluation of justice and the protection of local self-government rights. Here are some suggestions:

Development of a Generally Recognized Approach to Justice Evaluation:

Establish a working group or commission comprising legal experts, scholars, and representatives from the judiciary to collaboratively develop a generally recognized approach to justice evaluation.

The approach should encompass both quantitative and qualitative criteria, considering organizational and fundamental foundations of the judicial system. It should include criteria such as the assessment of court decisions, timeliness, compliance with legislation, resource provision, and public trust in the judiciary.

Ensure that the developed approach serves as a comprehensive and balanced model for evaluating justice, addressing various aspects crucial for an effective judicial system.

Implementation of Normative Changes:

Based on the developed approach, propose and implement normative changes in the legal system to formalize the criteria for justice evaluation.

Clearly define the roles, responsibilities, and jurisdiction of different courts to reduce uncertainty regarding dispute jurisdiction.

Address the identified issues related to the range of powers of local self-government through legislative amendments, providing clearer norms and guidelines for judges.

Capacity Building for Judges:

Provide training programs for judges to enhance their knowledge of the material and procedural features of local self-government.

Create specialized training modules to address the challenges identified in the study, such as the complexities arising from the imperfect normative and legal regulation of local self-government.

Promoting Consistency in Judicial Decisions:

Encourage communication and collaboration among different jurisdictions to promote a unified approach to similar disputes.

Establish mechanisms for judges to share experiences and best practices, fostering consistency in the motivational parts of decisions and contributing to the formation of a unified judicial practice.

Monitoring and Review:

Implement a monitoring and review mechanism to periodically assess the effectiveness of the reforms and the developed approach to justice evaluation.

Collect feedback from stakeholders, including legal practitioners, scholars, and representatives of local self-government bodies, to make continuous improvements.

Advocacy for Reform:

Use the findings of the study to advocate for broader reforms in the sphere of justice within the protection of local self-government.

Engage with policymakers, legislators, and relevant stakeholders to garner support for the necessary and sufficient measures identified in the study.

Public Awareness and Trust-Building:

Conduct public awareness campaigns to inform citizens about the reforms and improvements in the justice system.

Promote transparency in the judicial process to enhance public trust in the judiciary.

By implementing these recommendations, there can appear a systematic and comprehensive approach to improving the evaluation of justice and enhancing the protection of local self-government rights. This would contribute to the overall effectiveness of the judicial system and the fulfillment of constitutional rights.

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Legal regulation of the digital environment: digitization of the state-legal and law enforcement sphere

Правове регулювання цифрового середовища: діджиталізація державно-правової та правоохоронної сфери

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Abstract

The rapid development of society and the impact of information technology have significantly changed the legal field and contributed to the creation of a legal framework for the digital environment. Successful development of digital relations in Ukraine requires effective legislative regulation. The favorable appearance of this process is determined by effective strategic planning, active participation of the government and an appropriate legal framework. From this point of view, it is considered important to consider issues of legal regulation of the digital environment in the context of the activities of state and law enforcement agencies. The purpose of the work is to research the regulatory and legal provision of the digital environment with an emphasis on the regulation of digitalization of state legal and law enforcement activities. Research methodology includes such methods as: historical, systematization, analysis and synthesis, structural-functional and comparative analysis. The result of the scientific analysis of scientific research and regulatory and legal regulation of the relevant relations was the

Анотація

Стрімкий розвиток суспільства та вплив інформаційних технологій суттєво змінили правове поле та сприяли створенню правової бази для цифрового середовища. Успішний розвиток цифрових відносин в Україні потребує ефективного законодавчого регулювання. Сприятливість цього процесу визначається ефективним стратегічним плануванням, активною участю уряду та відповідним правовим полем. З цієї точки зору вбачається важливим розгляд питань правового регулювання цифрового середовища в контексті діяльності державних та правоохоронних органів. Мета роботи – дослідження нормативно-правового забезпечення цифрового середовища з акцентом на регулювання цифровізації державно-правової та правоохоронної діяльності. Методологія дослідження включає такі методи як: історичний, систематизації, аналізу та синтезу, структурно-функціональний та порівняльний аналіз. Результатом наукового аналізу наукових досліджень та нормативно-правового регулювання відповідних відносин стало

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study of the legal plane of digital transformations in Ukraine. Internal legislative norms were studied, relevant laws aimed at digitization were analyzed, their purpose was determined; the existing legislative basis for building a digital society and economy in Ukraine is highlighted. The analysis of strategic documents on digitalization in the spheres of public administration and law enforcement was carried out. The internal concepts of the development of e-government have been studied. The experience of foreign countries in the regulation of the digital environment and electronic management was studied, progressive means of regulation of the studied issues abroad were determined.

Keywords: digitalization, digital environment, law enforcement activity, legal system, legal regulation.

дослідження правової площини цифрових трансформацій в Україні. Вивчено внутрішні законодавчі норми, проаналізовано відповідні закони, спрямовані на цифровізацію, визначено їх призначення; висвітлено існуючу законодавчу базу для побудови цифрового суспільства та економіки в Україні. Проведено аналіз стратегічних документів з цифровізації у сферах державного управління та правоохоронних органів. Досліджено внутрішні концепції розвитку електронного урядування. Вивчено досвід зарубіжних країн з регулювання цифрового середовища та електронного управління, визначено прогресивні засоби регулювання досліджуваних питань за кордоном.

Ключові слова: цифровізація, цифрове середовище, правоохоронна діяльність, правова система, правове регулювання.

Introduction

Changes in legislative regulation arose as a result of the formation of digital reality, which determines the direction of the development of society and affects the mechanisms of legal regulation. Due to the fact that life in modern society is becoming more and more dynamic, technologies are developing. The impact of globalization and digitalization leads to the transformation of the paradigm of thinking, the improvement of civil society institutions, authorities and structures, as well as the legal system. Therefore, the digital space requires the creation of a model of legal regulation that corresponds to technological reality. Thus the objective of the study is to analyze the legal regulation of the digital environment in the context of the digitalization of the state-legal and police sphere, in order to identify the challenges and opportunities posed by this transformation.

Contemporary legal frameworks mirror the evolving dynamics of current social interactions. Simultaneously, the global community is reassessing its role in safeguarding the interests and intentions of involved parties within the digital landscape. Digitalization has raised new challenges for legal regulation, such as privacy protection, security and network neutrality. The states came to the conclusion that at the current level of development of human civilization, when resolving any legal disputes, the interests of the parties to the dispute, as well as any other natural and legal persons, states and the international community in particular, should be taken into account.

In this context, the tasks of the research are:

1. To find out problematic issues of legislative consolidation of provisions on electronic government.
2. Compare international experience regarding the legal regulation of digitalization of the law enforcement sphere and the state-legal sphere.
3. To analyze the legal regulation of the digital environment in the context of digitization of the state-legal and law enforcement sphere.

Achieving these goals can be ensured only with the active role of the state. At the same time, the modern state must realize that social relations in the digital dimension have already reached a state that is quite comparable to social relations formed in the offline environment.

Accordingly, the arrangement of the elements of the digital environment and the harmonious combination of these elements among themselves should become an important goal of the functioning of state institutions at the local level, as well as interstate institutions - at the international level.

Theoretical Framework or Literature Review

Atamanova and Smirnov (2022) focused their research on the digitization of the state and legal domains. They concluded that in Ukraine, the digitization of the state-legal sphere aims to enable citizens to access all government services online through their smartphones. The objective of digitization is to transform government services, reduce reliance on paper, and streamline access to services for simplicity. The authors highlight that digitization is viewed as a

holistic approach to combating corruption, expediting service delivery to citizens, and enhancing societal participation in shaping public policy through various e-democracy tools.

The issue of legal support for the digital economy and e-business are researched by Vinnyk (2018). The author examined the interaction between the information society and the digital economy, considering them as integral components in relation to civil society institutions, the system of the digital economy, including its subject-object composition, regulatory and legal support, the legal position of electronic business and the digitalization of its corporate form, foreign experience legal regulation of digital economy relations.

A profound research of legislation in different countries and international legislation on the whole regarding the regulation of relations in the digital space was carried out by Dovgan and Mikhailina (2020). Their findings indicate that for the well-rounded progress of information rights within society, it is insufficient merely to recognize the right to access the Internet; it is crucial to regulate the relationships that emerge in the digital space. This involves primarily defining the legal status of participants, such as providers and users. Additionally, an examination of cyber security measures in leading foreign nations revealed the necessity for Ukraine to enhance the effectiveness of its law enforcement agencies.

The experience of foreign countries regarding the legal regulation of the development of the digital economy was studied by Kostyuchenko (2021). The article emphasizes on a common feature of the legal regulation of the development of the digital economy in some leading countries of the world, including Australia, Great Britain, China, the USA, France, and Japan. It is about strategic planning in the field of digitalization, the main part of which is a detailed strategy for the digitalization of the economy and all other spheres of social life. The basis of strategic planning in the field of digitalization is the understanding of the need for clear regulation of the principles of activity of all organizations participating in economic circulation, in particular, state institutions and commercial legal entities. General rules and principles of using the latest technologies, primarily those that use artificial intelligence technology, electronic commerce are also taken into account, the legal status of electronic contracts are also taken into account. Significant attention in the legislation of

these states is also paid to ensuring cyber security and data protection.

Current trends in the development of legal regulation of the digital economy are considered in the work of Levytska (2019). Thus, it is stated that in the world states at the current stage of socio-economic transformation of society, the environment imposes its features on the institutional structure of society, on the model of legislative regulation of the digital economy and causes the need for the formation of fundamentally new concepts and approaches. In particular, the considered foreign experience of legal regulation in the field of digital legal relations will be useful for application at the national level of legal regulation in the digital field.

Manko (2020) considered the issue of technological algorithms and electronic documents. The author concluded that technological algorithms in law represent the digitization processes within the legal sphere of the contemporary state. While numerous issues remain unresolved, the overall trajectory of development merits endorsement and further comprehensive theoretical investigation.

The development of e-governance in Ukraine is studied by Mokhova (2021). Among other things, the author investigated the peculiarities of the formation of various approaches to e-government in the leading countries of the world. The main goal of the study was to find out the optimal model of e-government for Ukraine, so conceptual provisions regarding the formation of the e-governance development mechanism in the conditions of digital transformations of Ukraine on the way to European integration have been determined.

Pyshchulina (2020) analyzed the current stage of global economic and social development, which is characterized by the significant impact of digitalization. In addition, the paper analyzes the potential risks and threats of digitalization in Ukraine and the world.

Pavlenko (2021) tried in his work to understand the impact of the digitization process on law as such. The work shows that along with the advantages of digital technologies, in particular artificial intelligence, new types of ethical problems and issues of justice are raised. The necessity of defining approaches to solving new tasks of legal science and improving the legal framework for the protection of the digital rights of citizens is substantiated.

Svitlak (2020) paid significant attention to the problems of regulating civil relations in the digital space. Frolova (2020) drew attention to the peculiarities of the state policy of stimulating the processes of digital transformation of small and medium-sized enterprises in Ukraine.

Some issues of the development of the legal system in the digital era were investigated by Telychko and Rekun (2022). According to the authors, the digitalization of legal reality contributes to the formation of new civilizational phenomena and processes, and the emergence of a new legal understanding, worldview, and legal culture. It was also noted that the process of rulemaking and law enforcement should become digital. At the same time, attention was drawn to the fact that the necessary technologies for this already exist, but it is necessary to ensure their correct application during the formation of digital regulation processes.

Methodology

The methodological basis of the research is general scientific and special methods of learning state legal and law enforcement activities and mechanisms of legal regulation of the digital environment.

With the help of the historical method, it became possible to analyze the main stages of the formation of the electronic government system in Ukraine and abroad. By its legal nature, the historical method focuses on the origin and evolution of the subject of research and is indicated in a chronology of times and stages. This method makes it possible to investigate the emergence, formation, and development of processes and events in chronological order in order to identify internal and external connections, regularities, and contradictions. Therefore, in historical retrospect, the use of this method is important for clarifying the regulatory and legal regulation of the digital environment.

The study employed a systematic approach to examine the foreign practices of implementing state mechanisms for advancing e-government and digitization within the public sector. It aimed to identify the distinctive features of regulatory and legal support for e-government in Ukraine. The methodology involved selecting the most overarching features and characteristics, as well as formulating concepts, laws, and key ideas related to the subject under investigation. Due to the systematic approach, the basis of the regulation of the state mechanism regarding the information support of electronic government

based on the implementation of digital technologies was also formed.

The application of methods of analysis and synthesis was carried out when determining the features of the conceptual foundations of electronic governance, researching scientific approaches to the definition of the concept of "digital environment", "electronic governance", key achievements and problems of the implementation of digital capabilities of Ukraine, determining, as well as analyzing directions for improving the mechanisms of electronic governance. In general, the method of analysis is a method of research, which consists of the imaginary dismemberment of the whole phenomenon into constituent parts - simpler ones, the selection of individual aspects, properties, and connections. Synthesis is a method of research, that consists of the imaginary connection of separate sides, properties, connections of a complex phenomenon, and the understanding of the whole in its unity. Therefore, without applying the described methods, it is impossible to obtain objective research results.

The structural-functional method was applied to analyze the institutional framework for electronic governance in Ukraine, define the state mechanisms for the digital infrastructure of the country, and establish the strategic objectives for ensuring cybersecurity in Ukraine. In its essence, a structural-functional method is an approach to the description and explanation of systems, which examines their elements and dependencies between them within the framework of a single whole; individual social phenomena perform a certain function in maintaining and changing the social system. Each element of this structure performs certain functions that satisfy the needs of the system. The activity of system elements is programmed by the general structural organization, the positions they occupy, and the roles they perform. The structural-functional method is one of the most important forms of application of this method in the study of management phenomena and processes because it consists of dividing a complex object into its constituent parts, studying the connections between them, and determining the specific functions (roles) inherent in them, directed to meet the relevant needs of the personnel management system, taking into account the integrity of the latter and its interaction with the external environment.

Using the method of comparative analysis, an analysis of e-governance in Ukraine was carried

out, digitalization and its regulation at the regional and international levels were assessed, and the issue of electronic readiness of state administration bodies was clarified.

Data Sources:

Historical Method:

1) Historical documents related to the formation of electronic government systems in Ukraine and abroad.
2) Legal texts and regulations chronologically documenting the evolution of electronic government.
3) Historical records and reports detailing the emergence, formation, and development of electronic government processes and events. 4) Regulatory and legal documents pertaining to the digital environment and its historical regulation.

Systematic Approach:

1) Foreign practices and case studies related to the implementation of state mechanisms for e-government.
2) Laws, regulations, and key concepts governing e-government in different countries.
3) Reports and studies on the regulatory and legal aspects of e-government in Ukraine.
4) Comprehensive analysis of overarching features and characteristics in foreign and domestic contexts.

Analysis and Synthesis Methods:

1) Scientific literature on conceptual foundations of electronic governance.
2) Research papers defining the "digital environment" and "electronic governance."
3) ey achievements and problems related to the implementation of digital capabilities in Ukraine.
4) Directions for improving electronic governance mechanisms from academic and practical perspectives.

Structural-Functional Method:

1) Institutional documents outlining the framework for electronic governance in Ukraine.
2) Descriptions and explanations of the elements constituting the electronic governance system.
3) Data on state mechanisms for the digital infrastructure of Ukraine.
4) Reports and strategies related to the strategic objectives for ensuring cybersecurity in Ukraine.

Comparative Analysis Method:

1) Comparative studies on e-governance in Ukraine and other countries.
2) International and regional regulations and practices in digitalization and its regulation.
3) Assessments of electronic readiness of state administration bodies in Ukraine and globally.
4) Reports and analyses focusing on the regional and international levels of digitalization in the public sector.

The research focused primarily on Ukraine and its results may not be generalizable to other countries of the world.

Results and Discussion

In the contemporary landscape of social development, the dynamics of interactions between individuals and the state are evolving. There is a growing emphasis on the digitization of both state-legal and law enforcement activities, reflecting the changing nature of administrative processes.

In recent years, legislative adjustments have been made to regulate the digital environment. Issues related to electronic trust services, electronic identification, public electronic registers, and the overall development of digital infrastructure in Ukraine have been addressed and regulated.

Let's consider the legal regulation of the digital environment in more detail (Table 1).

Table 1.
Regulatory and legal regulation of the digital environment in Ukraine.

Legislative act	Key provisions
The State Regional Development Strategy for2021-2027 (Resolution 695, 2020)	Provides one of its priorities the improvement of quality and ensure accessibility for the population services provided by state authorities and local self-government bodies, regardless of place of residence, in particular on the basis of digitalization.
Strategy for implementation of digital development, digital transformations, and digitalization of the state finance management system for the period until 2025 (Order 1467, 2021)	The task of the strategy is to create a cloud infrastructure of the state finance management system, which contains the computing power of the operating data centers of the Ministry of Finance, the Treasury, the State Tax Service, the State Customs Service, the State Audit Service, the State Financial Monitoring (only in the part of processing information that does not have an access restriction), the National Center for reservation of state information resources.
The concept of the development of electronic democracy (Order 797, 2017)	The purpose of the concept is the formation of political, organizational, technological, and ideological conditions for the development of electronic democracy in Ukraine. The main directions are regulatory and legal support for the development of electronic democracy; resource support for the implementation and use of electronic democracy tools by subjects of power; increasing the readiness of state authorities and local self-government bodies to use the possibilities of e-democracy; ensuring the availability of e-democracy tools.
The concept of the development of the system of electronic services in Ukraine (Decree 918, 2016)	This concept is aimed at forming a quality system of electronic services in Ukraine. The concept touches upon several directions, including streamlining administrative service procedures, identifying and planning the stages of electronic services system development, creating a unified information and telecommunications infrastructure to facilitate electronic service delivery, and enhancing the readiness of individuals and legal entities to utilize electronic services.
Concept of the development of artificial intelligence in Ukraine (Order 1556-r, 2020)	As a result of the adoption of the concept, the purpose is to determine the priority directions and main tasks of the development of artificial intelligence technologies for the satisfaction of rights and legitimate interests of individuals and legal entities, building a competitive national economy, improving the public administration system.
The concept of the development of e-government in Ukraine (Order 649, 2017)	The goal is to determine the directions, mechanisms, and deadlines for the formation of an effective system of e-government in Ukraine to meet the interests and needs of individuals and legal entities, improving the state administration system, increasing competitiveness and stimulating the socio-economic development of the country. Its aim is updating of government services with the help of information and communication technologies; modernization of state administration with the help of information and communication technologies; managing the development of electronic government.
The concept of the development of digital competencies (Decree 167-r, 2021)	The goal is to determine the priority directions and main tasks for the development of digital skills and digital competencies, to increase the level of digital literacy of the population, in particular, of able-bodied people, senior citizens, low-income families, persons with disabilities, other vulnerable population groups, in the conditions of the development of the digital economy and digital society.

Some issues of the activities of units on issues of digital development, digital transformations, and digitalization of central and local executive bodies and deputy heads of central executive bodies, regional, Kyiv and Sevastopol city state administrations on issues of digital development, digital transformations and digitalization (Resolution 194, 2020)	Provides for the mandatory introduction in ministries, in other central bodies of the executive power, the position of the head of the deputy head of the relevant body for issues of digital development, digital transformations, and digitalization.
Action Plan for the Implementation of the Concept for the Development of Artificial Intelligence in Ukraine for 2021–2024 (Decree 438-r, 2021)	Among the main tasks of the Concept: introduction of legal regulation on issues of state policy formation in the field of artificial intelligence; conducting information campaigns aimed at popularizing the basics of artificial intelligence in secondary education institutions; ensuring scientific cooperation with international research centers; holding conferences and seminars on the introduction and use of artificial intelligence technologies; the introduction of artificial intelligence technologies into the national cyber security system for the analysis and classification of threats and the selection of a strategy for their containment and prevention of their occurrence; development of a system of indicators for assessing the state of information security using artificial intelligence technologies; ensuring the use of AI technologies in defense systems, health care, and justice, as well as for analyzing the effectiveness of the public administration system.
State Administration Reform Strategy of Ukraine for 2022-2025 (Decree 831, 2021)	Is aimed to build a capable service and digital state in Ukraine, which ensures the protection of citizens' interests based on European standards and experience. The expected results of the public administration reform until 2025 are: ensuring the provision of high-quality services and the formation of a convenient administrative procedure for citizens and businesses; formation of a system of professional and politically neutral public service, focused on protecting the interests of citizens; development of effective and accountable state institutions to citizens, which form state policy and successfully implement it for the sustainable development of the state.

Based on the results of the analysis of the mentioned documents, the investigation revealed a lack of emphasis on the digitization of public administration and law enforcement activities. So, as can be seen from the above analysis, digital transformations in society are related to strategic planning, which becomes especially relevant during the development and implementation of the state policy of modernization of the sphere of public administration and law enforcement activities. The issue of digitization of the processes of activities of public authorities and certain aspects of the formation of digital competencies of public servants were reflected in domestic development strategies.

The digitalization reform of Ukraine is currently one of the most visible reforms in the country. Thus, the digitalization of the state-legal sphere in Ukraine involves, first of all, the modernization of the state administration of Ukraine. However, it is necessary: to develop the architecture of the ministries' functions; data collection; applications, technologies; information security architecture; and general business processes. In general, the goal of reforming state structures is to save time, reduce costs for providing services, increase transparency, and improve the quality of services provided to citizens and businesses.

Regarding the stage of the digitalization process, which the Ukrainian state-legal sphere is currently undergoing, all reforms were

accelerated and carried out with a view to online access due to strong corruption and bureaucratic schemes. So, if in European countries, for example, digitization of services is carried out for the convenience of access by citizens, then in our country, the government plans to overcome corruption schemes that may arise when communicating live and receiving services by citizens in person.

Conclusions

1) Ukraine has established suitable legislative frameworks to foster a digital society, support law enforcement activities, and develop a digital economy. Nonetheless, the ongoing relevance of Ukraine's integration into the global digital space necessitates effective regulatory management of these processes. The primary objective is to align domestic legislation with the legal norms of the European Union in the realm of digital relations.
2) The digitization of the state-legal and law enforcement sectors entails enhancing professional and specialized digital skills, refining e-democracy tools, and elevating the quality of state electronic services.
3) The state plays an extremely important role in stimulating the processes of digital transformation of state bodies and society in general. Today, Ukraine is only at the beginning of a complex path of digital reconstruction of society and digitization of state legal and law enforcement activities. The success of achieving these goals requires the state to take important steps to form a modern regulatory and legal basis for digitization, to develop and fully implement strategies and programs for the digital transformation of public administration, taking into account the best global experience in the development of the digital economy, to develop roadmaps for digital transformation as a business in general.

Summing up, it can be concluded that the goal and task of the research have been fully achieved. Regarding further scientific research, we consider developing the problematic issues of legal regulation of the digital environment in Ukraine and the ways to solve them.

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Agonal concepts and communicative strategies in European and Ukrainian media discourses after February, 24

Агональні концепти та комунікативні стратегії в європейському та українському медіадискурсах після 24 лютого

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Abstract

The article is devoted to the issue of agonal concepts and strategic communications as a result of the full-scale invasion of the Russian Federation. Considering the ongoing war, it is considered necessary to investigate the Ukrainian and European media discourse and strategic communications as a system consisting of invariant and variable components that can be projected in mass media messages, as well as the transformation of such a system. The purpose of the research is to carry out a comprehensive analysis of agonal concepts and communication strategies in European and Ukrainian media discourse after February 2022. The research methodology is the following methods: content analysis method, discourse analysis method, critical discourse analysis method, historical analysis method, cross-method - cultural comparative analysis, and sociological method. This thematic study examines the agonal concepts and strategies of communication in European and Ukrainian media discourses after February 2022. It

Анотація

Стаття присвячена питанню агональних концептів та стратегічних комунікацій внаслідок повномасштабного вторгнення російської федерації. Враховуючи тривающу війну, вбачається за необхідне дослідити український та європейський медіа дискурс та стратегічні комунікації як систему, що складається з інваріантних і варіативних компонентів, які можуть бути спроектовані в повідомленнях ЗМІ, а також трансформацію такої системи. Метою дослідження є проведення комплексного аналізу агональних концептів та комунікаційних стратегій в європейському та українському медіа-дискурсі після лютого 2022. Методологією дослідження є наступні методи: метод контент-аналізу, метод дискурс-аналізу, метод критичного дискурс-аналізу, метод історичного аналізу, метод крос-культурного порівняльного аналізу, соціологічний метод. У цьому тематичному дослідженні розглядаються агональні концепції і страгегії комунікації в європейському та

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is investigated which strategies prevail in the Ukrainian and European media fields. The study shows how political leaders and the media use different levels of engagement, commentary, and content to demonstrate strength, unity, and stability during times of significant international tension. Attention was also drawn to how messages from the Russian Federation affect the international agenda. It is concluded that the strategic use of communication can become a powerful tool in the conditions of international crises.

Keywords: agonal concepts, concept, commutative strategies, media discourse, political discourse.

українському медіа-дискурсах після лютого 2022. Досліджено, які стратегії переважають у українському та європейському медійному полі. Дослідження показує, як політичні лідери та ЗМІ використовують різні рівні залучення, коментарів і контенту для демонстрації сили, єдності і стабільності під час значної міжнародної напруженості. Також звернено увагу, як впливають меседжі РФ на міжнародний порядок денний. Підсумовано, що стратегічне використання комунікації може стати потужним інструментом в умовах міжнародних криз.

Ключові слова: агональні концепти, концепт, комутативні стратегії, медіадискурс, політичний дискурс.

Introduction

After Russia's full-scale invasion of Ukraine on the morning of February 24, 2022, communication becomes a crucial tool for managing the situation on the ground and shaping public opinion. Social networks, mass media, and the statements of politicians play a necessary role in promoting crisis communication.

Narratives and communication from the government of Ukraine, Russia, and the world call for research into the linguistic features of the presentation of this or that material. Also, more and more attention is paid to the speech acts used by the leaders of the states after February 24, 2022, including President Zelensky's speech acts in his communication on Twitter during the crisis situation in Ukraine at the beginning of the war. The object of the research is agonal concepts and communication strategies in the European and Ukrainian media discourse after the full-scale invasion.

To study the agonal concepts and communication strategies in European and communication media discourses after the beginning of the war, the following questions were asked:

–   What communication strategies are used in European and Ukrainian media discourses after the war?
–   What speech acts are used in communication in the European and Ukrainian media space, and what are the consequences of their use?
–   What role, if any, do intercultural factors play in communication?

Because in the modern world, media discourse plays a significant role in the formation of public perceptions and the perception of various concepts, an important topic that is actively discussed in the European and Ukrainian media is the topic of agonal concepts - concepts related to struggle, rivalry, and conflicts During the research, the task was set to test three key hypotheses.

The first hypothesis is that the consideration of agonal concepts and communication strategies depends on the context: political, socio-cultural, economic, etc.

The second hypothesis is that the media use linguistic strategies to enhance or reduce the impact of agonal events to form certain images that are understandable for perception.

The third hypothesis is based on cultural characteristics. In particular, it is assumed that different cultural contexts in Europe and Ukraine can determine the specific features of agonal concepts in the media.

The research on agonistic concepts and communicative strategies in European and Ukrainian media discourses post-February 24, 2022, employs a diverse range of qualitative and quantitative research methods:

Content Analysis: used to systematically study the content of media messages, analyzing texts, publications, audio, and video contexts to identify patterns, themes, and prevalence in media representation of agonistic concepts.

Discourse Analysis: iInvestigates how language constructs and reflects social reality, focusing on linguistic structures, rhetoric, and framing techniques in media texts to understand how agonistic concepts are linguistically constructed and transmitted.

Critical Discourse Analysis: applied to analyze power relations and ideology in media discourse, emphasizing how language is used to reproduce or challenge social structures and power dynamics related to agonistic concepts.

Historical Analysis: traces the historical evolution of media discourse in the context of the full-scale invasion and operation in Ukraine since 2014, studying archival media content over time to identify changes and persistence in the representation of agonistic concepts.

Cross-Cultural Comparative Analysis: compares media discourses from European and Ukrainian sources, highlighting common characteristics and differences to understand how agonistic concepts are formulated and discussed in different cultural and media contexts.

Sociological Method: generalizes the prevalence of certain discourses and views among different social groups, providing a quantitative assessment of public opinion, attitudes, and awareness of agonistic concepts in media discourse.

Social Network Analysis: analyzes social networks, including platforms like Twitter, Facebook, and Instagram, to explore how agonistic concepts are discussed, shared, and debated online. This includes the analysis of user content, comments, and interactions.

The study on agonal concepts and communication strategies in European and Ukrainian media discourses yields several noteworthy implications:

Tools Employed in Media Discourses:

The identified tools, including appeals to emotions, messenger control, publication control, propaganda, and disinformation, indicate the strategic nature of media communication. Recognizing and understanding these tools are essential for comprehending the dynamics of information dissemination.

Speech Acts and Political Priorities:

Political leaders consistently reference specific topics in their communication strategies, aligning with priorities and resonant themes to achieve political objectives. This finding emphasizes the deliberate use of language to shape public opinion and consciousness.

Intercultural Factors in Communication:

The study underscores the significant role of intercultural factors in communication. For Russia, common history and culture with Ukraine play a role, while Ukraine leverages intercultural factors to emphasize identity and independence. Cultural context influences how information is transmitted and perceived, highlighting the importance of understanding the "spirit" of a country and its culture in shaping effective communication.

Contextual Dependence of Agonal Concepts:

The confirmation that the consideration of agonal concepts and communication strategies depends on the contextual factors in a country—political, socio-cultural, economic—underscores the dynamic nature of media communication. This implies that strategies need to be adapted to the specific context in which they are applied.

Softening or Sharpening Perception through Media:

The study validates that media communication is instrumental in shaping public consciousness by either softening or sharpening the perception of agonal events. Linguistic strategies employed by the media contribute to the formation of specific, comprehensible images for the public, influencing how events are perceived.

Cultural Context Impact on Agonal Concepts:

The study confirms that cultural context, including historical and cultural characteristics, significantly influences how agonal concepts are presented and received in the media. This insight emphasizes the need for culturally sensitive communication strategies.

Moving forward, the study suggests the necessity of exploring the specifics of propaganda use in European and Ukrainian discourses and its impact on public consciousness. This avenue of research could provide deeper insights into the dynamics of information dissemination and its implications for societal perceptions.

Theoretical Framework or Literature Review

The following scholars paid attention to the study of agonal concepts and communication strategies in European and Ukrainian media discourses during the war in Ukraine:

− The work of Larsson and Fanny Einarsson (2023) analyzed social networks and the message used by the President of Ukraine

Zelenskyi in social networks. It was concluded that President Volodymyr Zelenskyy uses communication for advocacy, informing, and influencing others. In his communication, Zelenskyi uses various speech acts, but the most common speech act is an assertive speech act. With the help of assertive speech acts, Zelensky informs and reassures the recipients of messages. The results and analysis show that Zelensky tends to use assertive speech acts and expressive speech acts to convey information about the past and present. Expressive speech acts often include information about what has been done or what support has been received, as well as expressions of gratitude. Directive and commissive speech acts are used to influence the addressee, they are related to future actions. The researcher's remarks and generalizations are interesting because they reflect the main messages that the high-ranking official probably intended to convey.

- Albatool Fahad Alyahya (2023) conducted a critical analysis of world publications in the context of information coverage. The author noted in the attitude analysis that both articles used all the elements of the attitude subsystem to influence their readers' opinions and attitudes, albeit with opposite goals. It was concluded that both news articles expressed both positive and negative attitudes towards the invasion of Ukraine, albeit in different ways. The Washington Post mainly focused on the negative aspects of the invasion and gave positive coverage of the United States' response to the Russian attack. In contrast, The Moscow Times reported positive actions by both sides. A study by Bozhuk (2022) aimed to investigate the leading strategic communications and strategic management in the context of war. The author concluded that PR technologies play an essential role in strategic management. Cristian E. Guerrero-Castro (2013), in his work, investigated strategic communications in the field of defense. The main conclusions of the author, with which we agree, are that strategic communications in the field of security and national defense aim, within the framework of their mission to support the national strategy, to achieve deterrence, legitimacy, and freedom of action in the international system.
- Juan Pablo Villar García, Carlota Tarín Quirós, and Julio Blázquez Soria (2021) identified strategic communications as a key factor for hybrid

deals. Gery W. Ryan and H. Russell Bernard (2000) examined the fundamental principles for defining the agonal concepts and communication strategies considered in this study as theoretical foundations.

- Ivar Ekman and Per-Erik Nilsson (2023) investigated the peculiarities of the Ukrainian information front in the conditions of war. The author investigated the effect of "rallying around the flag" when support for state institutions increases dramatically during a crisis, and the voice and messages of leaders carry more weight than in peacetime. The widespread opinion in society that Ukraine is waging a just war, as well as the fact that Ukrainians perceive the war as existential, gives communication efforts, both domestically and abroad, a very strong basis. Narrative lines generated by this reality – how Ukraine fights not only for itself but also for the future of the international order and the protection of democracy in general; how Ukraine conducts a just and legal war, observing international law - are understandable and correspond to the facts existing on the ground. However, the main challenge for this narrative framework is that it must be one that the respondents described as "true". In addition to the research materials analyzed in this report, the authors noted several instances in which Ukrainian communication contradicted the narrative: when photos of dead Russian soldiers were published early in the war when Ukraine's report of a missile landing on Ukrainian territory was untrue.
- A study by Chaban, Zhabotynska, and Knodt (2023) challenged the main narratives about Ukraine on Russian platforms. The authors obtained results that demonstrate the "behind-the-scenes mechanisms" which the Russian propaganda media use to provide a special emotionally colored perception Ukrainians by russians.
- Kurnyshova's (2023) study explores the relationship between resilience and agency as two sides of the same coin, and discusses how agency functions as a productive negation in the sense that refusing to compromise with the advancing Kremlin is "Russian peace." Also interesting in our opinion is the author's position regarding the concept of regulatory agency, which considers sustainability as a strategy of relying on one's forces, which, at the same time, due to its regulatory compatibility and compliance with the principles of democratic governance, opens promising

ways for the final integration of Ukraine into the Euro-Atlantic institutional and normative structures as a state capable of contributing to common security.

– Cornish, Lindley-French, and Yorke (2011) questioned general statements about strategic communications and national strategies. At the same time, Tbvănase Tasenţe (2023) analyzed in detail the online communications of world leaders during the war in Ukraine. It was noted that Joe Biden, Ursula von der Leyen, and Jens Stoltenberg used a variety of means to spread their messages - from press conferences and video calls to social networks and other digital platforms. It is concluded that the communication strategies of Joe Biden, Ursula von der Leyen, and Jens Stoltenberg during the crisis in Ukraine had a significant impact on the conflict. It is impossible not to agree with these conclusions because both the leaders who condemn the war in Ukraine and the leaders who deny supporting Ukraine influence the course of the war and history.

– Benabid (2022) examined the communication strategy in the war in Ukraine and concluded that Ukraine's strategy is supported by a narrative communication process that emphasizes storytelling. Being in a disadvantageous position from a military point of view, Ukraine demonstrates aggressiveness, even vitality, which is surprising. At the same time, Moscow continues to experiment, looking for the optimal dosage of communication to highlight the conflict, as well as to strengthen its power inside the country about its own population.

– Selvarajah and Fiorito (2023) investigated the public's attitude towards the war in Ukraine. The authors tested two hypotheses. The first is that international newspaper reports in the first five days of Russia's war in Ukraine contributed to the International Criminal Court announcing that it would investigate credible allegations of Russian war crimes in Ukraine. The validity of this hypothesis was established by evaluating the "accessibility effect" and the "applicability effect" of the "media agenda" using quantitative analysis and frame analysis. Eight newspapers from four selected countries published 30 news items linking Russia to war crimes in Ukraine. The second hypothesis that there may be a functional relationship between the application of international law in the ICC and coverage of events in the international mass media was

also confirmed thanks to the obtained results.

– Baylor (2022), in his work, compares two opposite approaches to conducting information warfare, which are used by President Zelensky and Russian dictator Putin. The president of Ukraine is directly addressing world leaders with messages about the current war situation, while the leader of the aggressor country limits his public appearances, preferring instead a non-public company of disinformation. In the opinion of the author, Ukraine is currently defeating the enemy on the information front.

– Ángel Moreno Rubio (2022) examined in detail the discourse of the President of Ukraine during the war. It is concluded that Zelenskyi's discourse contributes to the spread of the Ukrainian narrative and achieves its goal of gaining international support. Zelensky has recognized the means of soft power and emotion in the Western world and is using them to the best of his ability to put pressure and sanctions on Russian Federation. Without it, he would have been defeated very quickly. It is inappropriate to compare the media field in the first months of the war and the media field in the general duration of almost 2 years of the war, because it changes dynamically.

– Yuskiv, Karpchuk, and Pelekh (2022) researched the structure of strategic communications during the war. The authors consider strategic communications as a system consisting of invariant and variable components that can be projected in mass media messages. The study analyzed the messages of the Insider Ukraine telegram channel for the first 100 days of the war and found out that Ukraine's strategic communications during the war consisted of the following invariant components: interactive communications of Ukraine, operational communications of Ukraine, non-operational communications of Ukraine, operational and non-operational communications with the Russian Federation. Thanks to this study, the structure of strategic communications in general and during the first days of the war in particular became clear.

– Horban (2015) analyzed the issue of information warfare against Ukraine and the means of its conduct. In the study, the theoretical concept of information aggression was determined using the example of Russian interference in the

internal affairs of Ukraine, and the methods and tools of conducting information warfare were considered. We agree with the author's position regarding theoretical generalizations and definitions of key concepts.

- Denisyuk (2021) studied the impact of propaganda and counter-propaganda in detail. The author's main conclusions concern ways of controlling propaganda. In the opinion of the author, with which we agree, to build a countermeasure strategy in the information war, it is necessary to take into account the experience of EU countries in countering disinformation flows, and the national information policy strategy should provide for the use of a multi-level and complex approach while paying attention to indicators such as the development of information infrastructure, the information processing industry, compliance with the rights and freedoms of citizens in the information society.
- In the study of Tutar and Bağ (2023), through critical discourse analysis, an attempt was made to reveal the discourses of two leaders with their implicit and connotative meanings beyond their actual meanings. Thus, the statements of Putin and Zelensky were analyzed according to Van Dijk's model of critical discourse analysis. At the same time, in the reflection of the rhetoric of each of the leaders in the media, it can be seen that both sides pay attention to each other's statements. In their speeches, leaders follow tactics and strategies like chess moves. At the same time, in his patriotic discourse, Zelensky emphasizes that the country's security can be ensured by the loyalty of the entire people and soldiers. We agree with the author's conclusions, as they reflect the reality of the discourse, both in Ukraine and Russia.
- Shkvorchenko, Cherniaieva, and Petlyuchenko (2021) discovered the quiestion of linguistic approaches and modern communication technologies in political discourses in Europe and the USA. The study revealed that the primary distinction between the political discourses of Europe and the United States lies in the modes and methods of communication, the distribution formats, and the extensive indicators of population inclusion in communicative interactions within political discourse.
- Parahonsky and Yavorska (2022) challenged news coverage of war and peace. Romanova (2022) investigated the question of how to promote the involvement of European and Ukrainian local and regional authorities in the post-war reconstruction of Ukraine in the context of properly constructed communication. We believe that the research data are crucial for understanding the informational impact on war and post-war reconstruction.

Methodology

The study of agonistic concepts and communicative strategies in European and Ukrainian media discourses after February 24, 2022, involves a combination of qualitative and quantitative research methods.

In particular, the method of content analysis was used to investigate issues of media discourse. The purpose of using this method was a systematic study of the content of media messages. The applied use of this method is found in the analysis of texts, publications, both audio and video context, to understand and identify patterns, themes, and prevalence of discourses in the media field. Thanks to this method, regularities and repetitions of themes, frames, and language used in media representation were revealed.

Using the method of discourse analysis, the question of how language constructs and reflects social reality was investigated. The essence of this method is utilized to research the use of language, including linguistic structures, rhetoric, and framing techniques in media texts. As a result of the application of this method, it was investigated how agonal concepts are linguistically constructed and transmitted in media discourse.

The use of critical discourse analysis is applied to the analysis of power relations and ideology in media discourse. This method makes it possible to focus attention on ways of using language to reproduce or challenge social structures and dynamic positions of power structures. With the help of this method, it became possible to study how media representations contribute to or challenge existing power relations in the concept of agonal concepts.

The method of historical analysis played an equally important role in the research. In particular, the purpose of this method was to trace the historical evolution of media discourse in the context of both the full-scale invasion and the operation in Ukraine since 2014. The essence of this method is the study of archival media

content over time, to identify changes and persistence in the representation of agonal concepts. With the help of research using the method of historical analysis, it became clear how historical events and changes shape media narratives.

The method of cross-cultural comparative analysis helped to compare media discourses in different cultural contexts and take into account cultural differences. Thus, an analysis of media content from European and Ukrainian sources was carried out, and their common characteristics and differences were revealed. With the help of this method, an understanding of how agonal concepts are formulated and discussed in different cultural and media contexts is obtained. The benefit of the sociological method was intended to generalize the prevalence of certain discourses and views among different social groups. Thanks to this method, the quantitative assessment of public opinion, attitude, and awareness of agonal concepts in media discourse was analyzed. In addition, an analysis of social networks was carried out to study the discourse on social network platforms. Including, but not limited to, an analysis of user content, comments, and interactions on platforms such as Twitter, Facebook, and Instagram was conducted to explore how agonal concepts are discussed, shared, and debated online.

In the work, we aim to outline both theoretical foundations and present a new theoretical basis. With the help of a combination of theoretical material and practical work, it became possible to conduct a comprehensive study and understanding of agonal concepts and communicative strategies in European and Ukrainian media discourses after February 24, 2022.

The choice of research methods in the study of agonistic concepts and communicative strategies in European and Ukrainian media discourses after February 24, 2022, is justified based on the specific objectives of the research:

Content Analysis:

Rationale: This method is chosen for its systematic approach to studying the content of media messages. It enables the analysis of texts, publications, audio, and video contexts to identify patterns, themes, and prevalence of discourses in the media field.

Objective Alignment: Content analysis aligns with the objective of revealing regularities and

repetitions of themes, frames, and language used in media representation, providing a comprehensive understanding of the content landscape.

Discourse Analysis:

Rationale: This method is applied to investigate how language constructs and reflects social reality, encompassing linguistic structures, rhetoric, and framing techniques in media texts.

Objective Alignment: Discourse analysis is apt for exploring how agonal concepts are linguistically constructed and transmitted in media discourse, contributing to a nuanced understanding of the role of language.

Critical Discourse Analysis:

Rationale: This method is employed to analyze power relations and ideology in media discourse, focusing on how language reproduces or challenges social structures and dynamic power positions.

Objective Alignment: Critical discourse analysis is chosen to study how media representations contribute to or challenge existing power relations within the context of agonal concepts, aligning with the research's aim to uncover the influence of discourse on power dynamics.

Historical Analysis:

Rationale: This method traces the historical evolution of media discourse, specifically in the context of the full-scale invasion and the operation in Ukraine since 2014.

Objective Alignment: Historical analysis is essential for identifying changes and persistence in the representation of agonal concepts over time, contributing to a comprehensive understanding of how historical events shape media narratives.

Cross-Cultural Comparative Analysis:

Rationale: This method is chosen to compare media discourses in different cultural contexts and account for cultural differences.

Objective Alignment: Cross-cultural comparative analysis facilitates the exploration of how agonal concepts are formulated and discussed in diverse cultural and media contexts, enhancing the study's cross-cultural insights.

Sociological Method:

Rationale: This method is employed to generalize the prevalence of discourses among different social groups, providing a quantitative assessment of public opinion, attitudes, and awareness.

Objective Alignment: The sociological method aligns with the aim of analyzing public discourse by quantitatively assessing opinions, attitudes, and awareness related to agonal concepts, with a specific focus on social network platforms.

Overall, the combination of these methods, spanning qualitative and quantitative approaches, allows for a thorough examination of agonistic concepts and communicative strategies in European and Ukrainian media discourses, aligning with the research's dual focus on theoretical foundations and practical insights.

Results and Discussion

Regarding the first task regarding communication strategies used in European and Ukrainian media discourses after the war:

Communication battles for influence take place over narrative when competing or opposing positions attempt to gain legitimacy and success through narratives that favor them. The actors here seek not so much to communicate around supposedly verified facts but to appeal to emotions and feed the audience with interpretive models favorable to them. It is tempting to assume that Russia, like any belligerent state, is simply reworking the communication strategies well documented and grouped under the term "hybrid warfare" to achieve its goals. Such strategies include deception, information and psychological operations, social media, audiovisual propaganda, and old Soviet methods updated by Moscow, in particular, based on theories of reflexive control. One caveat is that these strategies are never easy to implement because they target mixed audiences: the enemy, the local population, the media, and international public opinion. They also entail risks for the communicator related to the intensity of media coverage of the conflict, in terms of audience and/or political costs (OECD portal, 2022).

In addition, the media, when covering crisis situations, are considered both in the cycle and in the content. The media are questioning the rules of the game not only in traditional media ecosystems (print and television) but also in state and military control over information flows. It is observed that continuous coverage of war (rolling news) is no longer the prerogative of the mainstream media. In an unprecedented initiative, volunteer editors documented the Russian invasion of Wikipedia as it unfolded, even if it meant departing from the original goal of the free encyclopedia.

There is a strategic demarcation of the scope of topics. Mass media actually use framing processes that involve selecting what is considered relevant and provoking specific interpretations by emphasizing only certain aspects of a topic.
.
Since the 2010s, the Russian Federation has shifted its communication strategy, recognizing the significance of "soft power" tools. The Kremlin has been actively working to regain control over messages in audiovisual media, investing steadily in social media to shape and present its perspective on events, including the causes, progression, and outcomes of various conflicts (Nato Strategic Communications Centre of Excellence, 2023).

After the beginning of the war in Ukraine American social media also made an attampt to curb the flow of fake news from Russian-controlled media outlets. In a report published on April 7, 2022, Meta (Facebook's parent company) said it had taken action against a group of hackers who were trying to spread false information that Ukrainian forces had surrendered. In addition, under Council Regulation (EU) 2022/350 of March 1, 2022, the EU Electronic Communications Office also amended existing regulations. The new regulation banned the broadcasting (and other activities that contribute to the broadcasting) of Russia Today and Sputnik TV channels. The ban on content distribution, encompassing cable, satellite, IP television, websites, and video-sharing applications, applies to channels such as RT - Russia Today (in English, UK, Germany, France, and Spanish) and Sputnik.22. EU's diplomatic head, Josep Borrell, justified the decision by citing the Kremlin's systematic use of information manipulation and disinformation as an operational tool in its attack on Ukraine (Council of Europe, 2023).

Therefore, the communication strategy takes into account both challenges and pays attention to possible obstacles. At the same time, it would be fair to note that states form strategies anticipating possible challenges and moves of rivals.

Regarding the second question, about what speech acts are used by communications in the European and Ukrainian media space and what are the consequences of their use:

It was possible to compare the most frequently used keywords in the online speeches of three world leaders. Simultaneously, it is observed that leaders use different themes during the crisis; there is very rarely a consensus on the direction of communication.

Thus, Jens Stoltenberg's public speech focuses on key words such as "support", "allies", "security", "contribution", "defense", "war", "invasion", "powerful", "NATO", etc. Joe Biden's speech focused more on domestic policy issues than on the crisis in Ukraine; the most frequently used words are "inflation," "economy," "families," "jobs," "honor," "Americans," "prices," "taxes," etc. Ursula von der Leyen focuses on topics such as "energy", "sanctions", "solidarity", "fuel", "climate", "fuel", "RePowerUE", "cooperation", "the future", etc.

Zelenskyi seeks to distinguish himself from ordinary politicians. To do this, he works to be perceived as an ordinary citizen without luxuries, and the best way to achieve this is through close and direct communication, influential symbolic actions, and messages. In this way, Zelenskyi needs to convince the international community to support Ukraine and punish Russia for the invasion. If Zelenskyi can convince public opinion to support more and more countries, the chances of gaining more support increase, as public opinion can influence policy decisions through the CNN effect. He concentrates his entire convictions in five main messages: the bravery and patriotism of the Ukrainian people; an appeal to Putin to meet with him and stop hostilities; convince NATO to provide a no-fly zone over Ukraine; and an explanation of why and how the world should support Ukraine.

It should be noted that these primary messages may be accompanied by secondary ones, depending on the situation and the audience. However, limiting himself to five messages, he strives to be direct and clear in his speeches and constantly repeats them. An example of the use of secondary messages is an appeal to public opinion, parliaments, or governments of third countries.

Regarding the third question on the role of intercultural factors in communication, we note the following:

Our understanding of the world is shaped by historical distances in our mind maps, influencing memory, identity, and political decisions. Emotions, integral to long-term memory, often lead to a "rosy" view of the past and a critical stance on the present. Cultural resonance, a key concept, uses salient and emotionally charged frames in media and political communication. This resonance attracts attention and influences identity by shaping emotions. For the Russian audience, attitudes toward the USSR form a cornerstone in their long-term mental maps, affecting perceptions of the common past with Ukraine. Currently, Russian authorities have a positive view of the Soviet period, while Ukrainian representatives, with different identity narratives, hold mixed or negative views, especially after the 2022 Russian aggression and invasion of Ukraine.

The findings of the study significantly contribute to our understanding of communication strategies employed in European and Ukrainian media discourses post-war, addressing three key questions:

Communication Strategies and Challenges:

Insights: The study highlights the nuanced communication battles for influence, where actors prioritize emotions and interpretive models over verified facts. Russia's utilization of "hybrid warfare" strategies, including deception, information operations, and propaganda, is contextualized, acknowledging the challenges of targeting mixed audiences and potential risks for communicators.

Contribution: Understanding the complexity of communication strategies provides insights into how narratives are constructed and legitimized, emphasizing the importance of emotional appeal in shaping public perception during conflict.

Media's Evolving Role in Crisis Situations:

Insights: The study notes the evolving role of media, not only in traditional ecosystems but also in challenging state and military control over information flows. Continuous war coverage is no longer exclusive to mainstream media, as observed through volunteer editors documenting the Russian invasion on Wikipedia.

Contribution: Recognizing the transformation of media dynamics underscores the shifting landscape of information dissemination, influencing how crises are covered and documented in non-traditional platforms.

Speech Acts and Themes Used by World Leaders:

Insights: The study analyzes the speeches of world leaders during the crisis, revealing divergent themes and word choices. Leaders like Jens Stoltenberg, Joe Biden, Ursula von der Leyen, and Zelenskyi employ distinct keywords, reflecting their communication priorities and strategies.

Contribution: Examining the speech acts provides valuable insights into how leaders shape narratives, with each emphasizing specific themes to influence public perception and international support. Zelenskyi's focus on direct and clear messages, coupled with repeated key points, illustrates a deliberate communication strategy.

Role of Intercultural Factors in Communication: Insights: The study emphasizes the impact of historical distances and cultural resonance on shaping identity and political decisions. It explores the "rosy" view of the past and contrasting attitudes towards the USSR in the Russian and Ukrainian audiences post-2022 invasion.

Contribution: Understanding intercultural factors elucidates how historical memory and emotional resonance influence public attitudes, providing context for divergent perspectives and potential areas of tension in media communication.

In summary, the findings enhance our understanding of the multifaceted nature of communication strategies in the context of conflict, shedding light on the challenges, evolving media roles, speech acts of world leaders, and the role of intercultural factors. These insights contribute to a comprehensive understanding of the complexities surrounding media discourses in the aftermath of war.

Conclusions

As a result of the research on agonal concepts and communication strategies in European and Ukrainian media discourses, the following conclusions were made:

1. The following tools are used in Ukrainian and European media discourses after February 24, 2022: appeal to emotions, control over messengers, control over the place of publication, propaganda, and disinformation.

2. Regarding the speech acts used in communication in the European and Ukrainian media space and the consequences of their use, it should be remarked that political leaders have a set of topics to which they constantly refer. These topics are priorities and those that resonate with the population to achieve political goals.

3. Intercultural factors in communication play a significant role. Thus, these factors allow Russia to conduct communication activities, taking into account the commonality of history and culture with Ukraine. At the same time, for Ukraine, intercultural factors make it possible to turn to identity and independence. In addition, cultural factors influence the spread of information among individual countries, because the population will perceive better what is closer to the "spirit" of the country and culture.

The first hypothesis was tested and it was confirmed that the consideration of agonal concepts and communication strategies depends on the context in the country where these concepts are applied: political, socio-cultural, economic, etc. As for the second concept, it has been confirmed that communication in mass media is used for softening or sharpening perception, building public consciousness and public perception. The analysis of Ukrainian and European mass media on issues of war coverage confirmed that the media use linguistic strategies to strengthen or reduce the impact of agony events, to form certain images that are understandable for perception. The third hypothesis, which is based on cultural characteristics, is also proven. Thus, the analysis shows that the cultural context affects the agonal concepts in the media. In particular, historical and cultural characteristics influence how information is transmitted and perceived by the public and decision-makers.

Regarding further scientific research, we consider it necessary to investigate the peculiarities of the use of propaganda in European and Ukrainian discourses and its influence on public consciousness.

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Artistic training of young students

Художня підготовка студентської молоді

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https://orcid.org/0000-0003-3518-2767

Abstract

The article shows ways of forming the artistic culture of the future in higher education institutions. Having singled out the structural and functional elements of artistic culture, which represents a system of measures aimed at improving and developing in the student the ability to aesthetically perceive the world, correctly evaluate, understand, and create the high and beautiful in art and life and is an integral part of the educational process, we considered the main indicators and factors of the level of the artistic culture of the individual, the main stages of the formation of the artistic culture of the individual are highlighted. The effectiveness of the described principles of forming the artistic culture of student youth in institutions of higher education (general didactic and specific principles) was tested experimentally. The significance of the global Internet network for the formation of an individual's artistic culture has been proven. The selected components of the artistic culture of the

Анотація

У статті показано шляхи формування художньої культури майбутнього я в закладах вищої освіти. Виокремивши структурно-функціональні елементи художньої культури, яка представляє систему заходів, що спрямовані на вдосконалення і вироблення у здобувача освіти здатності естетично сприймати світ, правильно оцінювати, розуміти, створювати високе та прекрасне у мистецтві і у житті та є складовою частиною виховного процесу нами розглянуто основні показники і чинники рівня художньої культури особистості, виокремлено основні етапи формування художньої культури особистості. Експериментально перевірено дієвість описаних принципів формування художньої культури студентської молоді в закладах вищої освіти (загальнодидактичні та специфічні принципи). Доведено значущість світової

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future specialist in the professional training system the directions of aesthetic transformation of reality and the mechanism of forming the artistic culture of student youth during experimental testing showed the effectiveness of the system of forming the artistic culture of the future specialist.

Keywords: system of formation of artistic culture, future specialist, institutions of higher education, student youth, aesthetic education.

мережі Інтернет для формування художньої культури особистості. Виокремлені складові художньої культури майбутнього фахівця у системі професійної підготовки та напрями естетичного перетворення дійсності та механізм формування художньої культури студентської молоді при експериментальній перевірці показали дієвість системи формування художньої культури майбутнього фахівця.

Ключові слова: система формування художньої культури, майбутній фахівець, заклади вищої освіти, студентська молодь, естетичне виховання.

Introduction

The modern world is characterized by globalization features and changes in the global space of life, which are based on the digitization of human life, and economic growth, depriving it of the development of aesthetic, sensual, and spiritual opportunities, the ability to perceive the world reality (Khokhlov, 2021).

A pillar of society, this is an aesthetically perfect person, a specialist who can change life all the time, to exist in society according to the laws of beauty, a creator. The formation of the artistic culture of student youth requires innovative technologies that would provide a person with creative self-realization, high-level professionalism, and develop a modern style of thinking, since "there is a need to change the didactics of the higher school, to orient it to the personality of the student and the development of both professional competences and applied personal - creative, communicative, socializing, informational and intellectual" (Riabchenko, 2011).

The problem of forming the artistic culture of student youth in institutions of higher education during the existence of all periods of activity of institutions of higher education was considered by scientists as an important component of professional training (Sotska, 2018).

An urgent problem in the training of a modern competitive specialist is the outdated teaching methods, content, structure, and technologies in the educational system, which cannot provide future specialists with the opportunity to master effective modern work tools, a competent approach, and pay enough attention to the formation of their aesthetic culture.

One of the main components of the modern training of a specialist of any specialty is the formation of his artistic culture based on versatile competencies and thorough professional knowledge. The requirements of the educational field are the need to introduce a person-oriented approach in higher education, to master innovative technologies, to ensure the formation of universal professional competencies, to strengthen the practical component of educational education, to bring methodical training and psychological-pedagogical training as close as possible to the conditions of future professional activity, and to introduce the pedagogy of partnership and the principle child-centrism, which depends on the creation of an atmosphere of harmonious learning in an educational institution, which will give students of education knowledge and shape their artistic culture (Papushyna, 2019).

In the research, we will use a set of methods (synthesis, systematization, generalization, theoretical modeling, abstraction), which will help to find out the state of artistic training of student youth; the importance of the structural-functional component was emphasized, which made it possible to identify the structural elements of the system objects and describe their role in the system; a logical, retrospective and comparative analysis of methodical, psychological-pedagogical, philosophical literature, scientific works was carried out to clarify the content of the outlined problem and the state of its development; the essence of the problem is characterized, the main components of the formation of the artistic culture of student youth in higher education institutions are singled out.

Literature Review

According to modern sources, a modern specialist needs an artistic and aesthetic culture, regardless of the profile of his training. It is also known that the principle of interculturalism is gaining importance in higher education, the implementation of which requires the integration of Ukrainian national culture into European and world culture.

In Ukraine, the process of formation of art education in the system of higher education continues, the concept of modern art education in the conditions of European integration is being developed, the search for optimal conditions for the formation of the artistic culture of future specialists and their readiness to aestheticize the subject-spatial environment is underway.

The analysis of domestic research in the field of philosophy, aesthetics, cultural studies, sociology, psychology, pedagogy makes it possible to determine the state of coverage of the problem of artistic training of student youth.

Let us emphasize the importance of the formation of artistic orientations at the student age, when students face important questions of self-determination, value perception of the surrounding world, awareness of the spiritual depths of human existence.

Knowing and learning the true spiritual values of artistic culture for students can be the basis for personal development and self-creation.

Various aspects of the problem were studied in the works of various scientists. In particular, H. Sotska (2018) highlighted the methodological and theoretical foundations of the formation of the artistic culture of future specialists in the art field. The potential of fine art has been revealed during the formation of the artistic culture of future specialists in the art field. The experience of forming the artistic culture of future specialists in the art field in foreign and domestic educational practice is reasonably presented.

S. Melnychuk (2005) shows the practice and reveals the theory of the formation of the artistic culture of future specialists in the educational activities of educational institutions in the period 1860-1990. The practice and theoretical approaches in institutions of higher education regarding the formation of the artistic culture of future specialists in the educational process are considered based on archival, monographic materials, and periodical press of the studied period.

V. Kotov, & N. Pliukhina (2022) offered consideration of the role of aesthetic education in the formation of the personality of a junior high school student. Scientists presented the art of dance as one of the leading means of aesthetic culture. They proved the universality of the means of aesthetic education, for centuries they showed the importance of the art of dance, which represents a complete picture of the world in the system of thoughts, views, emotions, feelings, and images. The aesthetic and educational status of folk choreography, which was determined by its place and role in the system of education, statehood, and culture, changes in the course of civilizational transformations.

A. Karam (2018) proved the determination of human spirituality, showing a process that includes value orientations, values that are based on artistic culture in particular, and general human culture, in particular. Culturological direction is singled out in the education of education seekers, and the ways of their socialization are shown. In the process of research, the analysis of scientific literature was carried out in retrospect, which made it possible to prove the complexity of the formation of culture, which is active, valuable, personal, and does not have a universal and unambiguous definition. The process of the dialogue "person and object" is shown, which is carried out through the sensual existence of the object, the aesthetic attitude of the subject, and thus the inclusion of the individual in the culture system.

V. Papushyna (2019) revealed the content of the concept of forming the artistic culture of future specialists, took into account the needs of pedagogy of partnership and individuality, the requirements of new standards of higher education, conditions of the labor market, ideas of human-centrism, subject-subject relations between a teacher and a student of higher education. She solved the main problem of training a modern competitive specialist, which consists of updating the structure, content, technologies, and methods of education by directing them to the formation of artistic culture.

A. Khokhlov (2021) shows ways to eliminate the shortcomings of aesthetic education and the role of art in the formation of a cultural, highly moral, personality of a citizen in the modern world. Education through the means of art is a fundamental component of the entire state, it forms the personality of the student of education as a part of society, taking into account the peculiarities of modern multiculturalism. The

concept of "aesthetic consciousness", which is a social and individual phenomenon, reflects in its connotativeness of acceptance, aspiration, compliance with the development of society, and understanding of cultural and historical heritage, which contributes to its general social cultural and intra-personal growth; the concept of "citizen", which is shown as an active creator of the future of this society, as a person who is a component of society with moral and cultural values, a bearer of universal culture and values using art.

Despite the multifaceted nature of scientific research devoted to the artistic training of student youth, many issues of this complex topic remain not fully resolved, as there are contradictions between: society's requirements for the formation of a culturally rich personality of a young person and the real state of formation of the artistic culture of student youth; requirements for the professional competence of students of pedagogical universities and insufficient focus of modern higher education institutions on its formation in the system of social and educational work; the need of future teachers to master the techniques and methods of decorative and applied activities in order to form their own artistic culture and the lack of necessary content and technological support for this process.

So, the objective social significance of the process of forming the artistic training of student youth, the identified contradictions, the insufficiency of the theoretical justification and practical implementation of the researched problems determined the choice of the topic of our article.

The goal is to show ways of forming the artistic culture of student youth in institutions of higher education and experimentally verify the effectiveness of the introduction of the system of forming the artistic culture of the individual.

Methodology

The methodological basis of the article is philosophical and general scientific provisions on objectivity, dialectic, scientificity, historicism of human knowledge; relationship between theory and practice; integrity and multifaceted phenomena of artistic culture; interpretation of the principles of mastering artistic values; personally oriented nature of professional training of student youth.

The following theoretical research methods were used to fulfill the research objective:

– logical, retrospective, and comparative analysis of methodical, psychological-pedagogical, philosophical literature, and scientific works to clarify the content of the outlined problem and its state of development;
– synthesis, systematization, generalization, theoretical modeling, and abstraction, which made it possible to formulate a conceptual and terminological apparatus, to characterize the essence of the problem, to single out the main components of the formation of the artistic culture of student youth in institutions of higher education;
– structural and functional, which made it possible to distinguish the structural elements (subsystems, components) of the system objects and describe their role in the system.

The study covers concepts that are interconnected and contribute to the realization of the research goal.

The methodological concept reflects psychological-pedagogical, philosophical, fundamental ideas - theories of cognitive activity, motivation, management, interaction and interrelationship of concrete-scientific and general-scientific methodology approaches to the conceptualization of practice and theory of student training in institutions of higher education.

The theoretical concept represents a system of concepts, basic concepts, ideas, initial categories, and definitions without which an understanding of the essence of the researched problem is impossible, and also offers basic provisions for research:

– the essence and content of the formation of the artistic culture of student youth in institutions of higher education should be revealed based on the theoretical justification of the main concepts;
– the process of forming the artistic culture of student youth in institutions of higher education implies, from the standpoint of modern social requirements.

The analysis of the results of research and experimental work at the formative stage made it possible to compare the obtained results to prove the effectiveness of the system of forming the artistic culture of student youth and to show the ratio of respondents with a high level of artistic culture formation. The results were as follows: the level of artistic and aesthetic competence in the

field of art (EG – 36.9%), the ability to evaluate works of art (EG – 23.9%), the need for artistic and aesthetic activity (EG – 43.5%), development of artistic outlook (EG – 26.1%).

Experimental verification showed the sufficient effectiveness of a well-founded system of forming the artistic culture of student youth using folk art. It has been proven that the condition for the successful functioning of the named system is the integration of certain components that provide the quality characteristics and properties inherent in this system.

The effectiveness of the use of a complex of folk art tools (types of folk art; means of artistic formation of folk art images; specific artistic means of folk art) in the functioning of the system of forming the artistic culture of student youth has been experimentally proven. The tasks of the formative experiment involved checking the effectiveness of the proposed system of forming the artistic culture of student youth based on establishing the dynamics of the levels of artistic culture formation during the experiment.

At the same time, the experiment proved that the effectiveness of forming the artistic culture of students through the means of folk art increases under the condition of successful organization of forms and meaningful filling of extra-auditory activities of student youth, providing them with an integral dialogic, action-creating, personal and professional character, systematic and creative use of folk art of various types.

The analysis of the results of the formative stage of research and experimental work gives a reason to conclude the improvement of the level of formation of the artistic culture of future specialists as a professional quality when using the system of forming the artistic culture of student youth.

Results and Discussion

People of all professions (builder, designer, teacher, engineer, ordinary worker, fashion designer) should have a high level of art culture and high aesthetic tastes, therefore every civilized society is interested in the education of such qualities of its citizens. All people are involved in the creation of material values and therefore they must possess high aesthetic qualities in addition to their practical purpose (Melnychuk, 2005).

The term culture, which embodies in its meaning upbringing, processing, education, respect, and development, is a specific, necessary, important way of development and organization of human life, reflects the idea of the products of spiritual and material labor, is an important criterion in the system of educational institutions and social norms, the overall attitude of people to nature, to spiritual values, to themselves and each other is necessary (Zhytnik et al., 2022).

In the process of aesthetic education, an art culture is formed, which represents a system of measures aimed at improving and developing in the learner the ability to aesthetically perceive the world, correctly evaluate, understand, and create the high and beautiful in art and life and is an integral part of the educational process (Yang, 2019).

We consider the formation of the artistic culture of student youth as a holistic process in institutions of higher education, which includes teaching cooperation, and relationships between students and heads of departments of the educational environment of institutions of higher education (Ivanova, 2005).

Aesthetic processes, a complex of all personal values, including ethical ones, cannot be separated from the concept of morality. The formation of the artistic culture of student youth in institutions of higher education is inseparable from the formation of aesthetic consciousness. Such a process develops a moral sense in an educated person, which makes it possible to understand what is not decent and what is decent, not accepted and accepted in the appropriate environment, and all this taking into account national characteristics, but not depending on them (Khokhlov, 2021).

Artistic culture is a complex system that includes a person's intellectual abilities, sensitivity to the surrounding world, his group and family's ideas about a good life, as well as real forms and objects of behavior, created by man according to the laws of beauty, according to the laws of natural necessity (Lavrentieva et al., 2023).

Artistic culture includes an appropriate assessment of life in forms that are characteristic of aesthetic consciousness, and not only the understanding of art and acts as a catalyst for creative activity, it is deeply emotional and contributes to the assimilation of a scientific picture of the world. It is defined as the totality of all aspects of society's life: spiritual, material, and artistic, which directly influence the formation of spiritual specific forces in its members, aimed at the contemplation and creation of various values, in particular, beauty (Shevtsova et al., 2023).

Let's name the main stages of the formation of an individual's artistic culture (Kysliak et al., 2022):

–   pre-aesthetic, when the main mental mechanisms of aesthetic reflection are formed, the child's aesthetic environment is provided, the beginnings of aesthetic attitudes, needs, and the first elements of aesthetic orientation arise in the child (from birth to 3 years);
–   artistic, when artistic and game activity prevails, an aesthetic attitude towards animals, people, and the surrounding reality takes place, and this whole process develops through artistic games, art, which is the main tool of aesthetic education of a child in this period (from 3 to 7 years old);
–   the school stage of the artistic development of the personality is connected with the transition to the educational activity of the child at school, where cognitive activity (logical-conceptual) prevails. At this stage, elements of aesthetic education are included in the school education system, to attract children to scientific knowledge, but at the same time, develop the child's artistic feelings.
–   the stage of formation of a person's artistic culture is connected with the youth transition; here, the search for the meaning of life, the value-oriented activity of consciousness, and the independent definition of all political, moral, and aesthetic ideals come first; it is a process which, with the help of a certain range of knowledge, is accompanied by the individual's desire to theoretically and logically justify his personal ideals and tastes. During this period, a young person's self-awareness, his aesthetic consciousness, and the aesthetic sphere of worldview are formed.
–   the stage of transition to practically transformative activity with the aim of artistic development of the individual. At this stage, a personality is formed, which is characterized by the dynamism and integrity of all elements of its artistic culture. This is the last and highest stage, where a person can show himself in the role of an educator of other people of new generations, an active creator of aesthetic values, and an active propagandist (Melnychuk, 2005).

In the formation of the ability to be critical of one's own preferences and tastes, to think reflexively, aesthetic self-improvement, the need to improve the process of developing the artistic culture of student youth is revealed. Such a process in a higher education institution requires new methods and forms for student youth in the organization of aesthetic education (Denac et al., 2013).

A modern higher education institution for students of higher education needs an organization of innovative education, which will contribute to the development of the need for multicultural, artistic, and aesthetic exploration of the world, which will be aimed at creating one's own "I" (Mykulina, 2018).

The aesthetic transformation of reality takes place in the following directions: internal (personal world) and external (environment). It is the aesthetic transformation of the inner world that stimulates the process of self-improvement of the individual and affects his creative self-esteem (Rudnytska, 2005).

In the process of experimental research, we attributed the main properties of the system of formation of the artistic culture of student youth as a quality of personality that its subsystems were created to achieve a single goal, but each of them functions according to its specific tasks.

It was important for us to state that each subsystem is relatively complete and has certain structural components. At the same time, each of the components has characteristics of the entire system, because they make up a single dynamic system of forming the artistic culture of student youth. The effectiveness of the system of forming a teacher's artistic culture depends on the purposefulness and successful functioning of all its subsystems.

We defined the components of the formation of the artistic culture of the future teacher, which we included: mastering the knowledge of artistic culture; formation of skills to use folk art tools in classes; and willingness to use the means of folk art in pedagogical activity.

Thus, the process of mastering the knowledge of artistic culture involves the assimilation of the conceptual and categorical apparatus of artistic culture; awareness of the cultural meaning of works of art; understanding the dynamics of the development of artistic culture of different eras; development of sensory, logical and associative thinking when studying the means of folk art; the formation of an artistic worldview.

The second component of the formation of the artistic culture of the future teacher involves the ability to master the technology of artistic dialogue; the ability to make a free choice of artistic means by the topic of the lesson; the ability

to create educational situations of artistic content; the ability to create and reveal the artistic values of products; the ability to make a free choice of means of folk art.

The components of third component of readiness to use the means of folk art in pedagogical activities includes readiness to broadcast artistic and aesthetic information; readiness for artistic and creative activity to create artistic products; the interpretation of the means of folk art; the use of means of artistic expressiveness of works of folk art in one's products; willingness to evaluate phenomena and events from the standpoint of artistic culture.

The effectiveness of the system of forming the artistic culture of the individual using art was investigated in the process of research and experimental work, the basis of which was a pedagogical experiment consisting of two stages: ascertaining and formative.

The purpose of the ascertaining stage of the experiment was to identify the level of artistic culture as a professional quality of the personality of student youth.

As evidenced by the results of the analysis, the ratio of students with different levels of formation of artistic culture turned out to be unequal. A higher level is inherent in that part of students who have more developed skills in interpreting the artistic and aesthetic information of works of both classical and folk art (CG – 4.8%); developed skills to find artistic and figurative analogies about artistic and aesthetic information (CG – 11.9%); developed needs in the transfer of artistic and figurative information in the process of creative self-realization (CG – 9.5%); formed artistic outlook (CG – 7.1%).

Based on the results of the ascertainment experiment, it was determined that the main reasons for the low level of formation of the artistic culture of student youth of various specialties are the mechanical assimilation of artistic and aesthetic knowledge, insufficient emotional and sensory contact with works of professional and folk art, the lack of a systematic approach to the process of forming the artistic culture of students using folk art of art, the lack of organizational and pedagogical conditions, the uncertainty in the existing practice of professional artistic and aesthetic training of future specialists in various fields, the potential possibilities of the means of folk art and the developed mechanisms for transmitting the artistic and figurative

information of his works in the students' own products.

At the stage of the formative experiment, we developed a system of forming the artistic culture of student youth using art, which was introduced into the educational process of higher education institutions.

The methods of aesthetic influence are observations and demonstrations (visual), persuasion (verbal), and involvement in the creative active activity of the individual (practical) (Kovbasiuk, 2020).

The task of an educational institution in the process of forming artistic culture among student youth is to educate a cultured, decent, intellectual, educated person (Bilozub et al., 2023). The global Internet network has gained great popularity in our time, the influence of which on a person is becoming more noticeable every day. Therefore, access to the worldwide "web" was necessary during experimental work in the formation of artistic culture among student youth in institutions of higher education (Kuzmenko et al., 2022).

Since the formation of the artistic culture of a future specialist in institutions of higher education is understood as a process that involves a consistent change of states and phenomena in the formation of this personal quality; the organization of pedagogical conditions aimed at the formation of a creatively active, integral, aesthetic and cultural personality, capable of experiencing, perceiving, transforming the phenomena of reality "according to the laws of beauty" (Sotska, 2018).

The analysis of the results of research and experimental work at the formative stage made it possible to compare the obtained results to prove the effectiveness of the system of forming the artistic culture of student youth and to show the ratio of respondents with a high level of artistic culture formation. The results were as follows: the level of artistic and aesthetic competence in the field of art (EG – 36.9%), the ability to evaluate works of art (EG – 23.9%), the need for artistic and aesthetic activity (EG – 43.5%), development of artistic outlook (EG – 26.1%).

Experimental verification showed the sufficient effectiveness of a well-founded system of forming the artistic culture of student youth using folk art. The effectiveness of the use of a complex of folk art tools (types of folk art; means of artistic formation of folk art images; specific artistic means of folk art) in the functioning of the system

of forming the artistic culture of student youth has been experimentally proven. The tasks of the formative experiment involved checking the effectiveness of the proposed system of forming the artistic culture of student youth based on establishing the dynamics of the levels of artistic culture formation during the experiment.

At the same time, the experiment proved that the effectiveness of forming the artistic culture of students through the means of folk art increases under the condition of successful organization of forms and meaningful filling of extra-auditory activities of student youth, providing them with an integral dialogic, action-creating, personal and professional character, systematic and creative use of folk art of various types (Order No. 1176, 2013).

The analysis of the results of the formative stage of research and experimental work gives a reason to conclude the improvement of the level of formation of the artistic culture of future specialists as a professional quality when using the system of forming the artistic culture of student youth.

The comparative analysis proved that the general level of formation of the artistic culture of the student youth increased significantly in the experimental group.

Based on the provisions that artistic culture is a constituent structural element of social life and represents a dynamic system, we took into account the organic connection of the effects of objective conditions and the subjective factor in the functioning of this system, the combination of which will ensure the complex, systemic nature of the formation artistic culture as a personality quality.

Therefore, for the formation of the artistic culture of student youth, a holistic process is necessary, a formed system that provides for teaching cooperation, and mutual relations between students of education and heads of departments of the educational environment of higher education institutions.

Conclusions

Ways of forming the artistic culture of student youth in institutions of higher education are shown. Having singled out the structural and functional elements of artistic culture, which represents a system of measures aimed at improving and developing in the student the ability to aesthetically perceive the world,

correctly evaluate, understand, and create the high and beautiful in art and life and is an integral part of the educational process, we considered the main indicators and factors of the level of the artistic culture of the individual, the main stages of the formation of the artistic culture of the individual are highlighted. The effectiveness of the described principles of forming the artistic culture of the future specialist in institutions of higher education (general didactic and specific principles) was experimentally verified. The significance of the global Internet network for the formation of an individual's artistic culture has been proven.

The selected components of the artistic culture of the future specialist in the system of professional training the directions of aesthetic transformation of reality and the mechanism of the formation of the artistic culture of the future specialist during experimental testing showed the effectiveness of the system of forming the artistic culture of student youth.

The analysis of the results of the ascertaining stage of the research proved the expediency of developing and implementing the system of forming the artistic culture of future teachers using folk art in the educational process.

The purpose of the ascertaining stage of the experiment was to identify the level of artistic culture as a professional quality of the personality of student youth. According to the developed criteria (artistic and aesthetic competence in the field of art, the ability to evaluate works of art, the development of the need for artistic and creative activity, the development of an artistic worldview), the frequency of involvement, the degree of knowledge, interest in folk art, and the system of personal preferences in evaluation were revealed during the study works of folk art, degree of activity and creative approach to the choice of forms of artistic and aesthetic activity in this area. The conducted research and experimental work convince that the formation of the artistic culture of student youth is actively carried out only if folk art is considered as a system of life activities of future specialists, which will appear in the classroom, extracurricular, and research work of students; this process is a system of actions aimed at forming an individual as a whole system of social, psychological and intellectual properties and qualities.

Further research will be aimed at clarifying the role of the Internet in the formation of the artistic culture of an individual.

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Implementation of blended learning in the students training of the specialty physical culture and sports

Реалізація змішаного навчання у підготовці здобувачів освіти спеціальності фізична культура і спорт

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Abstract

The essence of the professional training of future specialists in physical culture and sports in the conditions of blended education is clarified, and the key concepts of the study are defined. The components of information and digital culture are considered; principles of professional training of future specialists in physical culture and sports in conditions of blended education; the main features that characterize the professional training of future specialists, that form the competence of the individual, contribute to individual creativity, erudition, independent search for knowledge, mastery of skills and abilities and contribute to the need for their improvement, increase personal culture and love for one's profession; the most effective groups of methods are singled out and modern approaches to professional training in conditions of blended learning are highlighted. Modern professional training of future specialists in

Анотація

З'ясовано сутність професійної підготовки майбутніх фахівців з фізичної культури і спорту в умовах змішаного навчання, дано визначення ключових понять дослідження. Розглянуто компоненти інформаційно-цифрової культури; принципи професійної підготовки майбутніх фахівців з фізичної культури і спорту в умовах змішаного навчання; головні ознаки, що характеризують професійну підготовку майбутніх фахівців, що формують компетентність особистості, сприяють індивідуальній творчості, ерудиції, самостійному пошуку знань, оволодінню навичками й вміннями і сприяють потребі їх вдосконалення, підвищують культуру особистості та любов до своєї професії; виокремлено найбільш ефективні групи методів та виділено сучасні підходи до професійної підготовки в умовах змішаного навчання. Сучасну професійну підготовку

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physical culture and sports is presented as requiring the use of digital resources and the latest technologies of education and training. The digital resources that are the most common during the professional training of future specialists in physical culture and sports in the format of blended education have been identified.

Keywords: professional training, future specialists in physical culture and sports, blended learning, modern approaches, digital resources.

майбутніх фахівців з фізичної культури і спорту подано як таку, що вимагає використання цифрових ресурсів і новітніх технологій навчання та виховання. З'ясовано цифрові ресурси, що є найпоширеніші під час професійної підготовки майбутніх фахівців з фізичної культури і спорту в форматі змішаного навчання. У результаті аналізу професійної підготовки майбутніх фахівців з фізичної культури і спорту визначено важливі моменти застосування технологій змішаного навчання під час освітнього процесу.

Ключові слова: професійна підготовка, майбутні фахівці з фізичної культури і спорту, змішане навчання, сучасні підходи, цифрові ресурси.

Introduction

In the world society, the integration and globalization processes require recognition by the world community of the problem of maintaining psychological and physical health as the main indicator of the economic and social maturity of members of society, the dynamic development of culture, technology, the success of the public sector, and the training of physical culture and sports specialists requires a special attitude. The development of the educational system and training of competitive physical culture and sports specialists is required by the latest trends of society based on information technologies in the functioning and creation of an appropriate high-quality and high-tech information and educational environment, the importance of which, recently, is growing and significantly affects the quality process of development and formation of information-digital culture of future specialists in physical culture and sports. Only with a sufficient level of technological preparation, informational competence, and digital literacy, a specialist in physical education and sports can find rational ways to solve professional problems, navigate problematic situations, and be competitive in the labor market. Such an approach, which leads to the wide use of IT in the educational process by future physical culture and sports specialists, can be effective in conditions of blended learning (Lazorenko, 2020).

In today's difficult conditions, in the conditions of blended education, becoming a future specialist in physical culture and sports is possible only based on the conversion of theory and practice of physical culture and sports education, sports and pedagogical knowledge, specialization of the specialist mainly in-game

sports that develop intellectual and creative, physical abilities of a person and contribute to the development of moral and volitional qualities of the individual in a complex with the mastery of a healthy lifestyle and health care skills by the students of education (Khrystova et al., 2021).

The global digitization of the educational space has been observed over the last decade, which is accompanied by the use of online learning technologies and information and communication technologies, the strengthening of the academic mobility of students, and the increase in the amount of their independent work (Plakhotnik et al., 2023). As a result of the combination of the latest and traditional technologies, resource-enriched combined educational environments appear under the influence of such innovations, in which the traditional system of the educational space transforms. The result of such innovative changes is the development and emergence of a new educational paradigm, which is aimed at the specific integration of the best elements of such approaches (Danysko & Semenovska, 2019). This innovative phenomenon in modern scientific literature is defined as combined, blended, hybrid training, which has a powerful potential in terms of providing educational opportunities and contributing to the professional development of future specialists. Therefore, we will consider the professional training of future specialists in physical culture and sports in conditions of blended education.

Literature Review

O. Savonova (2019) showed the advantages of using blended learning technologies and singled out the peculiarities of training future specialists in physical education and sports through the use of empirical and theoretical research methods: synthesis, analysis, generalization of the results of the effective application of blended learning technologies in the training of future specialists in physical education and sports. The importance and necessity of creating a scientific-methodological center of blended learning technologies in order to ensure the integration of blended learning technologies in the educational process of the faculties of physical education to improve the quality of education, to carry out measures to increase the level of skills, knowledge, and skills of students in the implementation of blended learning is substantiated; scientific substantiation and development of methodological and theoretical foundations for the effective use of blended learning technologies in the educational process; provision of consulting and methodical support for scientific and pedagogical workers; ensuring the systematic update of the electronic information system of open access, ensuring the organization of blended learning; search and research of new ways and software and technical solutions to improve the effectiveness of blended learning; monitoring the organization of blended learning, carrying out an expert assessment of the quality of this process.

Ya. Yeremiia, Yu. Moseichuk, & O. Moroz (2023) showed ways to improve and develop the subject-methodical competence of future physical education teachers using generalization, analysis, and systematization of literary sources and scientific research data. The ways and foundations of improving the subject-methodical competence of future specialists in physical culture and sports have been established. The issue of improving the qualifications of modern school teachers has been updated; ways of modernization of the higher education system based on the competence approach are shown. The structure was considered, and the essence of the concept of "subject-methodical competence of the future physical culture teacher" was revealed. An integral part of physical culture and health activities is shown: the subject-methodical skills of future physical culture teachers, and the professional training of specialists at the practical and theoretical levels are revealed.

S. Atamaniuk (2022), the methodological basis of the study of their professional training for the use of innovative types of motor activity in their professional activity was considered in the case

of future physical culture and sports specialists. At the methodological level, existential and dialectical approaches are distinguished; systematic approach – at the general scientific level; professional-personal, health-improving, activity-based, reductionist, innovative, bio-socio-cultural, gender – on a concrete-scientific basis; teaching methods – technological. The level of research methodology is characterized by dialectical and existential approaches; the general scientific level of the methodology is characterized by a systemic approach, as it involves a systematic combination of interrelated system-forming factors; the specific scientific level of the methodology is determined by the need for the following approaches: reductive, bio-socio-cultural, professional-personal, activity-based, health-improving, innovative, gender-based, to the use of innovative types of motor activity of future physical culture and sports specialists in their professional activities.

O. Danysko, & L. Semenovska (2019) summarized and characterized the methods of blended learning based on the theoretical analysis of scientific literature. The methods that are expedient to use in the professional training of future physical education teachers are singled out. The author's definition of blended learning is presented, which is an innovative, personally oriented model that is necessary for the organization of the educational process and includes the following educational components – traditional learning, distance learning, and electronic learning, is a factor in ensuring open, continuous education throughout life. Blended learning is presented as a teaching system based on the self-learning of students in the process of interacting with information sources and the teacher using the latest technologies. The specific methods of blended learning implemented in the information and educational environment have been clarified. The need for the professional training of future specialists in physical culture and sports with a methodological toolkit in blended education, which integrates traditional and computer-oriented methods of formation of professionally significant skills, knowledge, skills, and universal competencies in students of education, has been proven. The main groups of methods are characterized and singled out, which should be combined with elements of remote, traditional, and electronic components of didactic interaction: problem-based, visual, verbal, practical, self-education, self-control, and control of educational achievements.

T. Khrystova, I. Rebar, & A. Abdullaiev (2021) devoted their research to the professional

formation of a physical culture specialist based on the conversion of practice and theory of physical education, sports, and pedagogical knowledge, specialization of a specialist in game sports that contribute to the development of moral and willpower qualities and physical, intellectual and creative abilities of children combined with the formation of healthy lifestyle skills. The scheme of training a future specialist in physical culture for sports and games is summarized. The main principles of physical culture teacher training are highlighted: general didactic (individualization, visibility, age appropriateness, accessibility, differentiation, activity, integrity, reflexivity, sequence of task implementation, purposefulness); special (dynamism of the educational and training process, repetition of training cycles, unity of special game training and general physical, gradual increase in physical load, variety and novelty of educational and training activities). The functions of the activity of a physical culture specialist were identified: the basic pedagogical and professional function (competencies: educational, informational, cognitive, subject-subject relations, communicative, health-preserving, physical culture professionally oriented function (methodical sports and games, training sports and games, sports-game refereeing, moral and volitional qualities of the athlete), specialized sports-game function (competencies: orthobiotic, ergonomic, restorative, sports-game, children's health research). The criteria for the effectiveness of the professional training process are substantiated.

S. Lazorenko (2020) the conditions of blended training, attention is focused on the development of information and digital culture and the development of a model of the system of professional training of future specialists in physical culture and sports in the conditions of blended training, which is presented as a complete structure that can provide professional systematic training of future specialists. Principles and methodological approaches are laid down in the training of future physical culture and sports specialists. The theoretical concept is modeled in the conditions of blended learning, the process of formation of the specialist's information and digital culture, which determines the system of initial categories, ideas, and basic concepts, is shown. The practical concept is described as the main one in professional training, which provides a practical solution to the problem. In the conditions of blended education, the possibilities of improving the forms, methods, content, and means of education are shown. The results of the diagnosis

of the results of the professional training of a physical culture specialist are presented, which is based on the indicators and criteria of the formation of the components of the information culture of future physical culture specialists.

V. Naumchuk (2009) presented the basics of independent activity of students of physical education faculties and showed the theoretical foundations of their professional training, substantiated conditions for improving professional training, revealed the importance of sports games for the professional development of future physical culture specialists in the process of independent work on sports games.

The problem of clarifying the modern conditions for the training of specialists, clarifying the specific scientific methodology for blended learning, distance learning, mobile learning, etc. remains open. Therefore, **the purpose of the study** is to clarify the essence of the professional training of future specialists in physical education and sports in the conditions of blended education.

Methodology

In accordance with the objectives of the research, a set of interrelated research methods was used: theoretical: analysis, generalization, synthesis of the main normative documents, reports on research issues, provisions of scientific works and prospects for improving the problem of professional training of future specialists in physical culture and sports in the conditions of blended education; reforming higher education; induction and deduction in order to establish cause-and-effect relationships between political, pedagogical, cultural, and social phenomena from the problem of professional training of future specialists in conditions of blended education; logical and epistemological analysis of theoretical individual provisions, empirical data and scientific identification – for the purpose of analyzing scientific sources and ensuring the reliability of results; system-structural, component-structural, system-functional methods – with the aim of highlighting the main components of the professional training of future specialists in physical culture and sports in the conditions of blended training, substantiating the patterns and identifying the features of its development.

The modeling of the process of professional training of future specialists in physical culture and sports in conditions of blended learning is based on the following methodological

approaches (holistic, activity-based, systemic, BYOD-approach, person-oriented, multi-subject, integrative, technological, cultural, visual-digital, student-centered approaches).

The following principles were used in the analysis of the professional training of future specialists in physical culture and sports in the conditions of blended training: the use of a blended educational environment, professional training; generally didactic, and the creation of digital educational resources.

The theoretical concept defines a system of basic concepts, initial categories, and ideas without which it is impossible to understand the problem, to reveal its essence, and contains the following provisions:

– the phenomenon of blended learning is a formation that has a complex structure and must be formed through its components;
– the organization of a blended educational environment in a higher education institution requires a clear and harmonious combination of remote and traditional technologies;
– the formation of the information and digital culture of future specialists in physical culture and sports in the conditions of blended education is implemented as a pedagogical system, is a component of their professional training, consisting of interconnected subsystems;
– the necessary conditions for the professional training of future specialists in physical culture and sports in conditions of blended education are:

1) digitalization of professional training, complex design of a blended educational environment, strengthening of interdisciplinary connections between disciplines;
2) ensuring communication with stakeholders, optimizing communication between participants in the education process, overcoming psycho-emotional barriers to working with IT;
3) strengthening the humanistic values of physical culture, consideration of historical aspects of the development of the field of physical culture and sports in the conditions of blended education, formation of value attitudes towards the use of IT;
4) the organization of future specialists in physical culture and sports quasi-professional activities in the direction of the

development of skills to use IT of a professional orientation.

The practical concept provides a system of actions that provide practical training of future specialists in physical culture and sports in the conditions of blended education, contribute to the solution of the problem, and is characterized by the following provisions:

– in the conditions of blended education, it is necessary to form the information and digital culture of future specialists in physical culture and sports;
– professional training of future specialists in physical culture and sports requires the ability to self-educate; in the conditions of blended education in the field of health, taking into account the development of digital technologies, awareness of future specialists in the field of IT;
– high-quality training of specialists takes place through the educational system, the implementation of which is based on blended education in a higher education institution;
– requires the development of intellectual abilities, mental capacity, and optimization of communication between the teacher and students;
– requires the formation of assessment skills, critical analysis, and comparison.

Results and Discussion

Modernity sets an innovative goal of professional education in the field of physical culture and sports – the training of competitive specialists who can significantly increase the effectiveness of physical culture in society (Ivanenko et al., 2018).

When organizing an educational, competitive, and developmental process in a higher education institution, scientists identify several necessary directions (Zavatska et al., 2011):

– definition of the most essential types of professional activity within the framework of the profession for those seeking an educational space;
– optimization of the personal qualities of education seekers and the content of professional motivation, which involves the correction and diagnosis of the motivational sphere of education seekers, as well as the development and diagnosis of their necessary personal qualities;
– by the economic criteria of competitiveness, professional training of future specialists in

physical culture and sports in the conditions of blended training for interaction in the labor market. Such areas of activity are broader than the framework of the traditional educational process. Therefore, they should be under the close attention of teachers due to their actual importance in the training of specialists in physical culture and sports. Such training can take place within the framework of psychological and pedagogical support for the development of the competitiveness of educational space applicants (Sukhanova & Ushakov, 2019).

The present shows that the future is based on a blended form of educational space, where together with remote forms, there should also be forms of classroom practical classes since the teacher is one of the main factors that affect the success of education seekers. When training future specialists in physical culture and sports, it is impossible to fully master the rational technique of movements at a distance, even using the most modern computerized simulators, sports equipment, videos, and video films with the image of exemplary execution of the technique of movements. Although the modern multimedia learning environment is an assistant in the educational process, only an experienced teacher, or a mentor can perfectly teach rational tactical actions, and motor exercises, set the ideal technique of movements, and reveal the individuality of the student of education. Therefore, the importance of professional training of future specialists in physical culture and sports in conditions of blended education is undeniable (Bielikova, 2014).

The most used term is "blended learning" by American scientists D. Garrison and N. Vaughan (2012). Scientists interpret blended learning as a well-thought-out combination of face-to-face and online educational experiences.

So, blended learning is a term applied to the educational practice of professional training of future specialists, which is carried out with the help of a certain combination of direct electronic and face-to-face learning. It is thanks to the use of mediated, technological components of such practice that learners and teachers do not necessarily have to be in one place physically together, but can be present in the digital environment virtually through the global Internet network.

Blended learning is a system of teaching that combines distance, face-to-face, and electronic learning, which is based on the self-learning of the learner in the interactive process of interaction with sources of information and the teacher using the latest information and communication technologies. The effectiveness of the distribution of offline components or online determines the nature and content of the activities of education seekers in the process of practical improvement of knowledge, the support system from the teacher, skills, abilities, studying the material, evaluating the level of educational achievements, etc. The basis of such an innovative synergistic system is electronic learning, which enables the combination of distance and traditional learning in various ratios and causes the emergence and spread of blended learning, as well as contributes to the formation of a polyphonic educational environment, which ensures the use of innovative methods of organizing the educational environment (Danysko & Semenovska, 2019).

The professional training of future specialists in physical culture and sports in the conditions of blended education involves the formation of components of information and digital culture:

1) axiological – awareness and understanding of the importance and role of IT in professional activity, worldview of information and digital technologies in the information society;
2) technological – for designing professional activities, the ability to use ICT, the possession of software, various computer equipment, multimedia technologies, network technologies, presentation technologies, etc., the ability to implement a personally oriented educational process, design educational and training classes, etc.;
3) motivational – motivating the use of IT for the professional orientation of future specialists in physical education and sports in the conditions of blended education;
4) information – the ability to design digital educational resources; professional skills for working with information and knowledge: management, search, creation of information, evaluation, transfer, etc.;
5) suggestive – with the help of verbal channels of possession of the means of non-verbal and verbal emotionally colored influence to broadcast the necessary professional information;
6) communicative – speech professional training of future specialists in physical education and sports in the conditions of blended education;
7) reflexive – the ability to develop and improve in the field of digital technologies for personal development of the personality and high-

quality professional activity (Lazorenko, 2020).

The system of professional training of future specialists in physical culture and sports in the conditions of blended education is based on the principles of continuity of education, integrativeness, fluidity, transferability, self-education, and continuity (Bida et al., 2018). The main feature of an effective system of educational space, which determines the essence of the principle of continuity, is the merging of basic education and further practical training of specialists in physical culture and sports in the conditions of blended training for social and labor activities into a coherent, unified educational process. The following principles step by step specify the content of the system of professional training of future specialists in physical culture and sports in the conditions of blended education and reveal the main factors of application in a hierarchical sequence (Kuzminskyi et al., 2021).

In addition to the above, principles such as systematicity, independence, fundamentalization, binary, humanization, scientificity, integrity, modeling, universalization, individualization, systematicity, connection with life, and dynamism are important in the training of future specialists in physical culture and sports in the conditions of blended education, flexibility, and others (Zorochkina et al., 2023).

The general principles of human activity determine the implementation of specific principles in the professional training of future specialists in physical culture and sports in the process of independent work on sports games, as they serve as basic provisions for developing conditions for improving the educational process, taking into account the specifics of sports games. The principles of professional training of future specialists in physical culture and sports in the conditions of blended education organically complement each other, are implemented in unity, not in isolation, are in a close relationship, and are deeply integrated (Naumchuk, 2009).

We believe that the principles of training a future physical education teacher are important:

– general didactic (visibility, accessibility, activity, individual approach; differentiation, sequence of task implementation, age appropriateness, purposefulness, integrity, reflexivity)
– special (dynamism of the educational and training process, repetition of training cycles, unity of general physical and special game

training, gradual increase in physical load, novelty, and variety of educational and training activities) (Khrystova et al., 2021).

Let us name the main features that characterize the professional training of future specialists in physical culture and sports in the conditions of blended education, form the competence of a specialist, promote individual creativity, erudition, independent search for knowledge, mastery of skills and abilities and contribute to the need for their improvement, increase personal culture, love for his profession. They talk about the professional readiness of future specialists and show the result of their professional training, which is a stable integrative education, which, based on the formation of the needs and abilities of the personality of the acquirer of the educational space, manifests itself in a clear form and is characterized by a normative level of transformation into a system of professional functions of social relations, which determines the attitude to the pedagogical activity of the future specialist and shows effectiveness.

The main goal of the professional training of future specialists in physical culture and sports in a modern and future educational institution should be the formation of a creative personality that teaches itself. Therefore, the basis of professional training of specialists is their independent work. The main thing in the independent work of a student of education is solving a cognitive task without direct help from the teacher. Then the independent activity of the student of education will be aimed at the transition to the creative solution of tasks from the method of simple reproduction (Naumchuk, 2009).

Thus, we prove that independent work in professional training is one of the methods of forming a highly qualified specialist. It sets the following tasks that must be solved in the conditions of effective cognitive activity and is provided by a clear individual educational schedule of the student, the availability of textbooks, lecture texts, methodical guides, etc. (Khrystova et al., 2021).

We will single out the most effective groups of methods of professional training for future teachers of physical culture in the conditions of blended education:

1) verbal – involves direct communication with the teacher in the classroom during classes (discussion, lecture, explanation, story, instruction, instruction, prompt reminder) and indirect (working through instructional

materials, listening to audio, working with open resources (blog, website), electronic textbooks and manuals, educational catalogs, real-time online chat discussions, etc.);

2) visual – involves visualization of new information directly by the teacher (showing, statistical visualization, illustration, demonstration of exercise technique) and the use of multimedia technologies (viewing movies and videos, presentations, online broadcasts (sports competitions, video lectures, screencasts, etc.), analysis and generalization of educational information, virtual tours;

3) practical methods – based on the acquisition of future specialists in physical culture and sports in the conditions of blended training of theoretical knowledge from the basics of the sciences of the specialty and specialization, the formation of practical skills of activity;

4) problem-search methods contribute to a more independent and meaningful mastery of knowledge and are used to develop the professional activity of future specialists, the skills of creative educational and cognitive activity of those seeking education (direct analysis of educational resources, searching for information in thematic lists, catalogs, directories, etc., solving problem situations)

5) methods of self-education form in students the skills of independent cognitive search, a meaningful and responsible attitude to the process of self-education, self-development, self-organization, and the ability to improve one's qualifications throughout life. In blended learning, it is possible to use traditional (creating reference schemes, taking notes, completing independent work tasks, reading additional literature, independent exercise, sports clubs, participation in face-to-face training) and computer-oriented (creating mental maps, creating an electronic portfolio, participating and exchange of experience in online professional communities, independent search and processing of information on the Internet, training and online courses) methods;

6) methods of monitoring and self-monitoring of educational achievements include current, intermediate, and final monitoring of the abilities and skills of students, their achievement of learning outcomes, and the ability to predict the consequences of their activities. The use of blended learning allows you to use computer-oriented methods of a programmatic and communicative nature (webinars, online surveys, interactive educational lectures with elements of formative assessment, automated test programs, and questionnaires).

At the level of academic disciplines, traditional and electronic learning methods can be implemented through various didactic techniques aimed at achieving a specific goal (Danysko & Semenovska, 2019).

We will highlight modern approaches to the professional training of future specialists in physical culture and sports in the conditions of blended training: personally oriented, environmental, systemic, and activity-oriented. These approaches actualize the process of professional training of future specialists in physical culture and sports. We will emphasize the need in the educational process to use an innovative approach that shows future specialists in physical culture and sports the advantages of the latest technologies and methods. The valeological approach provides for the provision of skills, knowledge, and health maintenance skills and is based on consideration of the acquisition of health improvement skills using natural means, and independent health maintenance.

This will make it possible to prepare future specialists in physical culture and sports for the implementation of innovations and to target them on non-standard professional activities of various segments of the population. Modern approaches provide new information for a balanced impact on motor activity, intellectual and physical qualities, mental functions, and sports abilities of the person seeking education (Atamaniuk, 2022).

Modern professional training of future specialists in physical culture and sports takes place everywhere in the world educational space in the conditions of blended learning, which requires the use of the latest education technologies, training, and digital resources. Modern methods of blended learning are saturated with various models (Moseichuk, 2017), which allows future specialists in physical culture and sports:

– to propose ways and implement modern health improvement technologies in the practice of physical education of school-age children;
– independently choose methods, forms, and means of introducing the latest healthcare technologies into the educational process with children and youth. With this approach, the professional worldview of future specialists in physical culture and sports is formed, which is the basis of interdisciplinary features of training, professional and

methodical competencies; individual physical culture and health measures are determined; strategic changes are being formed in the field of professional activity; the educational process in physical culture and sports improves (Yeremiia et al., 2023).

Therefore, the use of digital technologies is an integrated, indispensable component of the training of future specialists (Molchaniuk, 2019). In the practice of their professional training, technical means are used: mobile (smartphones, tablets), stationary (interactive whiteboard, computer, etc.), which are also united under the concept of "digital technologies" (Yarmoshchuk & Vasyliuk, 2018).

The digital resources that are the most common during the professional training of future specialists in physical culture and sports in the format of blended training have been identified:

– web servers for creating educational games, interactive tests, discussions, quizzes, and surveys: LearningApps, EDpuzzle, StudyStack, Kahoot, Master test, Quizalize, Quizziz, Triventy, Google From, Plickers, Mentimeter, ClassMarker;
– application programs: MS PowerPoint, MS Word, MS Excel, cloud technology tools, web browsers;
– means of electronic asynchronous communication: forums, e-mail, educational groups in social networks;
– means of communication: Google Meet, Zoom, Google Classroom, Skype, Instagram, ClassDojo, Facebook, Viber, Telegram and others;
– means of electronic synchronous communication: messengers, chats, video conferences;
– software (mobile) for relationships to monitor activity, educational activities: number of steps, distance covered, speed, etc.; breathing, energy expenditure: Health, Google Fit, Nike Plus Running, HealthKit, MyFitnessPal, Fitbit, RunKeeper, Samsung Health, Endomondo Sport Tracker, Runtastic); physical condition: Digifit iCardio, Google fit, Heart Graph, Breathe, Yoga Breathing Exercises, BackExercises; body water balance: Watercheck, Waterbalance, Water Your Body, Water Drink Reminder, Watermania, WaterLogged, Hydro; body weight, diet balance: Fatsecret, Lifesum, Myfitnesspal, Yazio Calorie Counter, Dialife, Eat Slower, LoseIt;
– online platforms: Prometheus, Educational Era, LearningApps.org, and others, which

will allow you to master the latest news and trends, and get informal education without spending excessive resources;
– video analysis and motion capture systems: Expert Vision Analysis, Motion Analysis Corp; Vicon, Oxford Metrics; Charnwood Dynamics, CODA, BioVideo, Kinovea; Dartfish;
– web servers for creating mind maps, and memory cards: Mindomo, MindMeister, Spiderscribe;
– to create multimedia posters on web servers: Thinglink, Glogster;
– web servers for creating interactive infographics, animations, presentations, video scribing, PearDeck, SparkolVideoScribe, and Nearpod.

Today, digital technologies are the main component of the educational process during the professional training of future specialists in physical culture and sports in the format of blended education and contribute to the high-quality formation of professional and general competencies, allowing to prepare competitive, highly qualified specialists for professional activities (Hrabyk & Hrubar, 2022).

As a result of the analysis of the professional training of future specialists in physical culture and sports in the format of blended training, important points of application of blended training technologies were determined:

1) the ability to ensure the individualization of professional training of future specialists in physical culture and sports; the opportunity to timely single out students who have understood the main points in the process of mastering the material, and the discipline and to react immediately. Due to this, the motivation of students to intensive independent work is improved, optimally selected educational information will help the student to learn to independently plan his educational activities, think critically, control and regulate the educational process, objectively assess his opportunities while developing;
2) thanks to the use of electronic training courses during the professional training of future specialists in physical culture and sports in the format of blended training, the teacher has the opportunity to save time at the stages of monitoring educational achievements and explaining a separate topic, to concentrate his activities on practicing practical skills in the discipline;

3) classes become more fast-paced, and more interesting because they are held in the form of quests, games, discussions, competitions, and presentations of the results of educational projects; students have the opportunity to use a pair of mobile phones to search for the necessary information on the Internet quickly; there is no need to take notes in class, it can be viewed on the course in the Moodle system; it is allowed to prepare and present reports, search for solutions to non-standard problems as a team, win and get satisfaction from the educational process (Savonova, 2019).

Conclusions

The essence of the professional training of future specialists in physical culture and sports in the conditions of blended education is clarified, and the key concepts of the study are defined.

The components of information and digital culture are considered; principles of professional training of future specialists in physical culture and sports in conditions of blended education; the main features that characterize the professional training of future specialists, that form the competence of the individual, contribute to individual creativity, erudition, independent search for knowledge, mastery of skills and abilities and contribute to the need for their improvement, increase personal culture and love for one's profession; the most effective groups of methods are singled out and modern approaches to professional training in conditions of blended learning are highlighted.

Modern professional training of future specialists in physical culture and sports is presented as requiring the use of digital resources and the latest technologies of education and training. The digital resources that are the most common during the professional training of future specialists in physical culture and sports in the format of blended education have been identified.

As a result of the analysis of the professional training of future specialists in physical culture and sports, important points of application of blended learning technologies during the educational process were determined.

We plan to direct further research to clarify the role of digital technologies, which are the main component of the educational process during the professional training of future specialists in physical culture and sports.

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Innovative technologies drive the modernization of higher education

Інноваційні технології - рушійна сила модернізації вищої освіти

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**Iryna Povlin[5]**
https://orcid.org/0000-0001-6028-6168

Abstract

The article shows the need to modernize higher education and its entire system, which consists of improving the efficiency of the educational process in higher education through the implementation and design of innovative modern educational technologies. The main types of innovative approaches in the educational process of a higher school are disclosed. The classification of educational technologies according to the factor of psychological development, orientation on personal structures, according the nature of the content and structure, is considered. Methodological approaches that are important in the modernization of higher education through the introduction of innovative technologies are analyzed. Taking into account modern methodological approaches, it is shown that the content of innovative technologies should be determined using the basic principles discussed in the article. The research work was aimed at proving the need to modernize higher education and its entire system, which consists of improving the efficiency of the educational process in higher education through the

Анотація

У статті показано необхідність модернізації вищої освіти та всієї її системи, яка полягає у підвищенні ефективності освітнього процесу у ЗВО шляхом впровадження та проектування інноваційних сучасних освітніх технологій. Розкрито основні типи інноваційних підходів у навчальному процесі вищої школи. Розглянуто класифікацію освітніх технологій за фактором психологічного розвитку, орієнтацією на особистісні структури, за характером змісту та структури. Проаналізовано методичні підходи, важливі в модернізації вищої освіти шляхом впровадження інноваційних технологій. З урахуванням сучасних методичних підходів показано, що зміст інноваційних технологій необхідно визначати з використанням основних принципів, розглянутих у статті. Висвітлено та показано важливість основних блоків інноваційних технологій, що впливають на освіту: (інформаційні технології, дистанційне навчання). Науково-дослідна робота була спрямована на доведення необхідності модернізації вищої освіти та всієї її системи, що полягає у підвищенні

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implementation and design of innovative modern educational technologies. In conclusion, the study demonstrates that the modernization of higher education through the implementation of innovative educational technologies can improve the efficiency of the educational process and prepare students for the challenges of today's world.

Keywords: modernization of higher education, efficiency of the educational process, innovative technologies, information technologies, distance learning.

ефективності освітнього процесу у ЗВО шляхом впровадження та проектування інноваційних сучасних освітніх технологій. Дослідження демонструє, що модернізація вищої освіти шляхом впровадження інноваційних освітніх технологій може підвищити ефективність навчального процесу та підготувати студентів до викликів сучасного світу.

Ключові слова: модернізація вищої освіти, ефективність освітнього процесу, інноваційні технології, інформаційні технології, дистанційне навчання.

Introduction

The relevance of our article is also determined by the activation of the main product of the information revolution - information technologies, which revolutionize all spheres of human life. The field of education is no exception. Information technologies have introduced such an impulse of innovation into the education system, which can be considered as the main means of its innovative development.

Information revolution - reflects the revolutionary impact of information technologies on all spheres of society. This phenomenon integrates the effects of previous revolutionary inventions in the information field, as it creates a technological basis for overcoming any distances in the transmission of information, which contributes to the unification of intellectual abilities and spiritual forces of the individual.

Education has changed significantly under the influence of new challenges of modernity and has become one of the factors of radical change in social systems. The globalization of education is unfolding in the direction of forming a single "educational space" based on integrating national educational systems.

Challenges that higher educational institutions may face when implementing innovative technologies are a lack of resources, resistance to change, and the need to train teachers.

Modernization of higher education and its entire system consists of improving the efficiency of the educational process in higher education through the implementation and design of innovative modern educational technologies and systems (Dubaseniuk, 2004).

The main resource in the high-quality training of a modern specialist and his modernization are

innovative technologies in the field of education. These technologies all over the world affect the quality of people's lives and condition the civilizational development of the individual.

The use of innovative technologies in education, the latest means of life affects and changes the nature of human existence. With the modern reform of education all over the world, in today's conditions, the main tasks in the education sector are the training of competitive, creative, educated individuals with developed competencies for high-quality professional activity and effective life activities (Pérez-delHoyo et al., 2020).

The constant and rapid development of the Internet and telecommunications technologies, their popularity and applicability in all spheres of life requires a rethinking of the place and role of a person in the educational process and affects changes in the educational environment, improving the content of education, which requires: constant modernization of education, mandatory use of innovative technologies in the educational space, rethinking the role of technology in education, the goals of education, changes in teaching methods and methods of teaching material, requires the dissemination of learned best practices, the purpose of which is to improve the quality of education in general (Senchenko et al., 2018). Effectiveness and efficiency are the main criteria for evaluating innovative technology and the entire innovative educational process (Navolokova, 2009).

Entry of Ukraine into the world and European educational space, and the integration processes taking place in it require increasing the competitiveness of specialists. This encourages higher education institutions to innovate. The renewal of the modern system of higher education and pedagogical science determined

the need for research on pedagogical innovation as a special branch of scientific knowledge. Intensive development and modernization of innovative processes in modern conditions fundamentally change the relationship to the possibility of managing such processes, since the existing spontaneity of these processes delays the development of practice.

Literature Review

The problem of innovative development of education and educational innovations is relevant because it causes wide public and scientific resonance. Innovative educational activity involves the development of the creative potential of teachers and concerns not only the creation and dissemination of novelty but also changes in the way of activity, and the thinking style of the participants of the educational process. The main characteristic of the innovative pedagogical activity of a higher educational institution is to increase the effectiveness of the educational process.

The development of innovative technologies as a pedagogical category is connected with the works of such scientists.

V. Brych & O. Borysiak (2017) justify the need for a mobile reorientation of the principles of competitive positioning of enterprises in the environment, which is connected with the affirmation of the global character of social processes in the educational sector. They show the need to introduce innovations in business processes based on quality education. They reveal the transformation of approaches to the role of a person in the enterprise and show the necessity of using innovative technologies for personnel education.

A. Kuchai (2013) analyzed the priority directions in education, revealed the content of a fundamentally new paradigm of education, in particular, emphasized the transition from the formation of a citizen of the country to a citizen of the world, a person whose morals and culture correspond to solving the world's problems, a democratic, open, educated, responsible person. It shows the need for education seekers to implement training with the use of innovative technologies, which ensure an increase in the level of creativity of specialists, promote the desire for self-improvement and self-development of future specialists, the desire for search, research work, provide psychological support for the innovative pedagogical activity.

N. Navolokova (2009) characterized various innovative technologies in an accessible form, offered practical recommendations for their use, and presented modern approaches to the design of teaching aids. The author's definition of the concept of "pedagogical technology" is given, a classification is proposed and an analysis of known and effective innovative learning technologies is carried out. Practical recommendations on the use of innovative technologies are provided. Information on teaching techniques, methods, and forms is presented.

Hepp et al. (2015) researched the method of using augmented reality technology to improve modern society. The features of the innovative product and prospects for integration are highlighted, and the importance of the implementation of augmented reality technology is shown.

N. Machynska & Yu. Komarova (2015) revealed the content of innovative technologies and showed their features, emphasized their expediency, and proved the necessity of their implementation in higher education. An aspect characterization of innovative technologies in higher education was made: (information technologies, case technologies, etc.), their classification was presented, the stages of innovative technologies in higher education were analyzed, and the specifics and feasibility of their application were determined.

Summarizing the opinions of scientists, we note that the important tasks of the development of innovative education are: first, ensuring the innovative orientation of the education system based on large-scale computerization and activation of scientific, technical, and innovative activities of higher educational institutions, creating innovative structures in their system; reforming the education system taking into account the requirements of European standards and preserving cultural and intellectual national traditions.

Secondly, increasing the effectiveness of the university sector of scientific research and development to strengthen its role in ensuring innovative development of the national economy. Modern high technologies depend on the level of scientific research, efficiency, and effectiveness of their implementation production. Of course, the quality of scientific and technological developments depends on the qualifications of scientists and engineers, and

they, in turn, are the total effect of this education system, especially higher education.

Thirdly, ensuring the expanded reproduction of knowledge based on the integration of higher educational institutions, academic and industry institutions by increasing the level of funding of the public sector of scientific research and development; concentration of resources on priority areas of development of science and technology and innovative activity; stimulating lifelong learning, fostering a culture of innovative thinking.

After analyzing the literary sources, it was found that the scientists presented a classification of innovative technologies, the definitions of the researched problem were grouped: "innovative technologies", "pedagogical technology", "educational technology", "teaching technologies", the role of the introduction of innovative technologies in education was shown, the methodology was investigated using augmented reality technology.

To achieve the innovativeness of the educational process, we set ourselves the task of revealing the main types of innovative approaches in the educational process of a higher school; to single out the main components of the modernization of higher education through the introduction of innovative technologies; to consider the classification of educational technologies according to the factor of psychological development, according to the orientation of personal structures, according to the nature of the content and structure; to reveal innovative teaching methods and technologies. Therefore, the research work is aimed at proving the need to modernize higher education and its entire system, which consists of improving the efficiency of the educational process in higher education through the implementation and design of innovative modern educational technologies.

The purpose of the article: is to show the need to modernize higher education and its entire system, which consists of improving the efficiency of the educational process in higher education through the implementation and design of innovative modern educational technologies.

Methodology

The study is based on the premise that the high-quality training of specialists in higher education institutions requires the modernization of higher education by introducing innovative technologies, determining the content of training,

and organizational structure, taking into account the trends of modern innovative education, the development of innovations in the field of education, promoting the formation of competence in a professional career at under the conditions of modernization changes in universities, European integration educational processes, integrated educational process of training specialists in institutions of higher education for adaptation to the labor market and successful professional activity.

The following methods were used in our study: analysis of philosophical, psychological, pedagogical, and scientific sources on the problem of modernization of higher education through the introduction of innovative technologies; showing the experience of organizing the training of specialists on the path of European integration, the origins, and development of innovative technologies to identify the state of development of the problem of modernization of higher education through the introduction of innovative technologies; a comparative analysis of the development of the problem of modernization of higher education through the introduction of innovative technologies and the introduction of industry innovations into the educational process of training specialists in universities; analysis of scientific publications on the development of the problem of modernization of higher education through the introduction of innovative technologies and practices, to generalize the identified trends of promoting the development of the problem of modernization of higher education through the introduction of innovative technologies in the training of specialists in universities; scientific and pedagogical experience of researchers to compare scientific and methodological support for determining the state of implementation of innovative technologies. Pedagogical observation, conducting problem-based learning through the introduction of innovative technologies.

We conducted an experimental study. The first stage of the experiment involved the formation of the student's information culture, which is an indicator of the modernization of higher education, which is the basis of the following stages.

In the second stage of the experiment, students mastered the system of theoretical knowledge about future professional activity and mastered the methodology of scientific knowledge. At the same time, we observe the development of students' abilities, the formation of their need for

independent activity, and their orientation toward the use of innovative technologies in professional activities.

The third stage of the experiment was aimed at the formation and improvement of the knowledge system, and the development of practical skills in the use of theoretical knowledge accumulated in the previous stages. At this stage, theoretical and practical training of students is integrated.

A control and an experimental group of students were created. In the control group, the process of studying the "Informatics" course took place within the framework of traditional education. In the experimental groups, the influence of the formation of each component of the student's information culture, which is an indicator of the modernization of higher education, was tested.

The analysis of the obtained data made it possible to formulate some regularities in the dynamics of the levels of formation of the information culture of students, which is an indicator of the modernization of higher education, after studying the computer science course: the transition from a low level in the experimental groups increased by a total of 25.6% compared to 14.8% in the control ones (with traditional education); the transition to a high level increased by an average of 7.4% in experimental groups versus 3% in control groups; a slight increase in the average level of formation of the student's information culture, which indicates the modernization of higher education and the ways and possibilities of introducing innovative modern educational technologies, as well as the estimated efficiency ratio of experimental groups compared to control groups.

At all stages of the experimental work, there was an uneven, but fairly steady growth in the level of formation of students' information culture, especially at the second and third stages of the experimental study.

Therefore, the proposed step-by-step technology of forming the information culture of students and the ways and possibilities of their implementation of innovative modern educational technologies is effective.

The obtained results and their analysis make it possible to form certain ideas that the purposeful formation of information culture of students, renewal of ways and possibilities of introducing innovative modern educational technologies into them, formation of information culture and

professional competencies of students contributes to the fact that the modernization of higher education through the introduction of innovative technologies in under the conditions of the information society is moving to a higher, new level of its evolutionary development.

Results and Discussion

The significance of the development of education, innovative processes of the development of the educational space, the state, and the entire society at the current stage of human existence plays an important and determining role in the modernization of higher education through the introduction of innovative technologies, since the main thing in modern production is knowledge and information. In our time, such terms as innovative activity, innovations, innovative products, and innovative products have become important in society.

In the educational process at the higher school, two main types of innovative approaches are distinguished, taking into account the scientific achievements of foreign modern pedagogy (Vitanova, 2016).

The first type of innovative approach includes innovations-modernizations that modernize the educational process and contribute to the achievement of guaranteed results within its traditional reproductive orientation.

The second innovative approach to education includes innovations-transformations that provide an opportunity to ensure the modernization of higher education through the introduction of innovative technologies, qualitative renewal of the educational process, directing the orientation of educational and cognitive search activity, and ensuring its research character (Dubaseniuk, 2004).

Since today requires global modernization of higher education through the introduction of innovative technologies, these are not just any innovations, but those that significantly increase the effectiveness of educational activities, and with this approach, the use of innovative technologies in education is the basis for increasing the efficiency and quality of the education process in higher school (Machynska & Komarova, 2015).

The main components of the modernization of higher education through the introduction of innovative technologies are (Furman, 1995):

- pedagogical neology, which is the theory of creation and application of innovations in the education system;
- methodology of perception, interpretation in the sociology of the new, assessment in education, management, pedagogy, and psychology;
- technology and practical application of innovative educational technologies.

These components form the essence of innovation.

According to the nature of the content and structure: educational and educational, religious and secular, professional and general educational, technocratic and humanitarian, branch, subject, mono-technological, penetrating, and complex technologies (Dubaseniuk, 2004).

V. Kovalchuk considers such innovative teaching methods and technologies to be the most important in higher education (Kovalchuk & Fedotenko, 2018): Information Technology; communication technologies; games; problem-based learning; coaching; case study; experiential learning; contextual learning; individual training; interdisciplinary training; training; independent activity; project activity; anticipatory activity.

After analyzing scientific research, we classify innovative technologies in education by groups.

Digital technologies. The modernization of higher education through the introduction of innovative technologies is aimed at an integrated process of informatics with various subject areas, which leads to the improvement of the educational field, ensures the digitalization of the consciousness of the students of education, and allows them to understand the processes of digitalization in modern society, leads to professional growth.

Personal-oriented technologies. Personal-oriented technologies place the personality of the student at the center of the educational system and contribute to providing the student with conflict-free conditions, the realization of his natural potential, comfortable educational conditions, safe learning conditions, and development. Personal-oriented technologies are not a means of achieving any abstract goal, but the goal of the educational system and contribute to the development of individual educational programs by students according to their needs and capabilities.

Monitoring of intellectual development. When modernizing higher education through the introduction of innovative technologies, the diagnosis of the quality of the educational space,

and the analysis of the education of each student is necessary for the construction of graphs of the dynamics of success and is carried out by testing (Lin et al., 2023).

Educational technologies. It is an integral factor in the modernization of higher education through the introduction of innovative technologies in modern learning conditions. Education seekers receive the opportunity of education in the form of their involvement in additional forms of personality development: participation in student self-government, mass cultural events, etc.

Didactic technologies. Through the introduction of innovative technologies during the modernization of higher education, didactic technologies, both already known and new and proven methods, can be implemented. These are games, independent work, protection of completed projects, the "consultant" system, learning with the help of audio-visual technical means, the "small group" system – group, differentiated methods of education, etc. In practical application, there are various combinations of innovative methods (Pérez-delHoyo et al., 2020).

When modernizing higher education through the introduction of innovative technologies, modern methodological approaches are taken into account (synergistic, competence-based, informational, systemic, acmeological, personal-activity, cultural, algorithmic, etc.).

Taking into account modern methodological approaches, the content of innovative technologies should be determined with the help of principles. Let's consider the main principles.

The principle of conformity to nature takes into account the laws of natural personality development and provides during the modernization of higher education through the introduction of innovative technologies: the development of the student's potential, inherited from parents and nature – spiritual, physical, social, mental; psychological-pedagogical individual assistance to students in realizing basic needs for self-actualization, security, self-realization, etc., without which the natural sense of personal dignity and independence cannot be realized.

It is not possible to create conditions for the free use of the emotional, social, physical, and intellectual, opportunities and abilities provided by heredity, which are inherent to a certain individual.

The principle of scientificity requires that the processes of educational cognition exist based on methods, principles, and means of science, and experimental activity is based on them (Moiseyuk, 2007).

The principle of an individual and differentiated approach through the introduction of innovative technologies enables a harmonious combination and mutual complementation of collective and individual forms of education with an individual and personal orientation to education, contributing to the determination of the individual trajectory of personality development (Marusynets et al., 2022). The principle of an individual and differentiated approach is related to the choice of methods of mastering the content of educational programs, and the level and adaptation of education seekers to information and computer technologies in the educational process (Chaika, 2011).

The principle of connection between theory and practice. Theoretical knowledge in the introduction of innovative technologies is the basis of productive learning – an intellectually rich, creative high-tech educational space (Sovhira et al., 2023). The principle of connection between theory and practice requires the study of modern theories of science, prospects for the development of education, combining theoretical material with situations and examples from real life. The acquired knowledge should be integral, reflected in the content of the innovative material, and not fragmented into theories, ideas, or facts (Chaika, 2011). The main role should be played by scientific theories in the design of the educational process, not practice. A scientific theory must be built based on the experience gained by the students, developing it so that it does not become abstract (Khymynets, 2009).

The principles through the introduction of innovative technologies form a system where, along with the analyzed principles, the generally accepted principles of systematicity and consistency are implemented; visibility; unity of education and upbringing; multiculturalism; consciousness, activity, and independence; thoroughness; availability; emotionality, etc. Orientation of education through the introduction of innovative technologies on the systematic implementation of principles ensures the humanistic orientation of the educational space, and the achievement of educational, educational, and developmental goals (Ortega Navas, 2011).

The purpose of our research work was to prove the need to modernize higher education and its entire system, which consists of improving the efficiency of the educational process in higher education through the implementation and design of innovative modern educational technologies.

The research was conducted by introducing two types of innovative approaches to the educational process. The first type of innovative approach includes modernization innovations that modernize the educational process and contribute to the achievement of guaranteed results within its traditional reproductive orientation.

The second innovative approach to education includes innovations-transformations that provide an opportunity to ensure the modernization of higher education through the introduction of innovative technologies, qualitative renewal of the educational process, directing the orientation of educational and cognitive search activity, and ensuring its research character.

In the course of research and experimental work, we analyzed ways to modernize higher education and its entire system; the main types of innovative approaches in the educational process of the higher school are disclosed; the main components of the modernization of higher education through the introduction of innovative technologies are singled out; the classification of educational technologies by the factor of psychological development, by orientation to personal structures, by the nature of the content and structure is considered; innovative teaching methods and technologies are disclosed; the classification of innovative technologies in education by groups is shown. For this, we used a complex methodology, which includes a set of methods that ensure the reliability of the results of the formative stage of the experiment: observation; survey; testing; computer diagnostics; conversation; solving practical problems; performance of individual tasks; analysis of the results of activities (computer classes, results of solving tasks, essays, and others).

To obtain reasonable and reliable results of the experiment, we had to choose criteria for evaluating the results of the experiment, determine the size of the sample, and prove its representativeness.
We used the ratio method as a criterion for evaluating the results of the experiment. The essence of this method is that when processing and analyzing the results of the experiment, we used a quantitative assessment of the formation

of each of the components of the student's information culture, which is an indicator of the modernization of higher education and, in general, this personal culture as a whole by groups. At the same time, the level of formation of the student's information culture, which is an indicator of the modernization of higher education, was determined by the percentage ratio of students who were at each level of formation at the beginning of the experiment and during the experimental work.

Table 1 presents the results of diagnostic "slices" of the initial state of some indicators of the

Table 1.

Comparative data of students of experimental and control groups before the beginning of the formative stage of the experiment (in % of the total number)

formed information culture of students, which is an indicator of the modernization of higher education, which was conducted before the start of the formative experiment.

The comparative analysis of the obtained results shows that there are no significant differences in the experimental and control groups according to the selected indicators before the formative experiment. This gives us the right, with a high degree of reliability, to consider the sample of the control group to be identical to the sample of the experimental group at the corresponding stage of the experiment.

Group	Number of students persons	Progress %	Ability to use innovative modern educational technologies						Formed algorithmic thinking					
			high persons	%	average persons	%	low persons	%	high persons	%	average persons	%	low persons	%
Experimental	76	54,3	3	3,9	17	22,4	56	73,7	6	7,9	21	27,6	49	64,5
Control	75	55,1	5	6,7	16	21,3	54	72	4	5,3	19	25,3	52	69,4

Having determined at the ascertaining stage of our research the levels of formation of students' information culture and the ways and possibilities of introducing innovative modern educational technologies, we concluded the need to make some changes to the educational process to improve the training of future specialists.

Thus, the goal of our further work is the improvement of innovative modern educational technologies and the step-by-step formation of the student's information culture, as well as the verification of these technologies in practice. To achieve the innovativeness of the educational process, we revealed the main types of innovative approaches in the educational process of the higher school; the main components of the modernization of higher education through the introduction of innovative technologies are singled out; the classification of educational technologies by the factor of psychological development, by orientation to personal structures, by the nature of the content and structure is considered; innovative teaching methods and technologies are revealed.

The following were chosen as starting positions:

– the technology of step-by-step formation of students' information culture should be acceptable for all specialties;
– formation of the information culture of students should be carried out continuously and subsequently during their professional training.

Thus, students of various specialties and each course of study should be included in research and experimental work, and at the same time, it is necessary to take into account the content of general education and professional disciplines, research, and independent work of students.

The formative stage was conditionally divided into three main stages, for each of which control "slices" were carried out, determining changes in the levels of formation of the information culture of higher education seekers, which is an indicator of the modernization of higher education. The data of the control sections were compared with the results of the ascertaining experiment, i.e. with the results of the "initial section".

The first stage of the formative experiment

coincided with the first year of study at a higher education institution and was decided within the framework of the "Informatics" course, which created the prerequisites for the formation of a student's information culture, which is an indicator of the modernization of higher education, being the basis of the following stages.

At the second stage of the formative experiment, during the study of general education and special disciplines, students mastered the system of theoretical knowledge about future professional activity and mastered the methodology of scientific knowledge. At the same time, we observe the development of students' abilities, the formation of their need for independent activities, and their orientation toward the use of innovative technologies in professional activities.

The third stage of the formative experiment was aimed at the formation and improvement of the knowledge system, and the development of practical skills in the use of theoretical knowledge accumulated in the previous stages. At this stage, the theoretical and practical training of students is integrated. The most important element of this stage is production practice, which affects the success of the formation of professional competencies, since knowledge and skills are practically realized, and even awareness of the peculiarities of professional activity.

The groups were approximately equal in terms of the level of success, the formation of cognitive motivation, and readiness to independently perform educational tasks. In the control group, the process of studying the "Informatics" course took place within the framework of traditional education. In the experimental groups, the influence of the formation of each component of the student's information culture, which is an indicator of the modernization of higher education, was checked.

To eliminate the randomness of the results and track the dynamics of transitions from level to level and the degree of formation of the information culture of students and to identify ways and opportunities for the introduction of innovative modern educational technologies, during the first stage of the formative experiment, in addition to the initial diagnostic section, we conducted two additional sections based on the results of mastering some innovative computer technologies.

The analysis of the data allowed us to formulate some regularities in the dynamics of the levels of formation of students' information culture, which is an indicator of the modernization of higher education, after studying the computer science course:

– the transition from a low level in the experimental groups increased by a total of 25.6% against 14.8% in the control groups (with traditional training);
– the transition to a high level increased on average by 7.4% in the experimental groups against 3% in the control groups;
– a slight increase in the average level of formation of the student's information culture, which indicates the modernization of higher education and the ways and possibilities of introducing innovative modern educational technologies, as well as the calculated coefficient of effectiveness of experimental groups compared to control groups.

Thus, during the first stage of the formative experiment, we observed an uneven, but rather stable growth in the levels of formation of students' information culture.
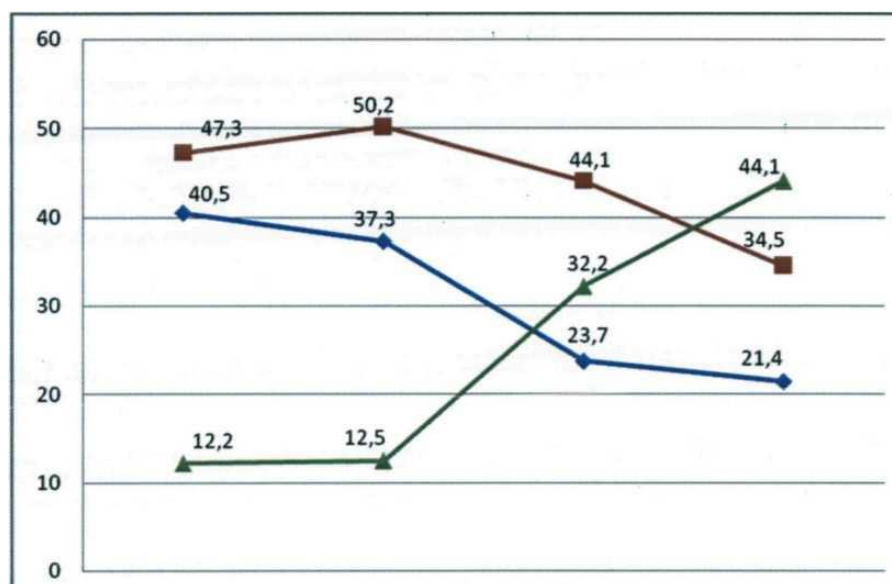
Therefore, after the first stage of the formative experiment, only minor changes are observed in the levels of the formed information culture of students and the ways and possibilities of introducing innovative modern educational technologies, therefore, the continuation of purposeful work on its formation is necessary.

The next two sections – one intermediate, and one final section – we conducted at the end of the next stage of research and experimental work. They were characterized by the fact that there was a combination of theoretical and practical training of students. Students go through practice, during which the peculiarities of professional activity are revealed and realized, and the student self-assesses the level of his professional training (Senchenko et al., 2018).

The result of the final stage of the formative experiment is further significant changes in the levels of formation of students' information culture and the ways and possibilities of introducing innovative modern educational technologies. The results of diagnostics after the final stage of the formative experiment show that the number of students with low and medium levels of formation of information culture continues to decrease, but at the same time, the number of students with a high level is increasing

The need to modernize higher education and its entire system is shown; the main types of innovative approaches in the educational process of the higher school are disclosed; the main components of the modernization of higher education through the introduction of innovative technologies are singled out; the classification of educational technologies by the factor of psychological development, by orientation to personal structures, by the nature of the content and structure is considered; innovative teaching methods and technologies are disclosed; the classification of innovative technologies in education by groups is shown.

Methodological approaches that are important in the modernization of higher education through the introduction of innovative technologies are analyzed. The importance of the main blocks of innovative technologies that affect education is highlighted and shown. Taking into account modern methodological approaches, it is shown that the content of innovative technologies should be determined using the basic principles discussed in the article.

The obtained results and their analysis allow us to make some ideas about the fact that the purposeful formation of students' information culture, the renewal of ways and opportunities for their introduction of innovative modern educational technologies, the formation of information culture and professional competencies of students is facilitated by the fact that the modernization of higher education through the introduction of innovative technologies in the conditions information society is moving to a higher, new level of its evolutionary development.

Further research will reveal the main types of innovative approaches in the educational process of a higher school.

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Formation of administrative and legal system ensuring financial and economic security: Regional aspect

Formación de un sistema administrativo y legal que garantice la seguridad financiera y económica: aspecto regional

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Abstract

The main objective of the article is to determine the directions of resources for the formation of an administrative and legal system that ensures financial and economic security. The research methodology involves the use of modern methods of system analysis and the method of pairwise comparison, which contribute to the optimization of resource provision. The results of the study give an idea of what financial resources states use today to form an administrative and legal system in ensuring and maintaining the optimal level of the type of security being studied. The scientific novelty of the study lies in the proposed methodological approach and its application to the financial and economic security support system in Ukraine. The study has its limitations. First of all, it is limited by the fact that the chosen methodology does not take into account all types of resources in the modeling. In further research, the authors plan to identify and characterize other resources necessary for the formation of an administrative-

Resumen

El objetivo principal del artículo es determinar la dirección de los recursos para la formación de un sistema administrativo y legal que garantice la seguridad financiera y económica. La metodología de la investigación implica el uso de métodos modernos de análisis de sistemas y el método de comparación por pares, que contribuyen a la optimización de la provisión de recursos. Los resultados del estudio dan una idea de qué recursos financieros utilizan los estados hoy para formar un sistema administrativo y legal que garantice y mantenga el nivel óptimo del tipo de seguridad en estudio. La novedad científica del estudio reside en el enfoque metodológico propuesto y su aplicación al sistema de apoyo a la seguridad financiera y económica en Ucrania. El estudio tiene sus limitaciones. En primer lugar, está limitado por el hecho de que la metodología elegida no tiene en cuenta todos los tipos de recursos en el modelado. En futuras investigaciones, los autores planean identificar y caracterizar otros recursos necesarios para la formación de un sistema administrativo-

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legal system in the matter of ensuring and maintaining the optimal level of the type of security being studied. It is concluded that, optimization of resources plays a key role in the formation of any system and provision of any kind of security.

Keywords: Choice of Supporting Resources, Financial and Economic Security Guarantee, Legal and Administrative System, Modeling.

legal en materia de asegurar y mantener el nivel óptimo del tipo de seguridad en estudio. Se concluye que la optimización de los recursos juega un papel clave en la formación de cualquier sistema y en la provisión de cualquier tipo de seguridad.

Palabras clave: Elección de Recursos de Apoyo, Garantía de Seguridad Financiera y Económica, Sistema Legal y Administrativo, Modelado.

Introduction

Today Ukraine is faced with a number of problems that can, to one degree or another, slow down or stop socio-economic development, the pace of European integration and the implementation of administrative reforms to democratize society. Thus, according to official statistics, in 2022 shadow economy level amounted to 33% of the country's total GDP, which indicates the increasing criminalization of financial and economic relations within Ukrainian society. In this issue, a special place is given to law enforcement agencies, whose task is to ensure an adequate level of financial and economic security (which will be further referred to as FES) of the country, in the context of implementing preventive measures, identifying, suspending and investigating possible cases of illegal actions in the financial and economic field of activity. The development of crime indicates the inefficiency of the administrative-legal system of the state within the framework of security activities.

If we talk about the current state of the administrative-legal system in Ukraine, it should be noted that today the public is increasingly interested in the effectiveness of the activities of government institutions, in particular law enforcement agencies. In this context, public councils are most active, the purpose of which is to promptly identify and report facts of corruption or abuse of official rank.

The main goal of the activities of the above legal and administrative system in the context of ensuring FES is to achieve a state of the economic system in which it is possible to promptly and effectively identify and counteract existing external and internal threats. Thus, the structure of the mechanism for ensuring FES includes a number of elements, the mutual implementation of which makes it possible to fully ensure the appropriate level of security. A distinctive feature of the interaction of the above elements is that, when directly implemented, they acquire qualitatively new features and can ensure the proper state of FES over time.

Administrative and legal measures are aimed mainly at the formation of directives, compliance with which contributes to obtaining a security effect. This is a powerful element of state policy in the field of ensuring financial and economic security. Along with this, gradually the number of threats that negatively affect security has only increased and, therefore, the number of administrative and legal measures in accordance with this, as well. This gradually developed into a holistic, comprehensive system.

In today's development conditions, the external environment of financial and economic security in the context of today's activities of Ukraine is characterized by high dynamism and constant changes. In such conditions, effective administrative and legal security measures are needed, which are systematic in nature. But at the same time, the formation of any system, including administrative and legal, requires resources. The main one is financial. Financial resources play a critical role in ensuring financial and economic security.

Consequently, the importance and relevance of ensuring the financial and economic security of the country is critically important in the realities of the present, since this is precisely what is an indicator of the security of the economic system from internal and external threats and an indicator of the effectiveness functioning of state and local government bodies. The stability of this indicator is also a manifestation that all financial resources and other assets are used correctly and are not wasted. It is also obvious that the presence of a high level of financial and economic security allows for the active development of entrepreneurship in the country, in the context of the forming of a powerful system of investment in the development of the private sector and the allocation of significant resources to overcome major threats. and risks in this area.

That is why a logical research question arises: how to provide resources for the creating an effective system for ensuring financial and economic security? As part of our research, we are looking specifically at the administrative-legal system and the resources for it.

The main purpose is to analyze the specifics of the formation of the legal and administrative system for ensuring FES. The object of the study is to FES. At the same time, the scientific question is how it is possible to effectively determine the resources for the formation of a legal and administrative system for ensuring FES.

Literature Review

Considering the issues of forming an administrative and legal system for ensuring financial and economic security in the context of the regional aspect, we can say that to date this issue has been studied by a large number of scientists.

For example, the work of Acs, Estrin, Mickiewicz, & Szerb (2018) and Baumol, & Strom (2007) actively discusses the contribution of entrepreneurship to the economic development of the region and its economic growth, as well as considers how entrepreneurial initiatives contribute to the financial and economic stability of the region. This analysis of the relationship between entrepreneurship and economic growth can provide insights into how administrative and legal systems should be structured to effectively harness entrepreneurial potential in a region. An interesting study in this context is Bjørnskov, & Foss, (2016). The study analyzes the role of institutions and entrepreneurship in economic growth. This can help to understand how administrative and legal systems can promote or inhibit entrepreneurship and innovation, which is important for regional economic security.

Similar topics are explored in the works of Blakyta, Ganushchak (2018) and Nehrey, Zomchak, Klymenko, Volovelska, & Pichugina (2022). In these studies, the issue of forming an administrative and legal system for ensuring financial and economic security in the context of the regional aspect is also studied at the level of individual socio-economic systems. The financial and economic security of an enterprise in these studies is considered as a component of the economic security of the state and the region; it can be useful for assessing the impact of administrative and legal systems on financial

stability in the region. At the same time, the authors note IT management as one of the ways to improve this type of security.

The study by Gricishen, Kuchmenko, & Zablodska (2021) examines economic security from the point of view of regional development and positioning. Particular attention is paid to how administrative and legal systems can promote or hinder economic security through their mechanisms of governance, regulation and stimulation of regional development. The study analyzes how different policies and strategies can impact the stability and prosperity of the region, highlighting the importance of good governance and legal frameworks in ensuring financial and economic security.

Most scientists note (Marer, 2010; Benigno et al., 2013; Lee, 2022) that this is a key negative factor affecting the level of financial and economic security of the region. Coverage of issues of financial crises and macroprudential policy is especially useful for understanding the role of administrative and legal systems in preventing financial crises and ensuring financial stability at the regional level. In addition, the works examine the indirect influence of financial crises at the international level in the context of changes in the level of financial and economic security of the region.

Another critical issue in the process of ensuring the financial and economic security of the region is the manifestation of the influence of the shadow economy, which is studied in the work of Bilan, Vasylieva, Lyeonov, & Tiutiunyk, (2019). A similar opinion is shared by Gunawan, & Ratmono (2020), who believe that modern challenges and threats of the shadow economy, in particular in the digital space, are new key destructive factors for financial and economic security.

The issue of the effectiveness of the formation of the administrative and legal system of the region in the context of ensuring financial and economic security is studied in the work of Lefimova, Labartkava, & Pashchenko (2020). In these works, the formation and analysis of administrative and legal measures aimed at ensuring financial and economic security is based on a methodology for assessing the development of economic security in the region. At the same time, in the work of Jankovska, Tylchyk, & Khomyshyn (2018), the issue of forming the administrative and legal system of the region is substantiated in the context of European integration processes and the need to

adapt to external economic and legal frameworks. This approach is especially relevant since today Ukraine is on the path to European integration and must adapt its own mechanisms for ensuring financial and economic security to the European framework. In this context, the study by Ignatov (2019) is also interesting for understanding broader trends and challenges affecting regional financial and economic security.

No less important in this context is the issue of methods for assessing and ensuring the effectiveness of the administrative and legal system for ensuring financial and economic security in the context of the regional aspect. Thus, the work of Podgorna, Babenko, Honcharenko, Sáez-Fernández, Fernández, & Yakubovskiy, (2020) gives an idea of the trends and challenges in socio-economic development that affect financial and economic security through the DP2 method. Similar works are Onyshchenko & Bondarevska (2018) and Vaitkus, & Vasiliauskaitė (2022). Analysis and assessments of financial and economic security and its regulatory support can be important for understanding methods and approaches to assessing economic security at the regional level

and can be key to understanding the role of legislation and legal systems in ensuring financial stability and security.

Along with studies examining modern methods for assessing the administrative and legal system for ensuring financial and economic security in the context of the regional aspect, a number of authors are exploring ways to improve this issue. Thus, Popławski, & Kuźnik (2020), and Shaun, & Nesadurai (2023) explore approaches to forecasting and planning measures to ensure economic security at the regional level. At the same time, Levchenko, Boyko, Savchenko, Bozhenko, Humenna, & Pilin (2019) explore the features of administrative and legal regulation of financial and economic security through an innovative approach to its assessment can provide important guidance on approaches and tools that can be used in administrative -legal system

Summarizing the analysis, it should be noted that in the scientific and practical literature on the subject of the study, there are a number of gaps that should be identified and characterized (Table 1).

Table 1.

Key gaps in the literature in our study

The name of the element in which there is a gap	Characteristics
Methodical approach	There are no new ideas on the introduction of modern methodological approaches to modeling the formation of a legal and administrative system for ensuring FES
Emphasis on resource provision	In the scientific and practical literature, there is no emphasis on the importance of choosing and optimizing resource provision

Source: (Formed by authors)

Summing up the results of the analysis, we concluded that there is an important search for a qualitatively new methodological approach to improving the resource support for the formation of the administrative and legal system. Most scientific literature does not offer new approaches to solving this problem and therefore you should present your own scientific vision for solving it. The scientific task is to optimize resources for the formation of a legal and administrative system for ensuring FES.

Methodology

During the research process, the following methodology was chosen: the method of system analysis and the method of paired comparisons. The paired comparison method is one of the most common methods for assessing the comparative advantage of alternatives. We also note that with a sufficiently large number of alternative options being evaluated, the procedure for pairwise comparison of all their possible pairs becomes laborious. That is why we have chosen only one type of resource support - financial. The sequence of implementation of selected methods, presented in Figure 1.
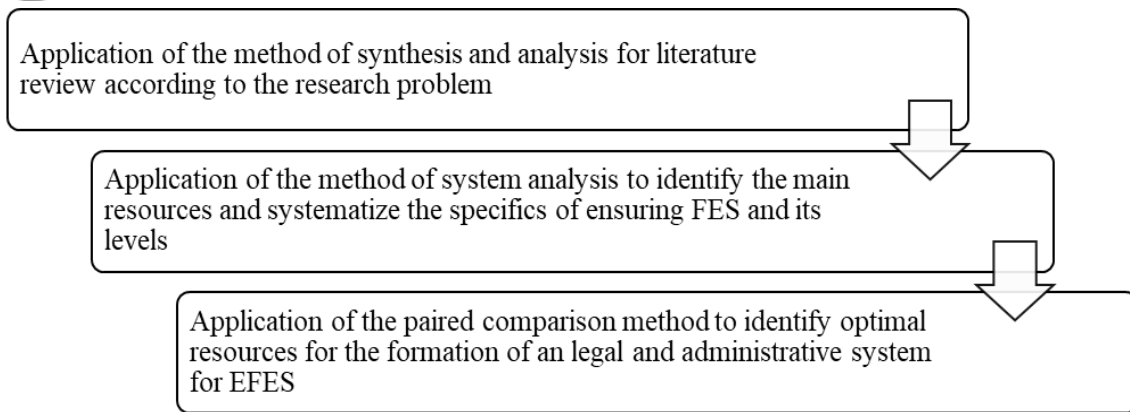
Figure 1. Scheme of implementation of the selected methods
Source: Formed by authors

The method of system analysis was used in the selection of resources and level. In general, the method of even comparisons allows us to determine the possibility of a rational choice of resources for a particular level of security when forming an administrative and legal system for providing FES.

Results and Discussion

Guaranteeing the FES of the country today is a key guarantee of the country's stable economic development, improving its level of well-being and social equality. In this context, the formation and subsequent adoption of appropriate organizational and methodological measures aimed at implementing these tasks today should become a key element of the state policy of most leading economically developed countries, focused on democratic values, the approval of which means civilizational progress, the vector of which is directed. social and democratic development. Accordingly, in Ukrainian there is a real need for analysis, comprehension and scientific substantiation of the issue of the role and activities of levels of government bodies, whose task is to provide the FES of Ukraine.

The issue of formation an effective system for protecting the FES of the state is relevant not only for Ukraine, which finds itself in difficult operating realities, but also for other countries of the world. This issue becomes particularly relevant with the development of new types of offenses in the virtual sphere. In particular, we are talking about committing illegal or criminal actions in the virtual financial environment with the aim of seizing other people's financial resources, which can be either in the form of identical electronic financial equivalents or in the form of a new virtual currency.

FES is a critical component of the system of ensuring the national security of the state. As practice shows, without an independent, sovereign financially stable economic system of the country, it is impossible to develop the state in the right direction. The economy ensures the satisfaction of human needs: both materially and spiritually. The economy should contribute to the development of society and the lives of the citizens of this country.

The digital environment of the legal and administrative system, formed in the conditions of digitalization of the state economy, has a wide range of areas of influence on the formation of various processes. Not only production technologies are changing, but also different forms of relationships (monetary, logistics, legal and consumer). There is also a modification of social capital and social relations, which play an increasingly important role in shaping the conditions for the socio-economic development of the state.

When considering the legal and administrative system for FES at the macroeconomic level, it is important to consider also its multi-circuit nature, since the system for FES of the country is a complex dynamic system. On the one hand, it is influenced by the FES of components at the industry level (such as the fuel and energy complex, the military-industrial complex), as well as the microeconomic level (individual entrepreneurs). On the other hand, national FES also has a direct impact on the level of FES of its sectoral and microeconomic components. Therefore, one of the most important areas for improving the legal and administrative system of FES of Ukraine is the development of resource provision.

After considering the basic foundation of the administrative and legal system and the nature of

its impact on FES, it should be generalized that all of the above aspects cannot be realized with certain resources, especially financial ones. To begin with, we will determine the financial resources for the formation of an legal and administrative system for FES:

A (1). Through the redistribution of centralized and decentralized funds.

A (2). Additional reserve funds.
A (3). Allocated in the planned mode from the state budget.

Next, we will establish the level of resource provision according to the corresponding hierarchy presented in Table 2.

Table 2.
The essence of resource provision levels

Level	Characteristics
Minimum	Terminates the effectiveness of the FES administrative-legal system
Normal	Makes possible the effectiveness of the FES administrative-legal system
Maximum	Accelerates the effectiveness of the FES administrative-legal system

Source: (formed by authors)

Further, it should be noted that we have three types of financial resources (A(1); A(2); A(3)), which we will designate in accordance with the level of security. Designations in accordance are identified by the corresponding letter designations (Table 3).

Table 3.
Symbols for resource assessment levels

Level	Resources
Minimum	r1 (A(1))
Normal	r2 (A(2))
Maximum	r3 (A(3))

Source: (formed by authors)

Using expert analysis, we can assess the significance of the level of ensuring of the administrative-legal system. To determine, taking into account the generalization of expert opinions, the weight of the level of provision with the necessary resources, a scale was used that demonstrates the level of importance of each object (Table 4).

Table 4.
Scale of the level of importance of provision levels with the necessary resources

Points	Characteristics
1	Resource levels are equivalent
2	One level is not significant but more than the other
3	One level is more critical than the other
4	One level has signs of materiality over excess relative to the other
5	One level has an absolute position higher than another

Source: (formed by authors)

Next, using the method of paired comparisons, we build the corresponding matrix. According to the procedures of this method, all diagonal fillings will be 1. At the bottom of the matrix are the inverse values. Table 5 shows the Matrix of paired comparisons, demonstrating the levels of existing financial resources necessary for the formation of an administrative and legal system for providing FES.

Table 5.
Results of comparison of allocated resource levels

r$_{ij}$	r (A(1))	r (A(2))	r (A(3))
r (A(1))	The value is:1	The value is:2	The value is:3
r (A(2))	The value is:1/2	The value is:1	The value is:1
r (A(3))	The value is:1/3	The value is:1	The value is:1
E$_n$	The value is:0,68	The value is:0,19	The value is:0,11
	λ$_{max}$	Consistency index	Consistency relation
Value	The value is:3,01	The value is:0,009	The value is:0,01

Source: (formed by authors)

In order to determine the level of consistency of pairwise comparisons in numerical value, given in Table 5. In addition, this table shows the normalized vector of matrix priorities (E) and the actual value of the matrix (λ$_{max}$), consistency index and consistency coefficient are calculated. The priority vector (E) is calculated as the product of the elements of each row and the subtraction by the roots of the 3rd degree, and then it is normalized by dividing the components by the sum of the values of all components. By setting it, we can determine the closest value of the eigenvector λ$_{max}$), which is calculated as the arithmetic mean of the priority vector. (λ$_{max}$ - n)

/ (n-1) allows us to calculate the consistency index.

The next step will be to identify options for the optimal selection of resources when forming an administrative and legal system for providing FES. This is achieved by defining a utility function (u). Its finding occurs according to the advantage of using different types of financial resources. To do this, we will carry out similar calculations, but now for each of the options for resource provision (A(1), A(2), A(3)). The main calculation results are presented in Table 6.

Table 6.
Results of comparison of resources in accordance with all three levels of provision

Minimum	A (1)	A (2)	A (3)
A (1)	1	½	1/4
A (2)	2	1	1/3
A (3)	4	3	1
E$_n$	0.13	0.23	0.62
	λ$_{max}$	Consistency index	Consistency relation
Value	3.01	0.09	0.01
Normal	A (1)	A (2)	A (3)
A (1)	1	1/2	1/3
A (2)	2	1	1/3
A (3)	3	3	1
E$_n$	0.15	0.24	0.59
	λ$_{max}$	Consistency index	Consistency relation
Value	3.05	0.02	0.04
Maximum	A (1)	A (2)	A (3)
A (1)	1	1/2	1/3
A (2)	2	1	1/2
A (3)	3	2	1
E$_n$	0.16	0.29	0.53
	λ$_{max}$	Consistency index	Consistency relation
Value	3.01	0.05	0.08

Source: (formed by authors)

At all levels, the level of consistency is satisfactory, there is an adequate convergence level. Components of the normalized priority vector from Table. 5 allowed certain adjusted weights (s) of all three types of financial

resources presented above in the text. To simplify further calculations, we summarize the definition of the utility function (uij) in one table (Table 7).

Table 7.
Resulting calculation indicators

$U_{i1}=s_{i1}u_{i11}+ s_{i2}u_{i21}+ s_{i3}u_{i31}$			
u_{ij}	u_{i1}	u_{i2}	u_{i3}
u_{1j}	0,13	0,23	0,62
u_{2j}	0,15	0,24	0,59
u_{3j}	0,16	0,29	0,53
U_1	0,14		
U_2	0,24		
U_3	0,61		

Source: (formed by authors)

Thus, our calculations allow us to assert that the optimal type of financial resources for the formation of a legal and administrative system for ensuring FES is A1 (Allocated in the planned mode from the state budget).

In general, resources are needed for all systems. The legal and administrative system for FES is no exception. Financial resources occupy the number one position of resource provision for most systems. So, your legal and administrative system simply will not work effectively without financial support. The formation, structuring and implementation of legal and administrative measures to ensure FES is costly and positive when there is plenty to choose from. When there are multiple resourcing options, the key is to optimize those choices. Here, in our opinion, the proposed methodological approach is suitable.

So, it is not new, but it is new in terms of the formation of effective legal and administrative systems for ensuring FES. The results presented depend on many factors and not only on available financial resources. The dynamism of the outdoor environment is one of these reasons. Changes introduced by the external environment also contribute to changes in resource provision.

In the scientific literature, there is an appropriate vision of ensuring financial and economic security and even reveals a number of aspects of the formation of the administrative and legal system, but along with it there are a number of gaps and problems that have not yet been disclosed. We compare the similarities and differences with the general vision of the main research results from other literature sources. This is a kind of generalized vision. (Table 8).

Table 8.
Identifying the key common and distinctive features of this study

Similarities	Differences
Agreement with the opinion that law enforcement agencies is a significant factor in the legal and administrative system for FES	The difference in the presented methodological approach to analysis and research
Agreeing that the legal and administrative mechanism for FES depends on resources	The difference in the assessment and optimization of the resource selection system for the formation of an effective legal and administrative system for FES

Source: (formed by authors)

The scientific novelty of the article lies in the use of a specific methodological approach and implementation in the field of ensuring FES in Ukraine.

Conclusions

In conclusion, we will determine that FES is not only the financial and economic components. Here, the legal and administrative aspect plays an important role, which activates this process through directives and mechanisms. We tried to understand how to properly optimize the resource support for the formation of an administrative-legal system of FES and came to the conclusion that the first step would be financial resources. They presented a methodological approach (the use of which had already appeared in other studies), but its use within the framework of the formation of an administrative-legal system of FES was new. The methodological approach in our case is not the resources themselves, but how they are compared and what method is used.

Also, we highlight the main results that were obtained during the writing of the article. At the beginning of the results, the exceptional importance of the modern administrative and legal system in the process of ensuring financial and economic security was established and proven. Secondly, the importance of resource support for the formation of the administrative and legal system was substantiated. In our opinion, resource optimization plays a key role in the formation of any system and the provision of any type of security. Thus, we have presented a method for optimizing resources, which, in terms of security levels and the allocated list of financial resources, made it possible, thanks to appropriate calculations and calculations, to mathematically establish the optimal type of financial resources for the formation of an administrative-legal system. The practical consequences of the obtained results consist in the formation of the possibility of using a method for rationalizing the use of resources and choosing the optimal one by government bodies entrusted with the functions of the FES.

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Impact of multimedia technology on university students learning agility and creativity

أثر تكنولوجيا الوسائط المتعددة على سرعة تعلم طلاب الجامعات وإبداعهم

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Abstract

Multimedia technology is argued in the literature to play a critical role in enhancing students' learning agility and creativity. Nevertheless, only a few studies have empirically investigated the same, particularly among university students. This is especially vital for Saudi Arabia's higher education sector, where significant resources have been invested under the Vision 2030 program. Recently, multimedia technology has included upcoming technologies such as artificial intelligence, augmented reality, and virtual reality. This study empirically investigates the impact of multimedia technology on the development of university students' learning agility and creativity. In this study, we employed a quantitative methodology. We surveyed 318 university students to accomplish the research objectives. The study's findings underscore that availableness and multimedia technology deployment are vital to developing university students' learning agility and creativity. The study contributes to the literature regarding technology adoption and skill enhancement. Additionally, the findings of the study aid in the achievement of Saudi Vision 2030 by increasing awareness of multimedia technology use to foster university students learning agility and creativity.

Keywords: Multimedia technology, learning agility, creativity, students, Saudi Arabia, Vision 2030.

خلاصة

يقال في الأدبيات أن تكنولوجيا الوسائط المتعددة تلعب دورًا حاسمًا في تعزيز سرعة التعلم والإبداع لدى الطلاب. ومع ذلك، لم تقم سوى عدد قليل من الدراسات بالبحث التجريبي في الأمر نفسه، خاصة بين طلاب الجامعات. وهذا أمر حيوي بشكل خاص لقطاع التعليم العالي في المملكة العربية السعودية، حيث تم استثمار موارد كبيرة في إطار برنامج رؤية 2030. في الآونة الأخيرة، شملت تكنولوجيا الوسائط المتعددة التقنيات القادمة مثل الذكاء الاصطناعي، والواقع المعزز، والواقع الافتراضي. تبحث هذه الدراسة تجريبيا في تأثير تكنولوجيا الوسائط المتعددة على تنمية سرعة التعلم والإبداع لدى طلاب الجامعة. في هذه الدراسة، استخدمنا المنهجية الكمية. قمنا باستطلاع آراء 318 طالبًا جامعيًا لتحقيق أهداف البحث. تؤكد نتائج الدراسة على أن التوفر ونشر تكنولوجيا الوسائط المتعددة أمران حيويان لتطوير سرعة التعلم والإبداع لدى طلاب الجامعة. وتساهم الدراسة في الأدبيات المتعلقة بتبني التكنولوجيا وتعزيز المهارات. بالإضافة إلى ذلك، تساعد نتائج الدراسة في تحقيق رؤية السعودية 2030 من خلال زيادة الوعي باستخدام تكنولوجيا الوسائط المتعددة لتعزيز مرونة التعلم والإبداع لدى طلاب الجامعة.

الكلمات المفتاحية :تكنولوجيا الوسائط المتعددة، سرعة التعلم، الإبداع، الطلاب، المملكة العربية السعودية، رؤية 2030.

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Introduction

In recent years, cultivating students' learning agility and creativity has become a primary educational objective worldwide, owing to their considerable financial, social, and individual benefits (Vincent-Lancrin et al., 2019). Technology plays a significant role in the classroom environment (Singh et al., 2013).

Multimedia technology has the potential to greatly enhance students' learning agility and creativity via the provision of novel tools and environments (Pun, 2013; Glaveanu et al., 2019). Multimedia technology can play an essential role in advancing the human capital of a nation (Singh & Alhamad, 2022a) and invigorating the youth's mind (Singh & Agarwal, 2011). Therefore, academicians in several nations also believe multimedia technology can foster students learning agility and creativity (Park et al., 2019).

In the last decade, multimedia technology has been integrated into education (Alam et al., 2022). LCD or DLP projectors, smartboards, digital cameras, classroom response systems, and document cameras were previous instances of this technology in the classroom (Singh & Chand, 2012). Recently, technologies like augmented reality (AR), virtual reality (AR), and artificial intelligence (AI) have been integrated with multimedia technology to deliver interactive education to students in the classroom (Saddik, 2018). In the twenty-first century, internet resources and multimedia technology-based applications aid instructors in imparting more advanced learning degrees while maintaining academic integrity (Callet & Niebur, 2013).

It provides students with beneficial tools for honing their critical thinking and problem-solving abilities (Neo & Neo, 2009; Alhamuddin et al., 2023).

Multimedia technology learning tools are distinctive in facilitating student engagement with authentic situations. It makes the study interesting for the students, which is important for continuing their education (Singh & Alhamad, 2022b). Furthermore, the educational benefits of simulation and visualization cannot be replicated in a textbook or other written materials (Singh et al., 2011a; Guo et al., 2020). Consequently, multimedia technology in educational settings effectively engages and sustains students' interest (Shi & Liang, 2012). The classroom's use of multimedia technology can catalyze students' critical thinking and expose their creativity (Sabzian et al., 2013).

However, the results of more current and earlier meta-analyses and reviews indicate that only limited research has examined the impact of learning interventions augmented with multimedia technology on students' learning agility and creativity (Valgeirsdottir & Onarheim, 2017), especially university students. This is especially critical in the Saudi Arabian higher education sector, where advanced technologies have been integrated into the higher education sector under the Vision 2030 program (Singh & Alshammari, 2023; Al-Mamary & Al-Shammari, 2023; Beyari & Alrusaini, 2023). Further, instructors teach university students in Saudi Arabia through multimedia tools such as video conferencing (Alquhaif et al., 2023). Therefore, this research addresses the impact of multimedia technology in developing university students learning agility and creativity.

Study Objectives

The current study objectives are:

1. To investigate the impact of multimedia technology in developing university students learning agility and creativity.
2. To suggest strategies for developing the learning agility and creativity of university students.
3. To acknowldge the contribution of the study to the technology adoption and skill development literature.

Literature Review

The learning agility of university students is considered a critical factor for their fruitful educational attainment in the current technology-driven environment (Singh, 2017). Learning agility in a technological environment is defined as the student's ability to learn, adapt, and orient toward new technologies (De Meuse et al., 2010). Learning agility is considered an essential skill for young learners to seek jobs in today's technology-driven marketplace (Hwangbo et al., 2019; Singh et al., 2011b). Learning agility allows students to learn technology-related skills in an educational environment and later apply the skills they learned in their work environment (Singh et al., 2011c; Dries et al., 2012).

Creativity is widely referred to as a process by which an individual or group generates something that is both innovative or original and practical or suitable for a given social setting. Many personal and environmental variables

impact creativity (Plucker et al., 2004; Richardson & Mishra, 2018). Various studies have established that students' creativity can be enhanced and identified numerous factors influencing creative development. While intervention studies have shown that creativity may be fostered in academic and non-academic contexts from kindergarten to adulthood, no widely acknowledged formulae or sets of instructions ensure success (Lai et al., 2018).

A multimedia learning environment entails presenting information via multiple channels, such as auditory and visual (Jiang & Benbasat, 2007; Takács et al., 2015; Michalski et al., 2016). Educational technology researchers have historically examined multimedia technology (Donnelly et al., 2010; Yu, 2021). The primary focus of the majority of researchers is the enhancement of teacher-student interactions using multimedia technologies. Numerous published works have theorized on multimedia technology to foster learning agility and creativity (Loveless, 2007; Anseel, 2017; Glaveanu et al., 2019). For instance, Loveless (2007) suggests that the interplay between the characteristics of digital technologies, the ability of learners to express elements of higher-order thinking through technology, and creative processes gives rise to activities that emphasize creativity in the context of new technologies. According to Anseel (2017), multimedia technology is important for young learners' learning, skill-building, and creative potential in a technology-driven environment. Glaveanu et al. (2019) suggest that multimedia technology can be a nurturing medium, facilitating an atmosphere that promotes learning agility and creativity.

Some researchers examine the influence of digital technology on developing creativity and learning agility by focusing on the dynamics of human-computer interaction. Lubart (2005) and Glaveanu et al. (2019) had four possible societal functions for computers in the context of learning

agility and creative activity. The first function is that of a "nanny computer", which means technology's ability to help the learning agility and creativity by offering a nurturing atmosphere and mentality. The second function of technology is to serve as a pen pal, enabling learners to exchange ideas and enhance communication and cooperation throughout the creative and learning process. The third role pertains to the "computer as coach," whereby computers function as expert systems that enhance students' learning and creativity by providing academic materials that strengthen cognitive processes, methods, and approaches associated with creativity. The fourth function is "computer as a collaborator," which means that computers may actively contribute to the production, assessment, and refining of ideas in collaboration with learners throughout the learning and creative process.

Although the correlation between technology, learning agility, and creativity is often discussed in the field of education, limited studies have examined the impact of multimedia technology on students' learning agility and creativity, according to previous literature reviews and meta-analyses (Valgeirsdottir & Onarheim, 2017).

Thus, the literature review suggests that

- Multimedia technology presents the potential to foster student learning agility and creativity.
- There is a paucity of studies that have investigated multimedia technology's impact on student learning agility and creativity.

Accordingly, this study will create knowledge to utilize the potential of multimedia technology to foster student learning agility and creativity.

Moreover, it would fill the identified research voids in the existing body of literature.
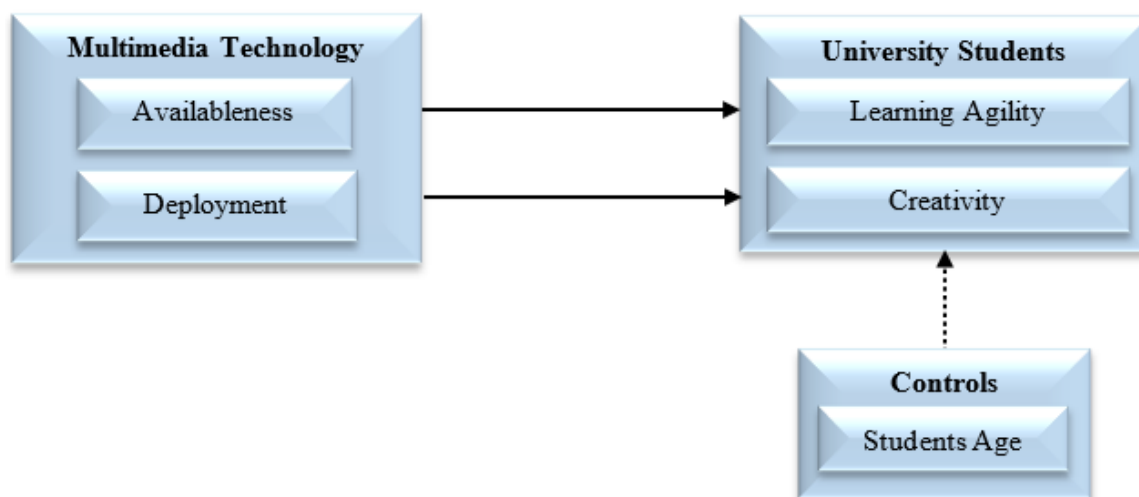
Figure 1. Model of Multimedia Technology Impact on Students' Learning Agility and Creativity (Authors design)

The model used in this study is illustrated in Figure 1. The model illustrates multimedia technologies' effect on developing students' learning agility and creativity. The research included a control variable: students' age.

The hypotheses of research are presented as follows:

H1: Multimedia technology positively impacts the learning agility of university students.

H2: Multimedia technology positively impacts the creativity of university students.

Methodology

A quantitative research method was implemented to accomplish the research goals. Now we explain the research components, including the sampling, data gathering methods, variables, regression model, and analytic approaches.

Sampling

This research gathered primary data by employing questionnaires. Surveys were given at the University of Ha'il (Saudi Arabia) to evaluate the effect of multimedia technology on the learning agility and creativity of university students. Non-probabilistic sampling was utilized to obtain responses from 318 university students. The features of the sample utilized in this investigated study are presented in Table 1.

Table 1.
Features of the Study Sample

Variable(s)	Type(s)	Number(s)	%age
Study Year	Year-1	82	25.79
	Year-2	80	25.16
	Year-3	79	24.84
	Year-4	77	24.21
Age Group	18-22	175	55.03
	23-27	101	31.76
	28-32	42	13.21
Student Gender	Male(s)	157	49.37
	Female(s)	161	50.63

Questionnaire Development and Distribution

We developed a survey to collect the primary data, The survey employed a five-point Likert scale (ranging from strongly agree to strongly disagree) to get student perspectives on the influence of multimedia technology on learning agility and creativity. The survey questions were translated into Arabic to augment the students' understanding and involvement. We were able to

survey several students while minimizing possible bias using the online distribution and collection of surveys (Singh & Alwaqaa, 2023). Before soliciting their participation, students were provided with a comprehensive explanation of the research objectives and informed that their answers would remain confidential. The students

who provided their permission participated in the surveys.

Variables

Table 2 presents the variables utilized in the current research and their definitions.

Table 2.
Study Variables and Definitions

Variable(s)	Definition
Dependent Variable(s)	
Learning Agility (LAG)	Student's ability to learn, adapt, and orient towards new technologies (De Meuse et al., 2010)
Creativity (CTY)	A process by which an individual or group generates something that is both innovative or original and practical or suitable for a given social setting (Plucker et al., 2004; Richardson & Mishra, 2018)
Independent Variable(s)	
Availableness (ALS)	The availableness of various forms of multimedia technology (such as VR, AR, AI, interactive learning activities, etc.) to university students (Sabzian et al., 2013)
Deployment (DPY)	Effective deployment of multimedia technology by students for educational objectives (such as assignments, class discussions, exam evaluations, etc.) (Abdulrahaman et al., 2020)
Control Variable	
Student's Age (SAG)	Student's age (Singh & Alodaynan, 2023)

This study's dependent variables are the students' learning agility (LAG) and creativity (CRE). Deployment (DPY) and availability (ALS) of multimedia technologies are two independent variables. As the age of students may influence their propensity to acquire learning agility and innovation in the classroom, we controlled age (SAG) in the model.

Study Models

We examined the regression models for determining multimedia technology's impact on university students learning agility and creativity:

$$LAG_t = \beta_0 + \beta_1\ ALS_t + \beta_2\ DPY_t + \beta_3\ SAG_t + \varepsilon_t \quad (1)$$

$$CTY_t = \beta_0 + \beta_1\ ALS_t + \beta_2\ DPY_t + \beta_3\ SAG_t + \varepsilon_t \quad (2)$$

Where,

LAG – Learning Agility
CTY – Creativity
ALS – Availableness
DPY – Deployment
SAG – Student's Age
ε – Error term

Data Analysis Method

The present investigation used ordinary least squares (OLS) regression analysis to assess the influence of multimedia technology on the learning agility and creativity of university students. Linear regression coefficient estimation is the primary aim of OLS regression analysis, with the consequence of minimizing the discrepancy between estimated and actual values (Hosman et al, 2010; Singh et al., 2023). This research used the OLS regression approach because of its successful alignment with the investigation's aims.

Analyses and Results

Descriptive Data and Correlation Coefficients

Table 3 shows the descriptive data of the variables. The presented data includes the mean values for the following variables: the student's age (25.27), the availability of multimedia technology (3.99), creativity (4.06), and the successful deployment of multimedia technology (4.01). Variance in data is quantified in terms of the coefficient of variation (CV) concerning a reference population (Singh et al., 2022a). Each variable in the research has a low CV (Table 3).

Table 3.
Descriptive Data

Variable(s)	Mean	Min.	Max.	Std. Dev.	Coeff. of Variation
Learning Agility (LAG)	4.12	1	5	0.71	0.17
Creativity (CTY)	4.06	1	5	0.65	0.16
Availableness (ALS)	3.99	1	5	0.72	0.18
Deployment (DPY)	4.01	1	5	0.88	0.22
Students Age (SAG)	25.27	18	32	4.89	0.19

The Pearson correlation coefficients for every variable in the research are shown in Table 4. If the explanatory variables have a significant bilateral correlation, there may be worries about multicollinearity (Singh et al., 2022b). In the presence of multicollinearity among independent variables, p-values will fail to accurately predict the significance of the variables, resulting in less precise coefficients (Alhamad & Singh, 2021; Jiehong et al., 2022). The absence of substantial relationships among the explanatory factors is seen in Table 4 (Singh & Alhulail, 2022).

Table 4.
Correlation Coefficients

Variable(s)	LAG	CTY	ALS	DPY	SAG
Learning Agility (LAG)	1				
Creativity (CTY)	0.201	1			
Availableness (ALS)	0.303	0.215	1		
Deployment (DPY)	0.298	0.285	0.306	1	
Students Age (SAG)	0.305	0.308	0.257	0.278	1

Multicollinearity and Heteroscedasticity Statistics

The present research data were subjected to the requisite checks for multicollinearity and heteroscedasticity (Table 5). To assess multicollinearity, variance inflation factor (VIF) values were used. Multicollinearity concerns were absent in the data (Table 5); all VIF values were below 5 (Alın, 2010; Singh & Alhulail, 2023). Heteroscedasticity was then evaluated using the Breusch-Pagan & Koenker (B.P.K) test. All of the p-values for the B.P.K test were below 0.05, leading us to conclude no heteroscedasticity concerns (Lewbel, 2012; Singh, H. P., & Alhamad, 2021).

Table 5.
VIF and B.P.K P-Value(s)

Variable(s)	VIF Value(s)	B.P.K P-Value(s)
Learning Agility (LAG)	2.874	0.014
Creativity (CTY)	2.978	0.025
Availableness (ALS)	3.057	0.031
Deployment (DPY)	3.142	0.019
Students Age (SAG)	3.168	0.034

Hypotheses Testing Analyses

The hypotheses are tested via multivariate regression analysis, as seen in Table 6.

Model A (LAG) in Table 6 illustrates an adjusted R^2 value of 0.612. This value accounts for 60.4% of the variation in the relationship between multimedia technology availableness and deployment (McCausland et al., 2021). A p-value of 0.021 depicts that the model is statistically significant at the 5% level. This indicates that using multimedia technologies improves university students' learning agility. This validates the hypothesis H1 of this investigation. Moreover, a noteworthy and favorable correlation exists between the availableness and deployment of multimedia technologies for university students and their capacity for learning agility. This suggests that the availability and

efficient use of multimedia technologies are critical factors in developing the learning agility of students.

The proportion of variance explained by the availability and implementation of multimedia technology is 62.1%, as depicted by the modified R^2 of 0.621 in model B (CTY) (Table 6). The p-value for the model is 0.018, which is statistically significant at a 5% confidence level. This shows that the usage of multimedia

technologies enhances the creative abilities of university students. Therefore, we accept hypothesis H2 of the research. Furthermore, a noteworthy and favorable correlation exists between university students' creativity level and the availableness and deployment of multimedia technologies. This suggests that the availableness and deployment of multimedia technologies are essential components in nurturing innovation among university students.

Table 6.

Hypotheses Testing Analyses

Variable(s)	Model A (LAG)				Model B (CTY)			
	Coeff. (B)	Std. Error	T-Stat	P-Value	Coeff. (B)	Std. Error	T-Stat	P-Value
Availableness (ALS)	4.612**	1.639	2.814	0.005	4.614**	1.693	2.725	0.007
Deployment (DPY)	4.582**	1.641	2.792	0.006	4.512**	1.698	2.657	0.008
Students Age (SAG)	0.812	0.603	1.347	0.179	0.825	0.606	1.361	0.175
R^2	0.581				0.593			
Adjusted R^2	0.612				0.621			
P-Value	0.021*				0.018*			

Note: A result is deemed significant at the 0.05 and 0.01 levels, denoted by * and **

Discussion

The research results have shown that availableness and deployment of multimedia technologies foster the learning agility of university students. These results are aligned with prior research, especially Loveless (2007), Anseel (2017), and Glaveanu et al. (2019), who informed student learning agility can be enhanced by employing multimedia technologies. This finding confirms Loveless's (2007) assertion that multimedia technology assists students sharpen their unique learning styles. This finding also supports Anseel's (2017) and Glaveanu et al.'s (2019) assertions that multimedia technology nurtures the learning agility of young learners in a technology-driven environment. Previous scholarly works have postulated that technology has the potential to enhance learning agility. Nevertheless, the present study surpasses this expectation by providing empirical evidence that supports this claim in the context of multimedia technology. Furthermore, the current research contributes to the extant literature by demonstrating the criticality of university administration efficiently utilizing and deploying multimedia technology to promote students' learning agility.

The research findings demonstrate that the presence and use of multimedia technology stimulate the ingenuity of university students. The findings presented in this study are consistent with previous research, particularly

those of Loveless (2007), Anseel (2017), and Glaveanu et al. (2019), which demonstrated that the use of multimedia tools may improve the creative capacities of students. This result provides more evidence in favor of Loveless's (2007) assertion that multimedia technology cultivates the creative abilities of university students. This study further substantiates the claims made by Anseel (2017) and Glaveanu et al. (2019) that in a technology-driven environment, young learners' creativity is fostered via the use of multimedia technology. Prior academic literature has expected that technology may augment the capacity for creativity. However, this anticipation is surpassed by the current research, which supports this assertion within the realm of multimedia technology. Moreover, the present investigation makes a scholarly contribution by illustrating the importance of university administration's effective use and deployment of multimedia technology to foster students' creative potential.

Conclusions

In this study, 318 Saudi university students were surveyed by employing a quantitative methodology. This study illustrated the influence of multimedia technology on the learning agility and creativity of university students by employing an empirical methodology. Previous studies have suggested that technology might enhance students' learning agility and creativity. The results of the study supported the

conclusions drawn in prior studies, which indicated that improvements in multimedia technology are essential for fostering students' learning agility and creativity. However, the present study went a step further and offered empirical evidence to support this claim in the context of multimedia technology. The present investigation enriches the extant literature on skill development and technology management by demonstrating how crucial it is for university administration to implement and utilize multimedia technology effectively to develop students' learning agility and creativity.

As part of its Vision 2030 government initiative, Saudi Arabia invested substantially in its educational institutes. Accordingly, the research findings have considerable implications for the country. The findings will provide valuable insights for emerging countries like Saudi Arabia, which want to foster a culture of innovation and adaptability among university students. Innovation and learning agility are critical qualities that Saudi university students must develop to realize the goals outlined in Saudi Vision 2030. The results of this research suggest that the integration of multimedia technologies in the classroom might have a substantial impact on promoting learning agility and innovation among university students in Saudi Arabia. Hence, Saudi institutions need to strive for the proliferation and integration of developing multimedia technologies to enhance students' learning agility and promote their creativity. In the realm of higher education in Saudi Arabia, the promotion of developing multimedia technologies like augmented reality (AR), virtual reality (AR), and artificial intelligence (AI) should be given special consideration.

Limitations

This study possesses certain drawbacks that could be in further research. The present inquiry included 318 students hailing from a solitary public institution in Saudi Arabia. In subsequent investigations, it is possible to augment the sample size by gathering data from more institutions. Subsequently, scholars may collect data from private and public colleges to compare their strategies for fostering learning agility and innovation among students. Future research may also collect data from other institutes (like colleges of education and polytechnic colleges) to investigate multimedia technology's effect on students' learning agility and creativity across various contexts. Future research may include surveying graduates to determine their level of

commitment to developing their learning agility and creativity. Given the cultural similarities between Saudi Arabia and the other Gulf Cooperation Council (GCC) states, future scholars may also benefit from collecting data from these countries.

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Mediation in administrative and legal disputes in Ukraine: a European perspective

Медіація в адміністративно-правових спорах в Україні: європейська перспектива

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Abstract

The purpose of the article is to study the foreign and Ukrainian experience in the development of the institution of mediation in administrative and legal disputes. Research methods are analysis, synthesis, generalization, analogy, comparative law, analysis of court practice, and others. The article examines the requirements for a professional mediator as an element of the effectiveness of mediation in administrative-legal disputes and the European experience of normative-legal consolidation of the organization of mediation in administrative-legal disputes. The authors analyze the possibility of involving a notary as a qualified lawyer and mediator, especially in public legal disputes. The study provides examples of successful mediation implementation practices in the United States and European Union countries. In addition, the authors emphasized the need for institutional mediation to resolve administrative-legal

Анотація

Метою статті є дослідження зарубіжного та українського досвіду розвитку інституту медіації в адміністративно-правових спорах. Методами дослідження є: аналіз, синтез, узагальнення, аналогія, порівняльно-правовий, аналіз судової практики тощо. У статті розглянуто вимоги до професійного медіатора як елемента ефективності медіації в адміністративно-правових спорах та європейський досвід нормативно-правового закріплення організації медіації в адміністративно-правових спорах. Авторами проаналізовано можливість залучення нотаріуса як кваліфікованого юриста у ролі медіатора, особливо у сфері публічно-правових спорів. У дослідженні надано приклади успішної практики впровадження медіації в США та країнах Європейського Союзу. Крім того, авторами наголошено на необхідності інституційної медіації задля вирішення

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disputes, taking into account their complexity, using France's experience to improve public-legal relations in Ukraine. It has been emphasized that mediation helps to reduce the burden on the judicial system, ensures a faster and more efficient resolution of administrative cases, and helps preserve the relationship between the parties, building trust between the state and the citizen.

Key words: mediation, legal aid, administrative-legal dispute, subject of authority, public-legal relations, notary, institutional mediation.

адміністративно-правових спорів з урахуванням їхньої складності з використанням досвіду Франції для поліпшення публічно-правових відносин в Україні. Наголошено, що медіація допомагає зменшити навантаження на судову систему, забезпечує більше швидке та ефективне вирішення адміністративних справ і сприяє збереженню стосунків між сторонами, розбудовуючи довіру між державою та громадянином.

Ключові слова: медіація, правова допомога, адміністративно-правовий спір, суб'єкт владних повноважень, публічно-правові відносини, нотаріус, інституційна медіація.

Introduction

As it is known, the term mediation refers to a negotiation process between several parties to a disputed legal relationship under the guidance of a neutral, impartial, and independent mediator with the aim of resolving the conflict and settling the dispute. Ukraine's modern administrative and legal space faces various challenges and problems that require a competent and effective solution. Considering ways to improve the judicial system of Ukraine, domestic scientists today emphasize the relevance of additional means of ensuring access to justice, which became significantly more difficult during the war and in the conditions of a potential reduction in state spending on financial and technical support of the judiciary (Teremetskyi et al., 2023, p. 40).

One of the possible strategies for resolving such conflicts is using mediation as a tool for dialogue and conflict resolution. It is important to note that the effectiveness of mediation has already received recognition in the countries of the European Union, where the use of mediation is actively recommended as the primary method of alternative dispute resolution both at the pretrial resolution stage and during the trial (Turchak, 2017, p.176). Implementing mediation in administrative and legal disputes in Ukraine complies with European norms and recommendations, particularly Recommendation (Committee of Ministers of the Council of Europe, 2001). An important stage in establishing mediation was the adoption of Guidelines No. 15 by the European Commission on the effectiveness of justice for better implementation of the Recommendation (Council of Europe, 2007). The specified normative legal acts significantly contributed to the normative legal support of the mediation process in administrative cases in Ukraine as well.

Additionally, an essential step in the development of mediation was the signing of the Singapore Convention (Singapore Convention on Mediation Website, 2021), which regulates the procedures for executing mediation agreements in international commercial disputes. By their nature, public legal disputes are a complex category since one of the parties is an entity endowed with mighty powers. Therefore, there is an objective difficulty in applying mediation procedures in these cases. In this context, the concept of "mediability", which has a broad and narrow interpretation, is relevant. In a narrow sense, mediability is defined as the mediator's assessment of the suitability of a specific dispute for resolution using mediation methods. In a broad sense, the term means an assessment of the general suitability of categories of disputes for resolution through mediation procedures, which is determined by the legal culture of a society or legislation (Tokarieva, 2021, p. 194). Mediability must be considered a critical aspect in determining suitability for mediation settlement of public legal disputes.

During the adoption of the legislation on mediation in Ukraine, one of the controversial issues was the possibility of using mediation in public legal disputes where the authorities are one of the parties. Separate draft laws provided for the limitation of the use of mediation only in private-law spheres, which meant the prohibition of solving public-law conflicts through mediation.

After the adoption of the Law of Ukraine "On Mediation" (Law of Ukraine No. 1875-IX, 2021, article 3) and the introduction of relevant changes to the Code of Administrative Procedure of Ukraine (Code of Ukraine № 2747-IV, 2023), the specified issue has received a legal basis, and

discussions on mediability have been completed. Therefore, the Law "On Mediation" is currently in force in Ukraine, which defines a wide range of the use of mediation in various spheres. The effect of its provisions extends to social relations related to mediation to prevent the occurrence of conflicts (disputes) in the future or to settle various types of conflicts, including civil, family, labor, economic, and administrative, as well as cases related to administrative offenses and criminal proceedings to reconcile the victim with the suspect (accused) (Law of Ukraine No. 1875-IX, 2021, article 3).

Despite such a broad scope of application, the legislation allows for further regulatory consolidation of the features of mediation procedures in specific categories of conflicts (disputes), which, to a certain extent, indicates different degrees of mediability of certain types of disputes. In addition, even before the adoption of the mentioned legal act, the Opinion of the Main Scientific and Expert Department of the Parliament of Ukraine regarding the draft Law "On Mediation" No. 2425a-1 of 2013 indicated the impracticality of using mediation in disputes where the state, territorial community, their bodies, state and communal enterprises, as well as in cases of administrative offenses were one of the parties to the dispute (Conclusion on the Draft Law of Ukraine No. 3504, 2020).

Considering the above, the article aims to analyze the possibilities and prospects of using mediation in resolving administrative and legal conflicts in Ukraine. The country's modern administrative and legal space is filled with numerous challenges, and mediation is an essential tool for resolving conflicts and ensuring dialogue between the authorities and citizens. A vital lever for this direction is the recognition of the effectiveness of mediation in the EU and support for its use as an alternative method of dispute resolution.

Literature Review

The study of mediation in administrative law disputes includes an analysis of various aspects of this topic with the help of multiple sources that examine the mediation procedures and their role in resolving conflicts in the field of administrative law.

In the article "Legal status and acquisition of qualifications of a mediator. Legal comparative analysis of regulatory acts in Spain and Poland" by M. Dąbrowski, W. Broński, M. Concepción, Rayón Ballestero examines the issue of the legal status and qualification procedure of mediators in Spain and Poland (Dąbrowski et al., 2023). This study provides an opportunity to compare the regulatory acts of the specified countries and to understand the peculiarities of their approach to the formation of professionals in the mediation field, including administrative law.

K. Tokarieva's dissertation "Administrative-legal Regulation of Mediation: Current State and Development Trends" details the legal regulation of mediation in public-law disputes in Ukraine (Tokarieva, 2021). Analyzing the current state and development trends of this type of alternative dispute resolution, the author considers international experience and the influence of legislation on mediation in Ukraine.

In their work, A. Kalisz and A. Serhieieva consider the issue of mediation in administrative law in Poland and Ukraine (Kalisz & Serhieieva, 2023). Comparing the experience of these two countries, scientists identify standard and distinctive features of judicial-administrative mediation.

K. Kułak-Krzysiak and P. Śwital reveal mediation as a tool of state management in resolving administrative conflicts (Kułak-Krzysiak & Śwital, 2023). The authors analyze the role of mediation in the interaction between state bodies and citizens in administrative disputes.

The work of J. Klaus Hopt and F. Steffek includes a comprehensive analysis of the principles and regulation of mediation from a comparative perspective (Hopt & Steffek, 2013). Researchers examine various aspects of mediation procedures and their impact on dispute resolution.

V. Kondratenko examines mediation's organizational, legal, and procedural aspects in Ukraine's administrative proceedings (Kondratenko & Kovalenko, 2023).

Therefore, the general approach to the study of mediation in administrative and legal disputes considers international and Ukrainian experience, providing comprehensive ideas about the problems of implementing extrajudicial procedures in legal conflicts with subjects of authority.

The analyzed works indicate a great scientific interest in mediation as a socio-legal phenomenon and allow us to single out the best

European practices for its introduction into the national system of Ukraine.

Methodology

The object of the study is social relations that arise in the process of regulatory and legal settlement and the use of mediation in administrative and legal disputes as an effective means of resolving conflicts between administrative bodies and private individuals.

Mediation is a voluntary and confidential process in which a neutral third party helps disputing parties negotiate a mutually acceptable solution.

The research analyzes legal acts related to mediation in the administrative and legal spheres. In particular, it includes the Constitution of Ukraine, the Law of Ukraine "On Mediation", the UN Convention on International Settlement Agreements as a result of mediation, recommendations of the European Union on the better use of mediation, as well as similar legal acts of other countries where mediation has already been implemented in the administrative - legal practice.

The research uses general scientific and unique methods of scientific knowledge related to the research subject.

General scientific methods include analysis, synthesis, analogy, and generalization. The analysis allows you to consider individual research components and identify their characteristics and relationships. Synthesis allows the combination of the received data into a single system, drawing conclusions and generalizations. Analogy allows us to conclude the similarity of legal systems based on similar features. Generalization and a systematic approach contribute to the understanding of the subject as a complex structure where all elements interact with each other.

Particular methods include various types of scientific analysis: comparative legal analysis, analysis of judicial practice, and documentary analysis. Legal analysis allows you to investigate the legal framework that regulates the use of mediation in administrative and legal spheres. Comparative analysis contributes to studying the practice of using mediation in different countries and identifying standard and distinctive features. The analysis of judicial practice involves the study of specific cases of mediation to resolve administrative and legal conflicts. Documentary analysis includes the study of scientific publications, articles, legislative acts, dissertations, and other documents containing information about mediation in administrative and legal spheres.

The combination of these methods allows for a comprehensive study of the effectiveness of mediation in the administrative and legal sphere, taking into account international and Ukrainian experience.

Results and Discussion

Requirements for a professional mediator as an element of the effectiveness of mediation in administrative and legal disputes.

The implementation of mediation in administrative proceedings is successfully practiced in many European countries. It is important to note that European mediation models do not have a universal character and are conceptual guidelines for further improvement of mediation practice in Ukraine. However, adjustments and adaptations can achieve optimal results considering the specific features and legal realities of Ukrainian administrative justice.

Thus, alternative methods of resolving administrative disputes have long been established in the judicial systems of countries such as Great Britain, Ireland, Germany, France, the Netherlands, Norway, and others (Melnychuk, 2022, p. 78).

Ukrainian legislation, namely Clause 2 of Part 1 of Article 1 of the Law of Ukraine "On Mediation", defines a mediator as a specially trained, neutral, independent, and impartial natural person who carries out the mediation procedure (Law of Ukraine No. 1875-IX, 2021, article 1). According to 3(b) of Directive 2008/52/EC of the European Parliament and the Council, the term "mediator" defines any third person invited to conduct the mediation procedure in a practical, impartial, and competent manner. This term applies regardless of the religion or profession of such third party in the Member State concerned and the method by which he was appointed or invited to mediate (Official Journal of the European Union, 2008).

Considering the complexity of administrative and legal disputes, during the mediation, more attention is paid to legal aspects than to emotional ones, and the issue of requirements for the professional level of a mediator is relevant.

The United States has different requirements for mediators, depending on the specific state and scope of mediation. For example, to be listed on the Arkansas Mediator Registry, you must complete a mediation training program of at least 40 hours within five years of applying for certification. Additionally, educational requirements include a graduate degree at the master's level or higher or a juris doctorate (Online Master of Legal Studies Website, 2021). Courts and mediation centers may also set additional requirements for the mediator's experience depending on the circumstances of the dispute. Most states require a certain number of completed mediation cases or hours of mediation activities under the supervision of a mediator mentor. In addition, some states require a law degree to be recognized as a mediator, and in some cases, especially family mediators, a bachelor's degree may be required. For example, in New Jersey, common criteria include 40 hours of basic mediation training, five hours of mentoring, and a bachelor's degree. In particular, the criteria for admission to the judicial list of mediators may differ significantly depending on the region and type of mediation.

Modern practice in the USA shows that mediation and other alternative methods of conflict resolution have become an integral part of the legal system. Mediation is so widespread that more than 90% of disputes are resolved with its help. More than 2,000 law firms have committed to providing mediation services, and companies routinely include clauses in their contracts and employment agreements requiring a mediation process before settling a dispute in court (Apalkova, 2021, p.18).

The American mediation model has a unique value within our research framework. It contains exciting elements that can serve as an example for the further development of the Ukrainian model of mediation in the administrative process. In particular, the mediation procedure introduced by the court is carried out by specialized services or other administrative bodies at the level of municipalities. Mediators working in these services carry out the process of reconciliation based on the analysis of psychological and legal aspects of the relationship between the parties. In the most complex conflicts, mediators can completely regulate the interaction between the parties or organize it only in the presence of lawyers.

In Hungary, the requirements for mediators include a higher education, a minimum of five years of professional experience, successful completion of specialized training for mediators, no criminal record, and no restrictions on mediation activities. Registration of mediators and mediation centers is carried out by the Ministry of Justice of Hungary (Fihun, 2021, pp. 22-23).

On the other hand, in Ukraine, the legislation stipulates several critical requirements for a mediator. First, a mediator can be someone who has undergone basic training in Ukraine or abroad. The second important point is excluding persons with a criminal record, limited civil capacity, or incapacity. Also, the parties to the dispute, including subjects of power, can set additional requirements for mediators, considering each case's specifics. In addition, associations of mediators and entities organizing mediation may impose additional requirements for the persons they register on their lists.

Thus, the requirements for mediators in each country are determined to ensure a high professional level and reliability of the mediation process. Each national legal system produces its approaches and criteria for determining the person who can act as a mediator and the requirements for him.

It should be noted that the success of the mediation process largely depends on the competence and professionalism of the mediator. Therefore, it is advisable to consider the possibility of involving a notary in the role of a mediator. As an experienced lawyer, a notary has excellent potential in simplifying the mediation process and ensuring reliability and objectivity in resolving disputes, especially in the context of public-law relations. Such a specialist also enjoys the trust of citizens, which is an essential aspect of successful mediation.

In our opinion, in public legal disputes, the notary-mediator should become a key figure who plays a vital role in resolving conflicts between administrative bodies and private individuals. This approach is particularly relevant since administrative cases in which authorities are one of the parties can be particularly complex and require competent mediation activities.

The notary mediator has a legal education and considerable experience in the legal field, allowing him to act as an objective mediator in resolving administrative disputes. In addition, notaries have a high degree of trust in the eyes of citizens, as their duties include providing legal services and certification of legal acts. Such functions make them ideal mediators in

situations where one of the parties is a government body with a qualified legal service. A notary mediator can build bridges of communication and reconciliation between administrative bodies and private individuals thanks to his professional skills and neutrality.

European experience of regulatory consolidation of the organization of mediation in administrative and legal disputes.

Mediation in Ukraine extends to various fields of application and has already found its legislative consolidation. A similar approach is enshrined in law in Poland. There, administrative mediation is enshrined in legislation in both horizontal and vertical dimensions. Thus, the use of mediation is possible both between the parties to the conflict (horizontal dimension) and between the parties and the public body before which the case is being considered and which is a participant in the legal process (vertical dimension) (Kalisz & Serhieieva, 2023, p.133). In Poland, there are mediation centers and organizations that provide mediation services and facilitate mediation procedures in cases related to administrative matters. These organizations usually involve qualified mediators who specialize in administrative matters.

In Belgian law, the Mediation Act 2005 covers all types of mediation, including administrative and legal disputes. Public organizations may conclude mediation agreements in accordance with the requirements of the law or decrees of the Council of Ministers. The issue of the participation of government officials in the mediation procedure is discussed, and the authority for this is granted by internal regulations (Federal Justice Public Service, 2005).

One of the forms of mediation in public legal disputes in Belgium is the use of special ombudspersons, such as the Public Services Ombudsman, the Public Authority Ombudsman, the Insurance Ombudsman, and others. A citizen unilaterally initiates this type of mediation through an appeal to the Ombudsman. It is important to note that the Ombudsman does not have the power to overturn an administrative decision but can send a negative report with recommendations to a higher authority, namely the Minister (Vandenhende et al., 2016, p.3).

In general, mediation can be used in cases of administrative sanctions for minors. The Law on Municipal Entities provides that municipalities may use mediation to resolve issues of violation of municipal regulations that may result in administrative sanctions. In a successful mediation, the competent administrative body has the right to mitigate the sanction (Official Web Site of Valia - Wallex, 2018).

Hungary has an Act that enables administrative authorities to take steps to reach an agreement between interested parties in cases where possible. If such an attempt is successful, the administrative bodies officially record the concluded agreement and include it in their decision (Vértesy, 2022). The mediation process in the system of the specified country is carried out by specially trained probation officers, whom the Central Bureau of Justice coordinates under the Ministry of Justice. Disputes subject to mediation are submitted for consideration by judges, prosecutors, and parties' representatives, especially in cases where the punishment for the committed offense does not include imprisonment for more than five years (Dubovik, 2015, p. 303).

Within the administrative proceedings in Poland, mediation can be used in various cases related to property and legal issues, such as neighborhood conflicts, consolidation of land plots, disputes regarding building conditions and permits, and infrastructure investments. Also, mediation can effectively resolve disputes in concessions, business licensing, environmental protection, agricultural and industrial issues, and tax and customs duties. In addition, it is essential to note that mediation can help resolve social security and other complex conflicts where the parties have diverse but partially similar interests and cases involving personal situations and factual circumstances (Kalisz & Serhieieva, 2023, p.134). Such an approach can simplify complex decision-making procedures in the judicial process.

The opinion of A. Samotuga, who compares Ukraine with France as a European state based on a number of political and legal characteristics, is valid. Both countries are parliamentary-presidential republics with dual executive power and a unitary type of territorial system. However, the researcher places particular emphasis on the organization of local government, where the concept of municipal dualism is used. It provides for the division of powers between local executive bodies and local self-government, which sometimes leads to intertwining their functions (Samotuga, 2022, p. 264). Therefore, considering the similarity of France and Ukraine's political and legal characteristics, it is

essential to view France's experience in mediation.

Among the models of mediation in the world, the most common is the classic private mediation, which is carried out by non-state mediators outside of court proceedings. At the same time, the implementation of judicial and judicial mediation also demonstrates effectiveness, which is confirmed by the experience of most countries of the European Union. (Tokarieva, 2021, p. 394). Individual countries develop their own mediation models that correspond to a particular population's legal traditions and culture. In France, "institutional mediation" is recognized as one of the most successful worldwide, especially in the public and legal spheres. Its introduction includes the creation of mediator institutes to resolve complaints and disputes in public administration and public services. New bodies such as the Mediator of the Ministry of Economy, Finance, and Industry are responsible for mediation in tax disputes and other areas. A specialized body, the Defender of Rights, took over the functions of administrative mediation and orderly mediation (Kavalnė & Saudargaitė, 2011, pp. 254-256). It is also important that mediation is popular among citizens: they want to resolve disputes peacefully with the help of mediators instead of going to court. Mediation services are available and free of charge, and their use has increased over the past five years (Paris, 2022). However, it is crucial to note the resistance of administrative court judges to judicial mediation due to the lack of necessary training and the busyness of the courts.

In Ukraine, a judicial experiment was conducted on implementing "dispute settlement with the participation of a judge" in administrative proceedings (Lazebny, 2019). However, it was not widely recognized due to insufficient clarity and understanding of the procedure by judges and citizens. Despite this, the dispute settlement procedure with the participation of a judge remained in the Code of Administrative Proceedings of Ukraine (CAPU). The CAPU establishes a dispute settlement procedure with the participation of a judge, which includes holding joint meetings with the participation of all parties and closed meetings with each party separately. It is important to note that in administrative proceedings, this procedure cannot be used in some instances outlined in Chapter 11, Section II of the CAPU, except for cases provided for in Article 267 of the Code and typical cases. Also, it cannot be applied in the entry into the case of a third party with

independent claims regarding the subject of the dispute (Code of Ukraine № 2747-IV, 2023, chapter 4).

The institutional model of mediation is the most appropriate for the national legal system in Ukraine. The creation of a separate body for mediation or the granting of such powers to officials of other bodies, institutions, and organizations will immediately solve several problems accompanying the actual introduction of mediation. In particular, it will significantly affect the cost and quality of mediation services. The institutional model will allow both the state and the professional self-governance body to better monitor the training and certification of the person performing the mediation.

The normal competitive environment of mediators from among professional lawyers or officials of a specially created mediation body will make their services available to the public and lower than court fees. To date, the mechanisms for certification of mediators who provided mediation services before the adoption of the current legislation on mediation or who plan to provide such services are still unclear. This causes a certain mistrust among the population, to whom court proceedings appear to be a more traditional and safe way of resolving disputes. Popularization of mediation against the background of affirming in society the value of psychological help and a non-conflict environment through the creation of special institutions for mediation, activation of the development of notary and lawyer mediation will increase the number of professional mediators and therefore will ensure the effective promotion of alternative dispute resolution.

The main risk of establishing an institutional model of mediation in Ukraine is excessive bureaucratization, so the legislator should take into account the flexibility of mediation and its incompatibility with the formalism inherent in the judicial process. In view of this, the legal regulation of the institution in the field of mediation should focus on the training, certification, and ethical professional training of the mediator rather than on direct access to the procedure for citizens.

Conclusions

Administrative and legal issues are often associated with complex legal norms, regulations, and procedures. Controversial issues may require careful study of legislation and court decisions to determine their legal status and

interpretation. In addition, administrative decisions and procedures are related to the activities of executive authorities, local self-government bodies, and civil society institutions. Participants in administrative disputes may face bureaucratic restrictions, extended deadlines, and procedures that complicate the dispute-resolution process. The indicated legal relations relate to fields requiring special expert knowledge, such as tax or land law, which complicates the mediator's work. At the same time, despite all the complexity of administrative-legal disputes, the financial costs and the prospect of the uncertainty of the outcome of the court proceedings lead to an increasing interest in alternative methods of dispute resolution, such as mediation, since negotiations and agreements require the expenditure of fewer resources.

Implementing mediation in administrative proceedings is a practice that functions successfully in numerous European countries. It should be noted that these European models are not universal in nature but provide a conceptual guideline for further improvement of mediation practice in Ukraine. Considering the legal traditions of Ukrainian administrative proceedings, adjustments and adaptations of foreign experience can be used to achieve optimal results.

Ukrainian legislation defines a mediator as a specially trained, neutral, independent, and impartial natural person who carries out the mediation procedure. Some countries, such as the USA and Hungary, have specific requirements for mediators, including training programs, experience, and education. Emphasis on professional training of mediators is carried out to ensure a high quality of mediation processes.

Mediation in administrative and legal disputes in Ukraine has the potential to become an effective tool for resolving conflicts between administrative bodies and private individuals. Foreign experience shows that an essential factor for the success of the mediation process is the competence and professionalism of the mediator, so it is appropriate to create in Ukraine the practice of mediation in administrative and legal disputes by a notary who has a legal education, significant experience in the field of law and possesses impartiality and neutrality The formality of administrative-legal relations requires special attention to the observance of the law when reaching an agreed solution between the parties, taking into account the interests and rights of the mediation participants, as well as during the conclusion and implementation of an agreement based on the results of mediation. The mediator must be competent to formulate an agreement due to the mediation, which is by the applicable law, and the balance of interests of all parties to the dispute.

The modern experience of the United States shows that mediation has become an integral part of the legal system, and its wide application testifies to its effectiveness. Mediation is used in various administrative contexts, such as social service cases, disputes between public authorities and citizens, and real estate and land rights. Many states have administrative mediation programs that help reduce the burden on the court system and ensure efficient dispute resolution.

In many countries of the European Union, mediation is also used to resolve administrative disputes. For example, Spain, France, and other countries have administrative mediation programs to facilitate the resolution of disputes between citizens and government agencies. Among the types of disputes resolved using mediation are disputes regarding social services, education, guardianship, immigration issues, land disputes, and others.

France's experience involves the creation of specialized bodies to resolve complaints and disputes in the field of public administration and public services. Implementing such a system can improve the availability and effectiveness of mediation in administrative cases in Ukraine. Specialized ombudspersons, as in Hungary, can also help resolve administrative-legal disputes in Ukraine. The general trend is that mediation helps to reduce the burden on the judicial system, ensures a more rapid and efficient resolution of administrative cases, and helps to preserve the relationship between the parties, building trust between the state and the citizen. As a rule-of-law tool, mediation also helps reduce costs for participants and simplifies the process of resolving administrative disputes.

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Self-governance structures in EU Nations: Drawing lessons for Ukraine's bar systems

Estructuras de autogobierno en naciones de la UE: Extrayendo lecciones para los sistemas de colegios de abogados en Ucrania

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Abstract

Objective: The objective of the study is to examine the experience of the organization of lawyers, the self-governance of lawyers, and the professional ethics of lawyers in the EU, to develop, from the analyzed material, practical recommendations aimed at strengthening the status of a lawyer and improve the Bar Association in Ukraine. Methodology: The methodological basis of the study is formed by general philosophical methods, and private legal methods of knowledge of the objective reality in the field of the organization of the bar association and the professional ethics of lawyers in the EU. Findings: The study found that the organization of lawyers and the professional ethics of lawyers in the EU are well developed and meet international standards. EU lawyers have a recognized professional status and play an important role in protecting human rights and justice. Conclusion: The findings of the study provide a solid basis for strengthening the status

Resumen

El objetivo del estudio es examinar la experiencia de la organización del Colegio de Abogados, el autogobierno del Colegio, la ética profesional de los abogados en la UE, para desarrollar, sobre la base del material analizado, recomendaciones prácticas destinadas a fortalecer la condición de abogado y mejorar el Colegio de Abogados en Ucrania. El objeto del estudio son los conceptos teóricos de las formas de organización y las cuestiones de ética profesional de los abogados en la UE; las normas nacionales e internacionales que proporcionan un mecanismo para prestar asistencia jurídica a los ciudadanos y sus asociaciones en una entidad supranacional. La base metodológica del estudio está formada por métodos filosóficos generales y jurídicos privados de cognición de la realidad objetiva en el ámbito de la organización del colegio de abogados, la ética profesional de los abogados en la UE. La conclusión del estudio es fundamentar la posición de que en la mayoría de los Estados miembros de la UE el término "colegio

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of lawyers in Ukraine. The Ukrainian government could improve the status of lawyers by adopting legislation that fully recognizes their autonomy and role in society.

Keywords: Western, Europe, legal, supranational, rule-making.

de abogados" abarca tanto toda la categoría de personas reconocidas como abogados en virtud de las leyes de ese país como la organización de abogados que tiene una base jurídica y su propia competencia, lo que corresponde a los artículos 24, 25 de los Principios Básicos sobre la Función de los Abogados adoptados por el VIII Congreso de las Naciones Unidas en agosto de 1990.

Palabras clave: Europa, Occidental, servicios, enormas jurídica.

Introduction

The subject of the study is the organization of the Bar Association and the professional ethics of lawyers in the EU. This research is relevant due to the reform of the legal aid sector in Ukraine.

The article is divided into three sections: the first section analyzes the legal regulation of the Bar Association in the EU; The second section analyzes the self-governance of Bar Associations in the EU; and the third section analyzes the evolution of the process of simplification of the procedure for the free provision of services by lawyers in the Common Market.

In 2013, the Law of Ukraine "On the Bar and Practice of Law" was adopted (Law of Ukraine No. 27, 2013) and in 2017, the Reporting and Election Congress The Reporting and Election Congress of Advocates of Ukraine adopted the Rules of Attorneys' Ethics (Rules of Attorneys' Ethics, 2012), which establish mandatory rules of conduct for each advocate in the practice of law based on moral criteria and traditions of the Bar, as well as international standards and rules of the legal profession.

As a result of the reforms that have brought about global changes in all spheres of state and society, a fundamentally new legal situation has been created that requires revision and legal clarification of the organizational foundations of the practice of law and the Bar as one of the main mechanisms for protecting human rights around the world. At the same time, Ukraine has the main subject of realization of the constitutional right to receive qualified legal aid - the Bar, which is of scientific research interest. Thus, in recent years, the role and place of the Bar, as well as the range of its tasks in protecting rights and legitimate interests have changed significantly. In addition, these legal acts have significantly changed the status of an advocate and the basis of the practice of law in Ukraine, in particular, expanded his or her procedural rights.

At the same time, there is currently no scientific research devoted to a comprehensive, comprehensive, conceptual understanding of the organization of the Bar and the professional ethics of attorneys in Western Europe.

However, it is particularly relevant for two reasons: from a theoretical point of view, it is necessary in the context of clarifying the new legal environment in which the Western European bar operates; from a practical point of view, knowledge of the achievements and shortcomings of the Western European bar could provide significant assistance in reforming the legal aid sector in Ukraine.

The legal regulation of the Bar in the European Union has peculiarities related to the integration process that has determined the direction of development of the European continent in recent decades. The formation of the Common Market in the European Economic Community was accompanied by the proclamation of new rules for conducting business activities. The Treaty of Rome in 1957 laid the foundation for the formation of the Common Market by eliminating all obstacles to the free movement of people, goods, services, and capital.

However, despite these positive trends, the current state of the legal aid sector in Ukraine can be considered ineffective both from the point of view of the legal community and public authorities, as well as the majority of the population. In today's Ukraine, there is a dichotomy of entities providing legal aid to citizens and their associations, and there are double standards of regulation of the legal profession: one part of practicing lawyers is subject to the requirements of corporate law, while the other is completely free from them.

Unlike Ukraine, which has adopted a specialized law on the Bar and the Practice of Law, the EU did not provide for a special rule regulating the

legal status of the Bar in the Rome Treaty. However, its provisions imply that the activity of a lawyer in providing legal services (the activity of persons of free professions, Article 60) is a type of economic activity. Based on this provision, the institution of the bar is subject to the legal regime of the Common Market freedoms, and lawyers can provide legal services in any member state of the European Economic Community.

The prolonged absence of proper legal regulation of the organizational foundations of the practice of law and the Bar in Ukraine, the lack of reference to the positive experience of historical development, and the formation of the legal framework for the exercise of professional activities by lawyers in foreign countries (e.g., the EU) caused significant shortcomings in the activities of the recently reformed Ukrainian Bar.

Foreign and domestic law firms and consulting companies operate in more favorable conditions than advocates, and the current legislation on the Practice of Law and the Bar does not contribute to the improvement of organizational and legal forms of the Bar; the cases of free legal aid provided for by Ukrainian legislation do not cover the current social needs related to the development of civil turnover and its legislative regulation; approaches to defining activities incompatible with the status of an advocate need to be changed. Undoubtedly, this is the case with the Western European bar, which has deep historical roots. Based on the comprehensive experience of Ancient Greece and Ancient Rome, European nations gave this legal institution a new meaning, turning it into a universal tool for providing legal assistance to citizens and their associations.

The lack of proper legal regulation of the status of the bar self-government institution and the Ukrainian bar itself caused significant shortcomings in its activities. Therefore, the adoption of new codes, primarily the Criminal Procedure Code of Ukraine, which came into force on April 13, 2012, also significantly affected the status of the bar, Judicial reform in Ukraine has been going on for over a decade, and the reform of the bar has only recently begun. The adoption of the relevant specialized law legally formalized the attribution of the Bar to civil society institutions and the assignment of certain public legal functions to it. These changes have removed the obstacles which hindered the growth of the Bar as a corporation of professionals in the field of legal aid.

The purpose of the article is to study the European Union legislation in the field of regulation of the Bar and Bar self-government, and also the evolution of the process of simplification of the procedure for free provision of services by attorneys in the Common Market.

Theoretical Framework or Literature Review

The deep integration processes taking place in various spheres of EU life have directly influenced the creation of a system of legal norms related to the activities of lawyers in the pan-European space, which provide for the creation of the necessary conditions for the free provision of services (freedom of movement of services), freedom of institutions, recognition of a common system of higher education diplomas, elimination of protectionist instruments restricting the free movement of lawyers.

 "Respect for all common civilizational values such as rights, freedoms, and legitimate interests of a person and a citizen are the foundations on which a legal and democratic state rests" (Rezvorovych, 2022: 163). The institution of the Bar is the guarantor of their protection, since "justice and democracy have become among the most important affairs of mankind that public institutions must achieve and enforce" (Kumar, 2021: 19).

The main areas of development of the Bar in Ukraine at the present stage are the implementation of international legal standards relating to the provision of legal aid and the activities of the Bar in the domestic legal system; reform of procedural legislation aimed at improving the independence of lawyers, increasing guarantees of their protection, ensuring the equality of the parties in court and at the pre-trial stage; further reform of Ukrainian legislation to formulate a comprehensive legal framework for the provision of legal aid. The magnitude of the tasks facing the institution of the Bar in Ukraine at the present stage is primarily due to the fact that "today's information society faces open challenges with hidden opportunities and risks in further evolution" (Gevorgyan & Baghdasaryan, 2021: 37).

The experience of organizing the Bar was studied on the basis of epistemological, ontological, and socio-historical approaches. The use of these approaches makes it possible to study the object of research, following the logic of its development through its immanent characteristics. «The latest advances in science and technology demonstrate the need for

transformation in social life, particularly in jurisprudence» (Filipova et al., 2021). As one of the main mechanisms for the protection of human rights in a law-based democratic state.

Methodology

To achieve the aims and objectives of the study, the author used general scientific methods (systemic, structural and functional, object-subject, logical (deduction and induction), and private scientific methods (formal legal, comparative legal). The use of a particular method depended on the solution of a particular research task. Thus, in the process of collecting and evaluating factual material, the method of comparative legal research was used; in the process of processing and studying factual material, the following methods were used: specific sociological, normative and dogmatic, statistical processing methods, special legal, comparative legal methods; at the stage of preparing conclusions and findings, logical research methods (formal legal method, deduction and synthesis, induction and analysis) were used.

In the process of collecting and evaluating factual material, sociological methods, such as surveys, interviews and focus groups, were used. In the process of processing and studying factual material, normative and dogmatic methods were used, such as the analysis of EU and Ukrainian legislation and jurisprudence. In the stage of drawing conclusions and findings, statistical methods were used, such as descriptive statistics and statistical inference.

Results and Discussion

In its evolutionary development, the Western European Bar has passed through certain stages of historical formation, each of which had distinct forms of existence (antiquity, the Middle Ages, the Modern period, and the contemporary period), which determined the specifics of the institution the modern period of development of the Western European bar is characterized, on the one hand, by a great variety of manifestations of its individual institutions (models of bar self-government, organizational and legal forms of practice of law, attitude to the bar monopoly), and, on the other hand, by universal features and attributes. In all Western European countries, deontological codes of attorneys-at-law (codes of professional ethics of attorneys-at-law) have been adopted and are in force, which are a mechanism for controlling the performance of professional duties by attorneys-at-law. The

moral and ethical rules that guide Western European attorneys go back to the long-standing legal traditions in Western Europe and are correlated with the conditions and nature of the tasks performed by attorneys. Western European states recognize the legal profession as an institution of civil society and therefore promote the institutional independence of the bar.

At present, when the debate between scholars and practicing lawyers on possible ways to reform the legal aid sector in Ukraine has intensified, legal knowledge of the organization of the bar and the ethics of professional activity of lawyers in Western European countries is needed, as it will allow to perceive a significant part of the legal experience gained in Western Europe.

The institution of the bar in the EU is subject to the legal regime of the Common Market freedoms, so lawyers can provide legal services in any member state of the European Union. In this context, it is necessary to distinguish between two fundamentally different ways of providing legal services. The first is the possibility for an attorney to permanently practice in one Member State and occasionally provide legal services in another EU Member State (e.g., representation of a client in court). The second method involves the relocation of an attorney to another EU member state with the subsequent permanent practice in its territory.

The successful functioning of the Common Market at the initial stage in the field of legal services depended on the readiness of states to create equal conditions for both national lawyers and those coming from other EU countries. The main problems were the differences in the national legislation of the EU member states, the legal unification of the profession, and the professional requirements for persons applying for the status of an attorney. The requirements for future attorneys are quite strict in the EU member states. The applicant must have high moral qualities, the required level of legal education, and successfully pass the bar admission procedure: courses, qualification exam, internship, etc.

The rights of a foreign advocate are almost fully consistent with the rights of a national advocate (membership in the bar association, the right to vote in decision-making), but they can provide legal services with some restrictions compared to national advocates. According to Art. 5 of Include Directive 98/5/EC of February 16, 1998 Directive 98/5/EC of the European Parliament

and of the Council, 1998 (Legislation, 1998), Member States retain the right to restrict foreign lawyers from representing clients independently in national courts (only together with a national lawyer). However, some countries have abandoned this approach to restricting the rights of foreign lawyers acting in the host country, such as France.

At the same time, foreign attorneys have certain privileges: there is no need to be proficient in the national language of the receiving state, as well as to be an expert in its legal system. The novelty of Directive 98/5/EC of February 16, 1998 is an alternative mechanism for obtaining the status of an advocate in an EU member state. While the 1989 Directive provides for the acquisition of the status of an advocate on the basis of legal education and recognition of diplomas, the 1998 Directive provides for the possibility of acquiring the status of an advocate for permanently practicing foreign advocates.

In order to obtain equal rights and status with local attorneys of the host country, a foreign attorney must meet the following criteria: to practice law in the host country under a professional title for three years; to practice law continuously; the practice of law must relate to the national law of the host country, as well as the law of the European Union and international law. If the foreign advocate meets these requirements, he or she shall apply to the relevant institution of the host state for the status of a national advocate. The facts of the practice of law in the receiving state shall be proved by any documentation that testifies to the following.

This mechanism for acquiring the status of a national advocate, which does not require either an examination or an internship, has been implemented in the national legislation of almost all EU member states. For example, by 2002, 378 attorneys from other EU member states had been employed in Belgium using the system established by Directive 98/5/EC. For comparison, in 1997-1998, in accordance with the provisions of Directive 89/48/EEC, 155 applications were received from applicants, of

which 20 passed the test, 44 failed, and the remaining applications were under consideration or appeal or were automatically rejected. In France, no foreign lawyers were admitted in 1997-1998, while after the adoption of Directive 98/5/EC, their number increased to 33. In Italy, in 1997-1998, 64 applications were received, of which in 57 cases the applicants passed the test, 7 were rejected; after the adoption of Directive 98/5/EC, 47 lawyers were admitted.

The European Union of Lawyers (Union des Avocats Européens, UAE), a general professional organization of lawyers practicing in the European Union, also contributes to the development of the freedom of legal services. Any lawyer who is a member of a national professional organization of lawyers in an EU member state can become a member of the UAE, and there is a possibility of associate membership for other lawyers. The UAE declares the main purpose of its activities to be the promotion of the free flow of legal services throughout the EU, the development and adaptation of common EU professional standards of practice in order to unify legal services within the EU, and the introduction of the practice of applying the Convention for the Protection of Human Rights and Fundamental Freedoms.

Thus, the pan-European regulation of admission to the practice of law shows a significant evolution with a tendency to simplify the procedure for advocates to exercise the right to practice law in a state other than the one in which they received their professional education and the status of an advocate. It is thanks to supranational rulemaking that this opportunity is practically realized.

Acquisition, suspension, and termination of the status of an advocate in the EU are fully within the competence of the national self-governing body of advocates (national bar association). Based on a direct analysis of the EU legislation regulating the acquisition, suspension, and termination of the status of an advocate, it is possible to distinguish the following models of bar self-government (Table 1):

Table 1.
Models of bar self-government in the EU

The model of bar self-government	The EU member state that represents the bar self-government model
Classical. Membership in the Bar is associated with affiliation with a chamber of advocates. The members of the chamber (collegium) are advocates who are assigned to the Supreme Court of the same land, region, or territory.	France, Italy, Greece, Spain, Holland, Belgium.
Territorial. It is characterized by the fact that the chambers are formed on a territorial basis and unite all advocates entered in the Register of the authorized body of a particular subject of the federation of an administrative-territorial unit). The jurisdiction of each chamber of advocates extends to the territory of the federal subject (administrative-territorial unit) in which this chamber was founded, and even to all advocates included in the list of this chamber of advocates.	Austria.
Associative. It provides for self-governance of the bar through associations and unions, and membership in an association is not mandatory.	The Swedish Bar Association and the Swiss Bar Association.
Corporate. Management with the help of the legal community.	With certain reservations Switzerland (Bar Association), Sweden (Bar Association).

Author's development*

In the UK, a country that was a member of the EU, another model of bar self-governance is characteristic - management through judicial inns and barristers. The first and second models are united by the fact that they involve membership in a chamber or panel. All of these models strictly distinguish between the forms of bar self-government and the organizational and legal forms of the practice of law.

National legislation in the EU is aimed at encouraging the practice of law in various organizational and legal forms, which provides for the introduction of restrictions for non-attorneys in order to weaken their influence on decision-making in the bar associations. The main organizational and legal form for bar associations in the EU is a non-profit partnership (civil law association): GB-Gesellschaft of German law; "Advokaterselskab" of Danish law; "association" or "societe civile professionelle" of French, Belgian and Luxembourg law; "maatschap" of Dutch law; "sociedades civis" of Portuguese law; "despachos collectivos" of Spanish law.

In the Netherlands and France, the organizational and legal form of the practice of law is a business partnership. Also in these countries, bar associations may be established in the form of bar holdings; in Denmark, it is possible to establish the legal profession in the form of a limited liability company, joint stock company, or bar joint stock company.

The mechanism of control over the performance of the advocate's professional duties is the professional ethics of advocates (deontology), which provides for strict compliance with its provisions by those to whom they apply, as is customary in any civilized society. Most of the national deontological codes (codes of professional ethics for lawyers) of the EU member states are regulatory rather than legal acts, as they are adopted by corporate self-government bodies rather than legislative or other authorized state bodies. However, in some EU member states, deontological codes (codes of professional ethics for lawyers) are by their nature legal acts, as they are approved by laws or decrees of the heads of state. Some of the codes supplement the provisions of the legislation regulating the activities of lawyers with their guidelines.

The legal regulation of the practice of law and the status of an attorney in Ukraine is carried out in accordance with the provisions of national legislation and internal principles, in addition to international legal acts, which "... can be classified by the object of regulation and divided into three main groups of international acts: those regulating the organisational and legal framework of the activities of attorneys (Basic Principles on the Role of Lawyers, 1990, "The Common Code of Practice for Lawyers of the European Community of 1988, etc.); those regulating the procedural basis of the activities of advocates (the International Covenant on Civil and Political Rights of 1966, the Universal Declaration of Human Rights of 1948 "The Convention for the Protection of Human Rights and Fundamental Freedoms of 1950, etc.); those that define the role of lawyers (attorneys) in

society (Standards of Independence of the Legal Profession of the International Bar Association, etc.)" (Mozhaikina, 2020: 31).

Thus, the institution of the Bar and bar self-government must take into account the positive experience, "the European vector of Ukraine's development has caused the emergence of new mechanisms of interaction between the state, the individual, and society" (Bakalinska et al., 2022: 146). It provided a clear definition of the term "lawyer", according to which in each EU member state it covers only the profession of lawyer. Therefore, when it comes to the provision of services, as well as freedom of movement, it means only a lawyer, who, in addition, in the process of providing legal services, must indicate in the language used in the country from which he came, the name of his profession (title) and the professional organization that issued him such a diploma. At the same time, the receiving country has the right to request documents confirming his/her qualifications. According to the direct provision of Art. 4 of the said Directive, the practice of law in the exercise of the freedom of movement of services cannot be conditioned by the need for an advocate to be a resident of the receiving state, as well as the need to join the professional community of lawyers of that state.

When rendering legal services, the foreign advocate shall be subject to the rules of practice of law of the receiving state. National legislation may stipulate that a foreign attorney shall represent a client's rights jointly with a local attorney and may be subject to professional restrictions similar to those applied to local attorneys.

"The legal sphere, like any other sphere of public activity, requires transformation; however, jurisprudence has its own peculiarities in terms of updating the organization and principles of work" (Paryzkyi, 2021: 27). Thus, the further development of integration within the European Community required mutual recognition of the professional qualifications of representatives of various professions, including the legal profession. At the moment, an attorney who wishes to move to another EU Member State and practice law there has two options for acquiring the attorney's status: one can use the general system of recognition of diplomas based on the 1988 Directive, or the special procedure introduced in 1998. During this period, it is also worth noting such important processes that influenced the adoption of these directives as the fact that "while new activities developed for a

part of the legal profession, most notably lobbying and mediation activities, lawyers contributed to blurring the border between the public and the private sphere at the European level" (Avril, 2018: 859).

To eliminate these restrictions, a special Directive 98/5/EC of February 16, 1998, was adopted on simplifying the procedure for the permanent exercise of the legal profession in a Member State other than the one in which the qualification was obtained. This legislative reform was in line with the needs of the labor market and the rule of law, which is "...as a well-established and well-defined principle whose core meaning is further shared as a common value among all Member States" (Pech, 2022: 107).

The Directive is intended for practicing lawyers and provides for an alternative procedure for their admission to practice law in the receiving state. The Directive provides for the right of an advocate to practice in another EU state while retaining the professional title obtained in the state of which he or she is a citizen. Art. 3 of the Directive stipulates that an advocate must register with the competent authority of the receiving state by providing evidence of permanent professional legal activity in the state of origin, and after registration, the advocate is granted the status of a foreign advocate.

Thus, with the formation of a special supranational association of the EU, the modern institution of the bar in the territory of its member states begins to take shape, which, in particular, provided for the possibility of "...providing opportunities for advocates to connect and share experiences" (Antone et al., 2021: 585). The institution of the Bar in the EU is becoming, on the one hand, an institution of civil society, and on the other hand, a means of implementing state guarantees of the constitutional right to legal aid (the right of citizens to seek the assistance of a lawyer in case of any form of restriction of liberty (Spain), the right to defense (Switzerland, Portugal), the right to defense and legal representation (Italy), the institution of a trustee (Germany). Thus, "advocates are a critical component in the search for material truth in the judicial process, particularly in criminal cases. From the client's perspective Protection is another goal of the settings" (Alatas & Santiago, 2022: 1).

The state considers the Bar to be a public legal institution and, by adopting special legislation, establishes certain criteria for the functioning of

the Bar, provides conditions that facilitate the training of advocates to provide citizens and their associations wiovth various types of legal aid. In particular, the institution that distinguishes the legal profession from the vast majority of other professions, is general in nature, absolute, and unlimited in time, "confidentiality is a cornerstone of the professional status of a lawyer and limitations of this principle should be strictly envisaged by law" (Nazarov et al., 2020: 603). Due to his or her status, a lawyer becomes a client's confidant, so the existence of the attorney-client privilege is in the public interest.

«The advantage of procedural legal personality in administrative and criminal proceedings, compared to the status of other subjects of procedural relations of a public nature, is the strict enshrining in the legislation of the procedural rights of participants in administrative-procedural relations and criminal-procedural relations and possibilities of their implementation» (Khalilov, 2023). The attorney-client privilege is a right and an obligation of the attorney. The right and obligation to maintain the attorney-client privilege extend to everything that became known to the advocate in the course of the performance of his or her assignment and continues to be maintained after its execution. EU member states have different approaches to the question of who can release an attorney from the obligation to maintain the attorney-client privilege. In some countries, it is generally accepted that the client has the right to release the lawyer from the obligation to keep the attorney-client privilege; in others, it is believed that the lawyer cannot be released from the obligation to keep the attorney-client privilege by his client, or by any authority, or by anyone at all.

"Lawyers, for example, are taught that they can retain unbiased beliefs while advocating for their clients and that they must do so to secure just outcomes" (Melnikoff & Strohminger, 2020: 1258). In the course of his or her professional activities, the advocate has legal and ethical obligations to clients, the court, and other public authorities with which the advocate enters into relations while performing the client's instructions, to the legal community as a whole, and to colleagues separately, to the society for which the existence of an impartial and independent legal profession is a prerequisite for the protection of the rights of citizens and their associations.

The highest legal guarantee of human and civil rights and freedoms is their judicial protection (Article 55 of the Constitution of Ukraine). Such judicial protection is provided through constitutional, civil, commercial, administrative, and criminal proceedings. The exercise of judicial protection in all types of proceedings is inextricably linked to one of the fundamental constitutional rights of a person and citizen in Ukraine, namely the right to legal aid.

It is undisputed that the main entity responsible for providing such assistance is the Bar, which in the civilised world serves as an indicator of the level of democracy in society. In addition, the proper functioning of the Bar is one of the main features of determining the level of human rights protection.

In this case, we should agree with the statement of the Committee of Ministers of the Council of Europe, which notes the important role of lawyers in ensuring the protection of human rights, considering their activities as one of the main components of the development of the rule of law in each country.

The new law on the Bar adopted in Ukraine provides that the scope of professional rights of advocates has been quantitatively increased, but mainly not through qualitative changes, but by actually artificially separating certain rights from the list of those guaranteed before. In addition, it should be noted that a number of such rights are only declarative in nature and cannot be properly used in the practice of law. Thus, the said law stipulates that the advocate has the right to collect information about facts that may be used as evidence in accordance with the procedure established by law, to request, receive, and seize things, documents, copies thereof, to get acquainted with them and to interview persons with their consent. In this case, the procedural procedure for the seizure of things and documents by the advocate from persons is not regulated at all, and therefore the mechanism for the exercise of this right and the procedural status of such documents (things), in particular in civil cases, remains unclear.

In addition, the advocate is deprived of the possibility of proper use of such a right as the right to conduct interviews with persons with their consent. Firstly, there is no procedural mechanism for the exercise of this right by the advocate, which may result in such actions being considered as pressure on a witness. Secondly, the legislator has not established the legal nature of the testimony of such persons, namely the possibility of their being classified as evidence.

It is undeniable that, in addition to a number of negative features, a significant number of positive characteristics have been enshrined. In particular, a fundamentally new system of formation of qualification and disciplinary commissions of the Bar has been established (their composition is elected and formed exclusively from among the advocates by the bar self-government bodies), which in a certain way increases the independence of the Bar as a whole.

The strengthening of guarantees for the protection of the advocate's activities is also positive, in particular, the obligation of the body or official who detained the advocate or applied a preventive measure to him/her to immediately notify the relevant regional bar council. The procedure for conducting searches and inspections of advocates is also described in some detail. As for the other guarantees, they are mostly declarative or duplicate the provisions of the existing legal acts. The issues of bringing advocates to disciplinary liability, internships for persons who have expressed a desire to become advocates, and others that are the subject of separate research remain controversial in connection with the adoption of the Law.

Conclusions

Legal regulation of the Bar in the European Union depended on the development of the Common Market of the European Economic Community, and subsequently of the European Union. Each step in the development of legislation in this area was significant progress in comparison with the regulations that had been adopted earlier. Despite the peculiarities of the legal profession, the European Union has managed to create a system that allows lawyers to exercise their rights to freedom of movement of services and freedom of establishment on an equal footing with representatives of other professions and to practice freely in any EU member state on a permanent and temporary basis. As a result of the study, the following conclusions can be drawn:

1. the legal regulation of the Bar and bar self-government in the European Union depended on the development of the Common Market of the European Economic Community and, subsequently, the European Union. Legislation regulating the status of a foreigner is marked by significant progress and gradual improvement;
2. despite the peculiarities of the legal profession, the European Union has managed to create a system that allows

lawyers to exercise their rights to freedom of movement of services and freedom of establishment on an equal footing with representatives of other professions and to practice freely in any EU member state on a permanent and temporary basis;
3. the constitutional and legal status of the Bar stems from the principle of the rule of law in combination with fundamental human rights, but most often, unlike the right to defense and legal aid, the institution of the Bar does not have direct constitutional consolidation.

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Evaluation of exhibition space design within the scope of art museums in North Cyprus

Kuzey Kıbrıs'taki Sanat Müzeleri Kapsamında Sergi Alanı Tasarımının Değerlendirilmesi

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Abstract

In the recent decades, educational institutions have played a role in fostering artistic production in Northern Cyprus since 1974. An illustration of this contribution is the Günsel Art Museum, established within the Near East University. This museum has not only served as a venue for art exhibitions but has also played a crucial role in promoting the creation and appreciation of art in the region. The research was conducted through a comprehensive case study, with a specific focus on the Günsel Art Museum. The results of the study reveal a positive influence of the museum on artistic production in North Cyprus. It has provided a platform for local artists to showcase their works and implemented educational programs that have introduced young individuals to the world of art. This article aims to explore the artworks and exhibition spaces in the NC post-1974, emphasizing the contributions of educational institutions established in NC during that period to artistic endeavors.

Key Words: Exhibition, Space, Design, Museum, Art.

Özet

Son on yılda, eğitim kurumları 1974'ten bu yana Kuzey Kıbrıs'ta sanatsal üretimin gelişmesinde bir rol oynamıştır. Bu katkının bir örneği, Yakın Doğu Üniversitesi bünyesinde kurulan Günsel Sanat Müzesi'dir. Bu müze, sadece sanat sergileri için bir mekân olarak hizmet vermekle kalmamış, aynı zamanda bölgede sanatın yaratılmasını ve takdir edilmesini teşvik etmede önemli bir rol oynamıştır. Araştırma, Günsel Sanat Müzesi'ne özel olarak odaklanarak kapsamlı bir durum çalışmasıyla yürütülmüştür. Araştırmanın sonuçları, müzenin Kuzey Kıbrıs'taki sanatsal üretim üzerinde olumlu bir etkisi olduğunu göstermektedir. Müze, yerel sanatçılara eserlerini sergileme olanağı sağlamış ve genç bireylere sanat dünyasını tanıtan eğitim programları uygulamıştır. Bu makale, 1974 sonrası Kuzey Kıbrıs'ta sanat eserleri ve sergi alanlarını keşfetmeyi amaçlamaktadır ve bu dönemde Kuzey Kıbrıs'ta kurulan eğitim kurumlarının sanatsal çabalarına vurgu yapmaktadır.

Anahtar Kelimeler: Sergi, Alan, Tasarım, Müze, Sanat.

Introduction

In the historical process, artistic content, socio-political factors, and changing technological developments have changed, and the adaptation of exhibition spaces to this has also changed in parallel with the historical process.

The word "exhibition" in the Turkish Language Institution dictionary is defined as "a collection of things arranged for the viewer to see and choose, and the place where these objects are displayed," "products and artworks arranged in a suitable way for the public to see and get to know," and "a place where the specific agricultural, industrial, etc., products of a place, a country, or various countries are exhibited to promote them in an appropriate way" (NND, 2023).

In all three definitions, the need for "suitability" and "organization" that can prepare the ground for the viewers, or "spectator's," preference and mutual need for suitability and organization

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mentioned here is parallel to the creation of the right communication is emphasized. This atmosphere to understand/appreciate the content of artworks.

According to Çiğdem Demir, who asserts that this need for exhibition and its reasons stem from an instinctive impulse, defines exhibition as follows: "Exhibition is the act of showing, presenting, proposing, and revealing objects or works; Velarde answers these questions with 'having something to exhibit and a story to tell.' (Dernie 2006) states that exhibition is an activity inherent in human nature, pointing out that every individual's home is actually an exhibition area, and individuals exhibit objects to provide information about themselves, their lives, and their needs" (Demir, 2009).

In the historical process, artistic content, socio-political factors, and changing technological developments have changed, and the adaptation of exhibition spaces to this has also changed in parallel with the historical process. In this study the universal design principles will be used to evaluate the exhibition spaces.

Research Questions/ Hypothesis:

Within the objectives and goals of the study, the aim of the study is to examine developing and changing museum design history, modern approaches of space design principles, and analyse latest museum design example of Art Museum in North Nicosia through observation and to offer suggestions. Space design is not efficient itself to create full perception for viewers, but it should be considered in an interdisciplinary approach. Hence, it is suggested to evaluate the design criterias as space design (including infographics), exhibition design and lighting design should be considered together. The following fundamental queries were addressed within the purview of this study:

1.   What is the design principles that shapes contemporary museums?
2.   How space design, exhibition design and lighting design should work togheter?
3.   What are the latest applications/trends in North Cyprus on museology?

Literature Review

The historical process that began with the rise of religious spaces in Italy in the 15th century during the Renaissance, becoming important buildings that exhibit art, saw the first examples of exhibitions due to the interest of the new bourgeoisie, which emerged as a result of merchants setting out to explore new trade routes brought by the Renaissance, and their economic advancement over time. The collections acquired by noble families and their openness to the public, as well as the exhibitions organized during this process, can be counted as examples. In this sense, Palazzo Medici See Figure 1, built by the Medici family in Florence in the 1440s, can be considered the first modern museum in Europe. Following this, the exhibition space where Vasari organized the private collection of the Medici family at the Uffizi Palace's 2nd floor See Figure 2 can also be considered the first exhibition space in the historical process up to the present day (Çolak, 2011).

Figure 1. Palazzo Medici Exterior (Günal, 2016)

Figure 2. Palazzo Medici Interior (Tuscany, 2023).

In the 18th century, with the abandonment of monarchical regimes, royal palaces turned into exhibition spaces, and royal archives became exhibitions that filled these spaces or new spaces organized in this sense. The best examples of these are the Louvre Museum in France and the British Museum in England. The new way of life that started with the Industrial Revolution before the 20th century influenced art and, consequently, exhibition space designs. However, this approach before the 20th century was generally based on the principle of collecting, preserving, and exhibiting artworks in chronological order, and the priority of space design was not visible in these spaces. The "Salon de Refuse" exhibition See Figure 3, which showcases the artworks of rejected artists in a public exhibition with special permission, can be called alternative spaces that bring artworks to the public independently, providing information about themselves, their lives, and their needs. (Demir, 2009) The understanding of modern art in the 20th century, unlike traditional art, requires a specific intellectual background, necessitating the correct alignment with the audience. Traditional art, being a product of shared common culture (religion, history, mythology, etc.), establishes easier communication with the audience, allowing it to be perceived by broader audiences. The first challenge faced by modern art in this context was the exhibition called the "Armory Show," held in 1913 in America. This event marked the encounter of European art with the American audience, which did not yet possess the evolution and experience of European art, leading to the inevitable discomfort of American art observers with this new form of art.

Figure 3. Salon des Refusés (Refuses, 2023)

The situation that needs to be focused on from the planning stage to completion is to ensure proper communication with the audience and to create the desired atmosphere for the audience. There is no single formula for exhibition design types, and different solutions can be prepared in different situations (Kandemir, & Özlem, 2015). Therefore, considering the specific elements of exhibition spaces that will be selected for the works to be displayed before exhibitions and the exhibition types in these exhibition spaces are important for successful exhibition designs. Here, the need for exhibition design that accurately facilitates communication between the art work and the audience, ensuring the correct interpretation, becomes crucial for the audience of 20th-century art (Tokay, 2009). This need is directly proportional to the decrease in the audience capable of understanding the content provided by the artwork, which has led to a diminishing interest in art (Aybay, 2017).

The working on the planning and design of exhibition spaces, the following key points should be taken into account (Mace, 1997):

- Equitable Use
- Flexibility in Use
- Simple and Intuitive Use
- Perceptible Information
- Tolerance for Error
- Low Physical Effort
- Size and Space for Approach and Use.

Consequently, exhibition spaces and designs have undergone significant evolution throughout history, adapting to changes in artistic content, socio-political factors, and technological advancements. Successful exhibition design focuses on creating an environment that encourages communication between the artwork and the audience, enhances the visitor's understanding and appreciation of the works, and ensures the safety and preservation of the artworks (Goulding, 1999). Consideration of the specific elements of exhibition spaces and the planned types of exhibitions is essential for successful exhibition designs. In this study, space design/ exhibition design and lighting design of Günsel Art Museum will be evaluated according to universal design principles.

Methodology

This study consists of three stages. In the first stage of the method, a literature review was conducted regarding the historical development of the design of exhibition spaces and the concept of exhibition space. Within the scope of the research, books, academic studies, projects, and articles on the subject were scanned. In this study seven aspects of universal design principles such as; 'equitable use', 'flexibility in use', 'simple and intuitive use', 'perceptible information', 'tolerance for error', 'low physical effort', and 'size and space for approach and use' was used to evaluate the exhibition spaces. Nicosia, the capital of the island of Cyprus, was chosen as the main scope of the study because it is a city where art is performed most intensely, where cultural and social density is high, and has art center/museum venues. Günsel Art Center in Nicosia and Dr. Küçük museum as first example of design planning in North Cyprus were examined. The analysis of these art centers was evaluated in the context of space design. In the second stage, space analysis was carried out in the context of space research based on the selected building mass to determine the current situation. During the analysis phase, the exhibition spaces on the plans of the selected art center/museum buildings were examined in the context of their current status determinations. In the last stage, observations were evaluated in the findings section of the study in order to determine the relationship between exhibition space designs and art designs.

Results and Discussion

Results

The history of Turkish Cypriot art, it is rooted in artists who completed their education abroad at the beginning of the 20th century. During the Ottoman period, there is no evidence of the existence of Turkish Cypriot artists through research. Towards the end of the 19th century and the beginning of the 20th century, some Greek Cypriot artists attracted attention with their Impressionist-style works, including copies of Renaissance paintings during the British Colonial period. Turkish Cypriot artists emerged on the Cyprus art scene around the mid-20th century (İnatçı et al., 2005). However, the national aspirations of Greek Cypriots in the 1930s, who wanted to break free from British colonial rule, ignited events that would influence the social and cultural lives of both communities for more than half a century. The increasing pressure and policies imposed by Greek Cypriots on Turkish Cypriots after 1950 led to the foregrounding of the struggle for survival and existence in Turkish Cypriot art, philosophy, and intellectual development (Kaymak, & Faustmann, 2009). With the 1960 agreement, the two communities found their place in the modern world and became a rising value in the Eastern

Mediterranean. The presence of 25 museums and 24 cinemas and theaters in Varosha (Maraş), which is currently uninhabited, is an example of cultural and artistic development. However, the tension between the two communities continued after the 1960 agreement and lasted until the 1974 peace operation, hindering the development of the Turkish Cypriot community in all areas. Examining Turkish Cypriot modern art, it can be said that artworks with aesthetic concerns have emerged in the last 30-35 years (İnatçı et al., 2005).

I addition, the universities established in the north of the island as a result of economic policies after the declaration of the Turkish Republic of Northern Cyprus in 1983 paved the way for intellectual development. The support of academics working within the university has greatly contributed to the development of museology and exhibition design in Northern Cyprus. The graphics and exhibition arrangements designed by Dr. Gökhan Okur (see figure 4), an instructor at the Faculty of Fine Arts of Near East University, for the Dr. Fazıl Küçük Museum, serve as an important example of well-planned exhibition and informative design, highlighting the positive contribution of well-planned ergonomics criteria to visitors' experiences.
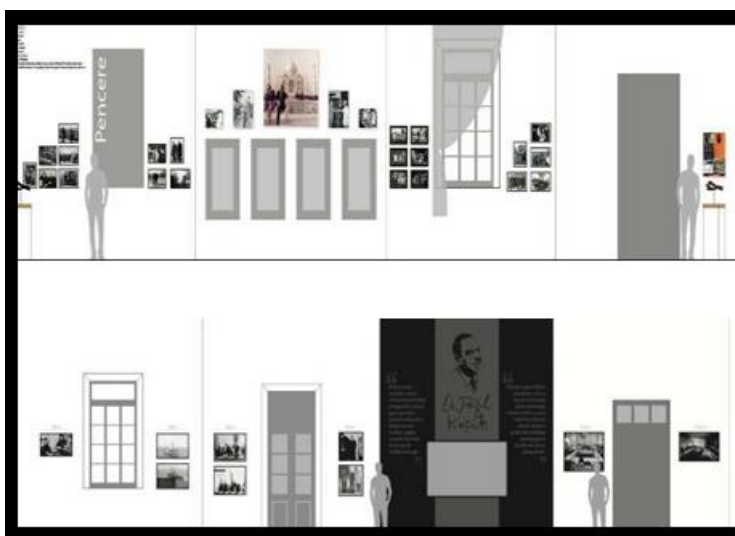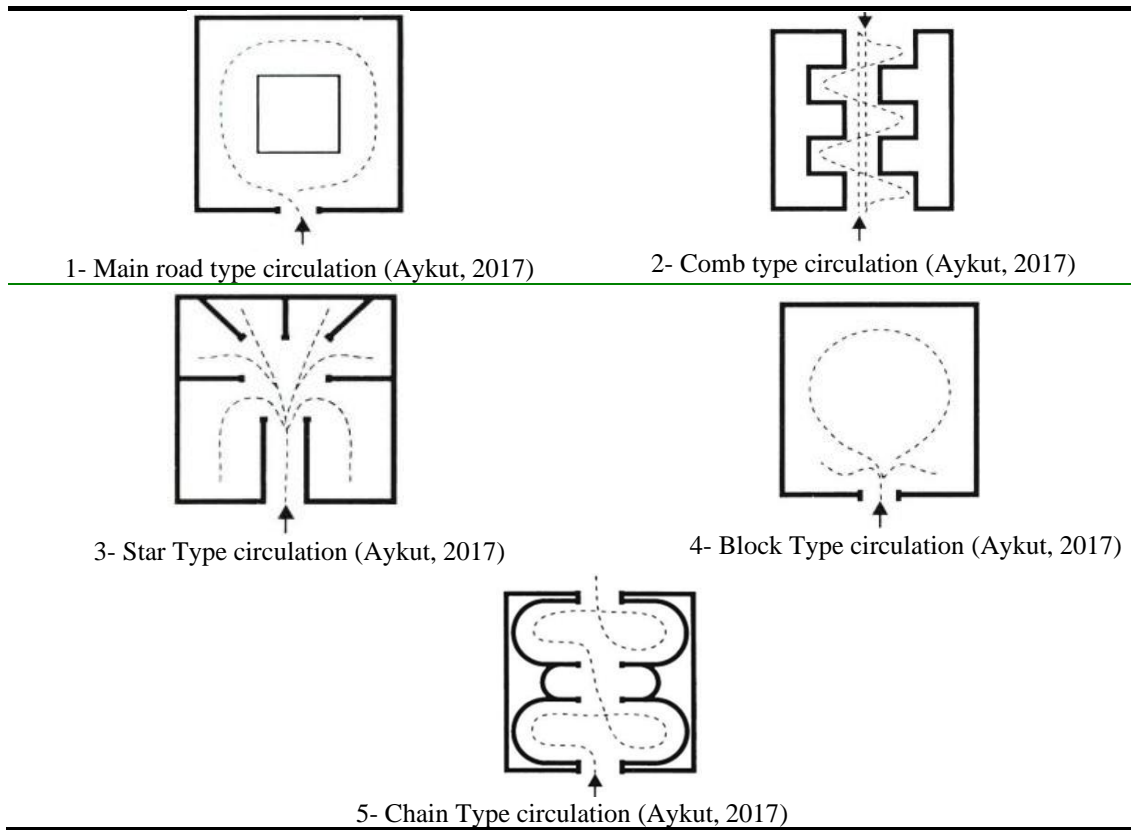

Figure 4. Dr. Fazıl Küçük Museum infographics (Okur, 2019)

At the same time, Near East University, one of the universities on the island, has made significant strides in museology, organizing exhibition openings for the collection of the Cyprus Modern Art Museum, which is still under construction. The upcoming Günsel Art Museum also serves as an example of Near East University's investment in the development of art on the island with a contemporary museological approach.

There are various formulas for touring museum areas and determining potential trends. This system varies depending on the layout and content of the exhibition area. In organizing the exhibition area, an access graph suitable for the layout is prepared, and visitors' possible trends are evaluated based on this graph. Züleyha Aykut suggests five possible graphic proposals for these circulation Patterns (Kaymakçı, S., & Sever, İ. A. 2022; Aykut, 2017). See Table 1.

Table 1.
Circulation types (Aykut, 2017)

1- Main road type circulation (Aykut, 2017)

2- Comb type circulation (Aykut, 2017)

3- Star Type circulation (Aykut, 2017)

4- Block Type circulation (Aykut, 2017)

5- Chain Type circulation (Aykut, 2017)

After examining the circulation types graphics, it is understood that the most suitable type for the current layout of the Günsel Museum is the star-type circulation. The museum, designed on the ground floor, shows a distribution towards the exhibition areas from the central point accessed by stairs. See Figure 5. To make this circulation type operate more efficiently, infographics and way finding signs can be added to the existing layout to facilitate the audience's navigation.
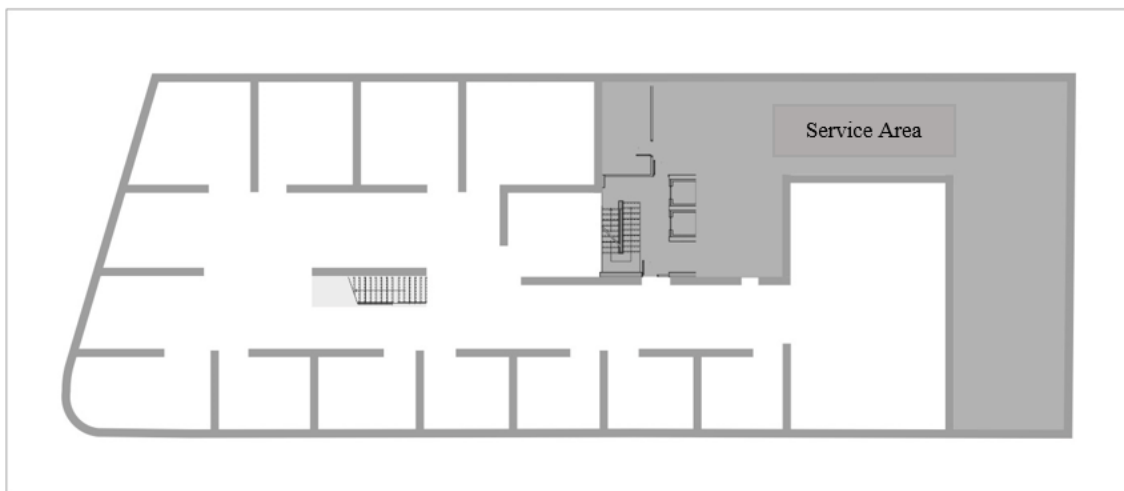
Figure 5. Günsel Art Museum, Ground Floor Plan, Scale 1/50 (Ergün, 2023)

Direction and information graphic applications in the museum, which has 15 exhibition areas, had designed by Prof. Erdoğan Ergün, the head of the Graphic Design Department of the Faculty of Fine Arts and Design at Near East University, who is also the director of the Günsel Art Museum.

It is observed that the directional and informational graphics are designed according to universal design principles, allowing the viewer to have an easier and more perception-oriented visit in terms of the 7 points mentioned earlier. Exhibition spaces are not perceived as ordinary places, part of daily life, but rather as spaces that open the door to another world. This is because the artworks they contain or display are also like that. Richard Leppert describes images in his book "The Sight of Meaning in Art" as follows: "Images show us not the real world but a world from worlds. Images represent these things; representation, that is, re-presentation. Indeed, the things represented by images may not be in "reality"; they may only exist in the world of imagination, fantasy, desire, dream, or fantasy" (Leppert, 2002: 14). Inviting the viewer into this world and enabling the communication between the viewer and the image presented as part of this world will only be possible with the right creation of the atmosphere of this world. The communication of art depends not only on the artwork and the viewer but also on a time/space need (temporal and spatial). In other words, displaying art requires a specific space and time.

The lighting units, which are crucial for all these conditions, are observed to be designed in accordance with contemporary museology at the Günsel Art Museum. The lighting units that are effective in perceiving the artworks offer a two-stage lighting design with main lighting illuminating the main lines during exhibition circulation and portable spotlights revealing the artworks more. See Figure 6. Thus, viewers can find their way between exhibition areas and gain a better understanding of the artworks, allowing people of all ages to perceive the artworks more effectively. Therefore, by establishing the right communication between the artwork and the viewer, the content of the artistic message becomes more understandable.


Figure 6. Lighting units in Günsel Art Museum (Günsel, 2023).

The analyses conducted reveal that the museum's lighting design, spatial layout, and exhibition methodology possess qualities in harmony with universal design principles explored in the literature review. Additionally, the strategic placement and design of info graphics and directional elements within the space will guide visitors in finding their way and exploring the artworks, enhancing the quality of their visit. Consequently, when appropriately implemented, these elements will transform the space into a holistic environment functioning effectively in every aspect.

In this context, the large wall marked in purple (which welcomes visitor at the entrance) on the museum plan provides information about the general museum circulation. The numbering method to be used in the yellow areas will guide visitors in navigating the exhibition spaces.
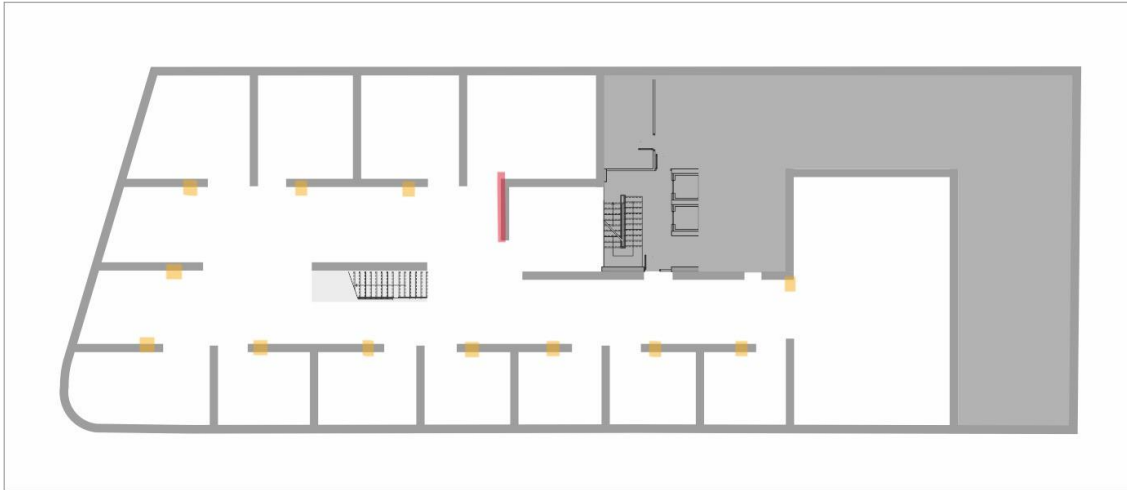
Figure 7. Günsel Art Museum suggested info graphics and number plates (Author, 2023)

■ Info graphic   ■ Number Plates for exhibition rooms

Discussion

Regarding to the research questions mentioned in introduction, some points can be discussed as outcomes of the analysis. In the context of contemporary design principles, museum design is characterized by an interdisciplinary approach that incorporates education and research on a global scale. In this sense, various disciplines such as graphic design, interior architecture, architecture, art history, museology, and ergonomics collaborate in a cooperative effort to create modern museum spaces. The easy perceptibility of informational graphics, along with the support of illumination for exhibited works, museum spaces, and guidance, is a crucial indicator of the necessity for collaborative efforts in exhibition design and lighting design. By aligning itself with the trends that have been developing and implemented worldwide, North Cyprus has simultaneously made significant progress in the field of modern museology. The experience gained from these initial implementations foresees an improvement and advancement in the near future.

Conclusions

The educational institutions established after 1974 play a crucial role in the education of art students, directing and supporting the students in academic research, and thus contributing significantly to the discussion and adoption of art in society. Especially over the past decade, the symposiums and workshops organized by these institutions and artists, showcasing artworks produced and exhibited during these events, can be cited as examples of increasing awareness. In the context of this research, a temporary modern art museum established within the Near East University in the last 15 years, a city museum, and ongoing construction of the largest modern art museum in North Cyprus, alongside the Günsel Art Museum, serve as examples of the contributions of these educational institutions. Simultaneously, ongoing art production is regularly visited by the community, academics and students affiliated with the institution through monthly exhibitions. Artworks created for significant days in the collective memory of society and special exhibitions also serve to refresh cultural memory. In this regard, the cultural expression of art meets with artists from different countries, enhancing diversity and contributing to the cultural richness of the Cypriot community.

As observed in the examples of the Dr. Fazıl Küçük Museum and the Günsel Art Museum, the steps taken in contemporary museology with the contribution of experts in the field are indicators that global practices are approached in museology in Northern Cyprus. The efforts made to participate in international competitions every year and the effort to be present in these competitions are inevitable results of all these initiatives, indicating that Northern Cyprus will participate in the race in terms of artistic activities in the future and can be a visible cultural showcase.

Art, in all its branches, is the most important influence reflecting the cultural language and history of a society. The more developed the visual memory in art in a society, the higher the culture and welfare level of the society will rise, and it will gain an equivalent position among modern civilizations.

In addition, academic-based cultural initiatives and initiatives, over time, become part of everyday cultural cycles, nourishing the society. Especially, activities carried out in places where the public frequently visits not only bring the culture of the North Cyprus to the international platform but also integrate into the visual culture of the people of North Cyprus, encouraging and educating future generations to undertake more comprehensive initiatives.

Recommendations

Based on the analysed data from this study, there is a need for info graphics to be added to the museum space and a numbering system to ensure proper circulation. It has been observed that in European practices, layers and colour systems are considered for museums. Integrating the most suitable system determined by graphic designers into this museum would be beneficial in making the museum more conducive to a comfortable visit. The determination of these recommendations through collaborative efforts of the appropriate disciplines is the subject of future studies and research.

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Mind maps to boost the learning of English as L2 at higher education institutions in Ukraine

Ментальне картографування у стимулюванні вивчення англійської мови як іноземної в закладах вищої освіти України

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**Mykhailo Rakhno[5]**
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Abstract

Mind mapping is a powerful tool for teaching English as a foreign language, particularly in the context of learning and mastering English as a second language (L2). Visualizing the content contributes to a more effective memorization and error-free reproduction, even after some time. In the Ukrainian pedagogy, the didactic potential of "cognitive graphics" and specific means of its implementation calls for deeper studies and systemic representation as the concept itself is a multi-disciplinary phenomenon on the intersection of neuro-/psycholinguistics, psychology, theory of language communication, cognitivism, and web-design. That is why the aim of this work is to ascertain the essence of mind mapping as powerful means of teaching and learning English, to show its relations with ICT in designing an effective set of academic tasks and stimulating the student's digital competence. The innovative character benefits

Анотація

Ментальне картографування є потужним інструментом у навчанні англійської мови як іноземної. Проведене дослідження засвідчило, що його застосування як інноваційного методу в ЗВО України на основі інформаційно-комунікаційних технологій підвищує ефективність освітнього процесу. Використання ментального картографування оптимізує зусилля українських студентів у роботі з інформаційними масивами для вивчення англійської мови. Візуалізація контенту сприяє чіткішому його запам'ятовуванню й безпомилковому відтворенню з плином часу. В українській педагогіці дидактичний потенціал "когнітивної графіки" та конкретних засобів її репрезентації вимагає прискіпливого вивчення й системного представлення, а саме поняття є суміжним явищем, перебуваючи на перетині нейро/психолінгвістики, психології, теорії

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the perception, and thus, the interiorization of the course content, increases the academic performance of students and their confidence in their abilities providing internal motivation for further work. As a result, the student's self-assessment receives additional clarity, communication in L2 gets extra motivation, critical analysis skills and soft skills develop better creating a sturdy foundation set of skills for a highly professional graduate from a Ukrainian university.

Keywords: associative scheme, interactive tool, cognitive graphics, mind mapping, Ukrainian higher education institutions (HEI).

мовної комунікації, когнітивістики та вебдизайну, у межах кожної з цих галузей реалізує спектр відповідних функцій. Саме тому мета роботи – розкрити сутність ментального картографування як потужного засобу викладання / навчання англійської мови, показати його зв'язок з ІКТ для підготовки ефективного комплексу навчальних завдань та стимулювання цифрової компетентності студента. Інноваційність упровадження ментального картографування в навчанні англійської мови в ЗВО України покращує сприймання, а отже, засвоєння контенту курсу, підвищує академічні досягнення студентів, посилює їхню впевненість у власних силах, що слугує внутрішнім тригером подальшої роботи: чіткішим стає самооцінювання здобувача освіти, мотивованішою – комунікація із застосуванням іноземної мови, швидшим – рівень та ступінь формування навичок критичного аналізу, а також м'яких навичок як рис висококваліфікованого випускника ЗВО України.

Ключові слова: асоціативна схема, заклади вищої освіти України, інтерактивний інструмент, когнітивна графіка, ментальне картографування.

Introduction

The post 2000-s higher education sphere in Ukraine has been significantly determined by the impact of digital technologies due to immense volume of the course content as well as increasing requirements to the Ukrainian university graduate (Rakhno & Shramko, 2021) and a future specialist (Kulichenko & Polyezhayev, 2020). In the age of intense information flow, when the amount of data obtained grows exponentially and the core problem is to master it effectively, not everyone is able to manage the proper work with insights and grapple with a problem of the content overload. The issue is particularly acute for students of the Ukrainian higher education institutions, whereas they are the contingent that need as much new information as possible for self-development and self-assessment on the way of becoming a highly qualified specialist, sharpening their skills of critical analysis, deepening the ability to navigate the continually variable world of science correctly and quickly.

The purpose of the given research is to make deep analysis of mind mapping as an innovative method of teaching and learning English as L_2 in Ukrainian tertiary education institutions. It aims to outline its connection to human's ability to

visualise the information due to ensure better memorisation.

The described aim involves implementing the following tasks:

- to describe the specific features of mind mapping as a special way of structuring information by the human brain;
- to specify the concept of "cognitive graphics" and types of its implementation for learning tasks;
- to outline how visualization affects perception of learning material;
- to describe the impact of implementing the method of mind mapping in teaching English as a foreign language at the Ukrainian higher education institutions.

Theoretical Framework

Learning English as L_2 within the cognitive theory must be a consciousness-based and reasoned thinking process. Students acquire a whole set of data via L_2, i.e., encode details to be processed and relate it to knowledge in memory, store new data and retrieve it when needed (Schunk, 2012). University students as

information handlers in L_2 face challenges on the problem how to make interlinks between intellectual and emotional concepts in native and foreign languages. Nowadays the innovative methods use several new tools helping to simplify processing the information in the brain. Mind mapping is among the most powerful ones, functioning as a graphical information transfer tool used in the process of thinking presented in a convenient perception form of association schemes. It also might come as a multi-coloured and image-centred radial diagram (Eppler, 2006) that hierarchically represents semantic or other connections between parcels of learned material.

The essence of mind map approach primarily was introduced in the "Use your head" research by T. Buzan (Buzan, 1984) which once made him one of the brilliant students at the University of British Columbia. Those students with whom this scientist optionally studied also gained remarkable results, whereas those who were lagging, noteworthily fostered their academic performance after implementing the cognitive cards approach.

In the digital era mind map is profoundly embedded into the investigation of intelligent agents based on cognitive architectures, serving a pre-requisite to a cognitive systems' toolkit. Such cognitive architectures contribute to understanding the interaction mechanism of cognitive processes, constituting "a special niche in the development of AI systems, endowed with mental capabilities, such as perception, attention, memory, reasoning, learning" (Marques et al., 2022). Therefore, mind map appears to be an effective tool of cognitive graphics underlying, f. i., scientific visualization that "merge information and graphics to produce appealing images of data that boost a person's ability to quickly consume and understand content" (Smiciklas, 2012). Nowadays cognitive graphics presents a new branch of human acquisition, integrating "cognitive science, computer graphics, psychology, graphic design, education, science and many others depending on a sphere of application" (InfoScipedia, 2023). Cognitive visualization within the theory of multimedia learning performs a complex process that includes some mental activities, whereas the process of learning (Mayer, 2002) in turn consists of three subsequent stages. First and foremost, visual images are perceived by the eyes. Secondly, students deal with some aspects of the visual image in working memory. Following the construction of series of mental images, they arrange the set of images into a coherent mental representation called a pictorial

model. The latter involves selection, organization and integration of figures and is commonly referred to as visual-spatial thinking. The mentioned above theory of multimedia learning is related to a constructivist epistemology of learning, under which students diligently develop their own understanding of the world, rather than get such understanding delivered to them. Such an outlook requires students to be active participants in the learning process rather than to merely absorb information entirely presented to them (Mnguni, 2014).

Cognitive visualization as an utterly multi-dimensional function of human consciousness plays a vital role in formation and activation of personal potential in learning subjects. Within a visualization which makes the meaning visible a student has to mobilize resources of figurative and logical complex thinking as well as the aesthetic-cultural artistic feature and other important personality traits and qualities.

Up-to-date visualization objects have become scientific formulas, logic-symbolic models, technical functional and structural schemes as well as a range of didactic tools, allowing to manipulate the properties of objects in the internal and external extents. To create visualization products, the evidence of external prototypes might not be necessary due to the autonomy of internal images related to the object. Reflection of visualization process has its base in abstract imagination which formalize the original image. The cognitive visualization results in an image formed by the conscious thought that defines an unknown object / phenomenon and represents in the external plan of the educational activity. Therefore, the key tasks of cognitive visualization become development of ways and means of purposefully creating thought images within the educational process.

Cognitive visualization has certain properties that significantly affect the degree of activation, increase dynamism of mental systems and educational activities on processing and assimilation of knowledge. The first property of cognitive visualization lies in a quality of knowledge concentration. Being the core of intensification of the educational process, it suggests an increase in the density and saturation of information presented to students. In a diachronic plane, visualization, especially cognitive, has been "an integral part of man's investigation of the world" which significantly contributed "to invention and discovery", while modelling functions as a "flexible, recursive process which is dependent on the individual

practitioner, the practitioner's skill level, and the modelling task" (Crapo et al., 2000). Therefore, they are of the utmost value in the educational process in the tertiary education institutions. We can attribute to enlargement of didactic units of such an educational activity as an integration of specific approaches to learning which is implemented in reliance on an associative mechanism.

The quality of cognitive visualization to knowledge concentration is embodied in compression learning, a technological method of educational activity, a solution to the issue of educational content accelerating increase. It allows lecturers to blend "the most critical learning concepts in each individual course and boost their relevancy and comprehension for the student without losing any of their relevant qualities" (Allard, 2013) by means of teamwork, brainstorming, as well as integration of new courses (f.i., ethnography, anthropology, psychology, sociology) into the educational process.

The essence of compression learning can be exemplified by a brief excerpt that presents a visualization constructed by replacing text data with reference signals, ranging the details via the method of associative information coding. It is highly valuable in mastering L_2, though tends to be a challenge among students who experienced "confusion, frustration and stress" (Allard, 2013), solved by careful lecturer-student interactions.

The second property of cognitive visualization is generalization of knowledge, performed as reduction of the essential semantic core, revealed in details, which helps to optimize huge amounts of data in a short period of time. Operating basic methods of analysis and synthesis, student can perform content reduction, highlighting the core concepts of the given material, and reveal inner interlinks between the latter as a theoretical image via mental operations. As a result, it deepens students' ability to quickly evaluate the content on the course, promoting rapid task understanding, but, simultaneously, lowering the limits of quantity of exercises performed, therefore "multitasking limits are the price we pay for behavioural flexibility" (Garner & Dux, 2023).

The defragmentation of the given data also derives from analysis and synthesis as an ability of human brain to parcel structures on the logical-semantic as well as on syntactic levels of speech organization, resetting the item in reverse.

Working out the excerpt consequently leads to the possibility to unfold the information, reflected in specific images. It also opens the perspective to a student to interpret content and establish associative links. A special function of human abstract thinking is construction of a semantic research space providing the possibility of experimenting with arbitrary formation of conceptually figurative constructs of the model of an investigated object. At the same time formalization of the results of thinking is displayed in exact concepts and statements, thanks to which information has been provided on the core of the object and its structure / properties. The task of forming a logical idea of the studied concept in the form of a semantically connected system, effectively perceived, and fixed by brain, finds its realization due to a certain design, the table of the structurally logical scheme, radially concentrated graphics.

According to C. Carter and H. Hamilton (Carter & Hamilton, 1995), knowledge generalization refers to "the replacement of specific attribute values found in the data with more general concepts" from concepts hierarchy, defined by the user.

Thus, optical visualization of data marks an ultimately powerful cognitive means, which broadens human abilities. Computer-based representations gained popularity because they provide peculiar computer-human interconnection (Steichen & Fu, 2020). Simulation, a particularly efficient interactive tool, reveals potential of didactic transformation under the study terms, forming changeable settings like reality. It can be defined as "the representation of an object, a natural or social phenomenon by software" (Bellou, 2009), that outlines feedback and therefore motivates students to self-assessment and self-development.

Desire to soften the statistic character of most didactic visualization tools necessitated the study of achievements of neurophysiology. According to the data analysis in the field of world perception by visual organs, the eye, particularly its retina, picks up an object when it is in a moving state or when it is changing. The dynamic phenomena are tracked easily and do not require special explanations. To maintain the statistics and dynamics of the object in consciousness, the nature created a particularly active organic mechanism that made the organ of vision mobile, or rather the specific structure that makes it up.

Due to the associative mechanism, the human psyche works better if the system of visual means of representing external information is supported by the entire range of expressiveness and pictoriality means. In this case information has been enriched and visual channel can translate this increment to the brain adequately and quickly in comparison to the verbal channels. Building a system of visually conceptual aesthetic and emotionally coloured coding will contribute to improving interaction between internal and external plans, as well as supporting and enhancing students' learning activities.

Thus, a mind map is a "powerful graphic technique which provides a universal key to unlocking the potential of the brain" (Buzan & Buzan, 1996). Based on a hierarchy and classification of information, mind map represents the way of thinking. According to the researchers, there are four essential characteristics to be mentioned as follows:

- the subject of attention is visualized in the central image;
- the main themes of the subject radiate from the central image as branches;
- branches comprise a key image or key word printed on an associated line. Less important topics are also represented as branches attached to higher level branches;
- the branches form a connected nodal structure (Buzan & Buzan, 1996).

To understand how mind map works the features of human brain functioning should be analysed. Thinking is associative by its nature. When new information is presented to us, associative neural connections arise. Our brain relates existing knowledge to what we have just received and connects it; brick by brick builds a unique path from the already known to the new knowledge (Buzan, 1986). When a person thinks, they engage the entire branched neural network. We work with information nonlinearly, associatively because of our brain structure. Cognitive maps resemble the brain itself in its structure. Information consists of various chains, associative links.

Some researchers (Genesee, 2000; Jensen, 2008) argue that foreign language learning involves two hemispheres of the brain. The right hemisphere is responsible for imagination, colour, mindset, and holistic perception. The left hemisphere operates with numbers, being engaged in logical tasks, analysis, speech generation. Consequently, when any cognitive maps are created, the information is depicted so that both hemispheres work, which makes thinking process more efficient. Numbers, verbal information has closely been intertwined with pictures, various colours. Any idea of radiant human thinking can develop almost indefinitely. The process of mind mapping begins with a central idea – a key problem, which, as a rule, has its location in the centre or at the top of the sheet. After brainstorming you become aware which of the discussed categories are key and most directly related to the underlying problem. If the categories seem too abstract, you are recommended to attach an image to them, which will help to make the categories more specific. At the second level, development of the basic idea takes place. There are ramifications and numerous connections. The problem unfolds, presenting its essence. The third, generally the final, level gets its creation precisely after the whole completion of the second one. Here is the widest scope for creativity. For a sufficient specification of ideas, they recommend using additional means of mind mapping: notes, callouts, inter-element pointers (Buzan, 1984).

In fact, the mind mapping changes boring information, intended to be memorized, into a colourful and clearly organized picture, helping to raise "bridge" between new and already known data. Generating a mind map, a set of instructions is to be followed in succession:

- a sheet of paper is put horizontally;
- the basic idea lies in the main question to consider;
- the branches of the diagram become thinner as you move away from the central problem;
- each branch should be signed with a keyword that would help to memorise a whole scheme after a certain period;
- any mind map is focused on the result: solving the core problem (Buzan, 2005).

To create a diagram, one should arm themselves with paper and markers. However, if a classroom is sufficiently computerized, it is more appropriate to use diverse applications (such as MindApp, MindMeister, XMind, Pro3, MindView, SpiderScribe etc.) when structuring thoughts. They allow to share charts with other students in a group, to add new items and move them with the help of a single mouse click on the computer. If written correctly, mind map becomes one of the most powerful tools a lecturer uses to achieve creative success. Some of modern infographic designers propose a new advanced idea of computer mind mapping – organic mind mapping and give some valuable pieces of advice as for making the mind map on

the computer screen. The operation of mind mapping generation involves seven steps.

Step 1. Start your mind map with an eye-catching core idea image. Using specific image will stimulate different associations and make it more memorable.

Step 2. The branches of your mind map are to be curvilinear and organic. They will draw the students' attention faster compared to traditional branches because organic lines reflect our natural process of thinking.

Step 3. Modify your colour scheme to suit your ideas and tasks. Try to combine colour, style and mode of your mind map in a successful integration so that you can find any branch without difficulties. Don't forget that your creativity should not interfere with clarity of content, but rather should enhance understanding of the subject.

Step 4. Your mind map will gain more brightness and clarity if you add felicitous images to it. Images aid your cortical skills, automatically boosting your memory and creative thinking power whilst helping you represent key themes and spark ideas.

Step 5. Scientists insist on using only one pivotal idea per branch and avoiding long phrases or sentences for it will work as a "little supernova" of ideas. Such an approach stimulates the appearance of new thoughts so that the stream of creative thinking will be almost unlimited.

Step 6. The technical facet of the issue. A developer of the mind map can vote for the most valuable and successful ideas by hitting the thumbs on the icon. If you share your key ideas with others, they can easily assist you in highlighting the brightest of them and eluding those ones which are too much of a good thing.

Step 7. The most progressive step in a set. An idea remains an idea until actioned. So, you should provide an appropriate task or some assignments within each branch. Students will be able to show the level of their understanding in practice.

Appropriate usage of the specialized applications in the educational process, f.i., at higher education institutions, "takes your mind map to the next level by turning your idea directly into actionable tasks that you can track and manage from start to finish, from collaborating with your team on ideas to grouping related ideas into categories. It boosts memory, improves productivity and expands creativity" (AYOA, 2023a).

Another valuable point of this educational method implementation is forming a deeply profound "bank of ideas" via a specialised digital tool, particularly, one can use Organic Mind Map. It accumulates the creator's "stray thoughts" and doubtful ideas and allows sharing them with other participants / colleagues as well as transferring any of them into an active mind map to the branch which seems highly applicable to the moment. Scientists suggest systematizing mind map by creating categories around each branch via singling out the key spheres of the map, defining the analogies and interconnections between crucial themes and thoughts.

"Inspired by the hand-drawn Mind Map, Organic Mind Maps <…> use curvilinear branches to support your natural thinking processes. A natural way of organising information, Organic Mind Mapping allows you to capture and expand on your ideas – for infinite and unrestricted creative thinking" (AYOA, 2023b), thus stimulating one of the essential skills of up-to-date university graduates.

It is also a strong recommendation to add some files, comprising interesting documents on the discussed topic and audio links. The step will brighten the mind map, make it deeper and memorable for every student. Supplementing different notes and detailed comments to each branch serves a useful technique whereas it helps to understand the key questions and their discussion clearly. It results in feedback from the lecturer and sharing the ideas between him and students. Using autohide is not less important and convenient. The function helps students to concentrate their mind on points by hiding away other parts of the mind map which are of minor importance at the moment. Its significant value appears in case if it concerns large complicated mind maps, thus providing an opportunity to focus on the branches needed.

Mind map developer can also apply mind map links to show ideas to other students and lecturers. It is also possible to connect branches from various mind maps which makes the creating easier and much faster. The mentioned above platform of organic mind mapping has the "show creators' function" which demonstrates whose ideas are shown or the branch of the mind map by displaying their avatar. Such a function tends to be helpful if you are eager to expand ideas. You can also export your mind map as a whole product or some separate group of specific

branches to a PDF image. Students are supposed to print it and send to co-workers, lecturers or just friends: "You can share your mind maps with anyone and everyone. Simply invite an email address to your mind map and they will receive an email invitation. Depending on the permissions you've granted them, they'll be able to view, edit, comment, and add branches to your mind map. You can also export your mind map as an image to share with others" (AYOA, 2023b).

Purpose of the Study

The current research was conducted to identify the effect and frequency of mind mapping in university students who learn English as L_2. Assessing the students' views on the factors of creativity and the process of thinking, clear answers have been provided to the following questions: 1) How did the use of mind maps affect the attitude of the students towards English classes? 2) Does mind mapping stimulate creative thinking and activity of the students?

The following hypotheses were tested:

- the usage of mind maps has positive influence on the students' interest in English as a subject;
- students believe that they become really active and motivated due to mind mapping;
- using mind maps makes students' minds creative and bright.

Methodology

Research Design

Determining the effect of mind mapping for learning English as L_2 by University students was conducted in the framework of the experimental research design. In the acquisition one group of students was chosen as an experimental group and in the process of learning English as L_2 they were proposed to use mind maps. The other group of students was chosen as a control group to compare the results with the experimental group.

Participants

The participants of the study consisted of the first-year students of two departments of Sumy State Pedagogical University named after A. S. Makarenko: Foreign Languages Department and Biology Department. The study was performed during the autumn semester of the 2022–2023 academic year. A total of 40 students participated in research. Random sampling was applied to identify the experiment and control groups. The control group consisted of 20 students (10 females and 10 males). There were 20 students in the experimental group as well (9 females and 11 males). The average age of the students was 17 in both groups (experimental and control ones). All students had English seminars twice a week.

Table 1 shows that students in the control and experimental groups had been studying the English language for the same period (11 years at institutions of comprehensive secondary education and 5 months at the University).

Table 1.
Characteristics of participants

Groups	Control group	Experimental group
Total	20	20
Females / Males	10/10	9/11
Average age	17	17
Experience of learning English as L_2	11 years 5 month	11 years 5 month

Source: (Own authorship, 2023).

Research Instruments and Procedures

The research took place between September 2022 – January 2023 involving experimental and control groups, based on two groups of two separate departments at the same University. Both groups learnt the same material and did the same assignments. The lecturer asked students of both groups to fulfil anonymous questionnaires before and after the research. The anonymous questionnaires integrated all the aspects of the study. The preliminary test had its focus on collecting general information about each student (age, gender, years of learning English, studying favourite subjects). The research was carried out with a five-level Likert

scale questionnaire with 30 statements; answers were used to control the students' interest towards mind mapping and the predictable results of using it during English classes.

Further investigation took place in January 2023 and revealed students' grades of the first semester and their own considerations concerning degree of their creativity and motivation level. The January research was carried out with the help of a six-level Likert questionnaire.

Data Analysis

For analysing the effects of mind mapping on the students' motivation and creativity, three sets of variables from the questionnaire were considered. Data analysis was done with the help of IBM SPSS v 20 software.

Sets of variables used in the research were those:

- analysing "positive influence" data, based on the categorization methodology of Szeto (Szeto & Hung, 2009);
- activity and motivation question unit;
- creativity question unit.

Data reduction methodology was used on variables of activity and motivation question unit as well as the creativity question unit. The maximum likelihood algorithm was employed to separate 3 factors with 10 variables altogether, which made possible to keep 59.17 % of their original information. The factors were assessed according to a 5-level scale where 5 was an absolute agreement with the following statement.

1. I've become more interested in English after using mind mapping.

- I feel the need to study English deeper after using mind mapping;
- English is one of the most interesting subjects for me due to mind mapping;

- Mind mapping stimulates communicative activity at English seminars;
- Mind mapping adds to my creativity at the English language seminars.

2. The facilitating effect of mind mapping (those students who think that mind mapping facilitates learning English as L_2 will score high for this factor, close to 5). This very factor consists of the following attitude statements:

- When I study English, I often use mind mapping to revise the material;
- Using mind maps helps me to make the process of a new topic learning easier.

3. The debilitating effect of mind mapping (students who consider mind mapping to be a waste of time will score high for this factor, close to 5). The following factor consists of such attitude statements:

- I would like to use mind maps as little as possible;
- Mind mapping is a very time-consuming process for me because I need to spend too much time creating mind maps.

Results

Examining answers on the first question ("How did the use of mind maps affect the attitude of the group towards the English language?") the difference between students' responses provided for the preliminary test (the end of September 2022) and the post-test (the beginning of January 2023) questionnaires in both groups was analysed, after using data reduction method with the help of questions devoted to students' attitudes towards the English language.

The results of the conducted survey showed that in both groups almost more than one tenth of the students chose the English language as favourite subject (13 % – 11 %) (Figure 1).
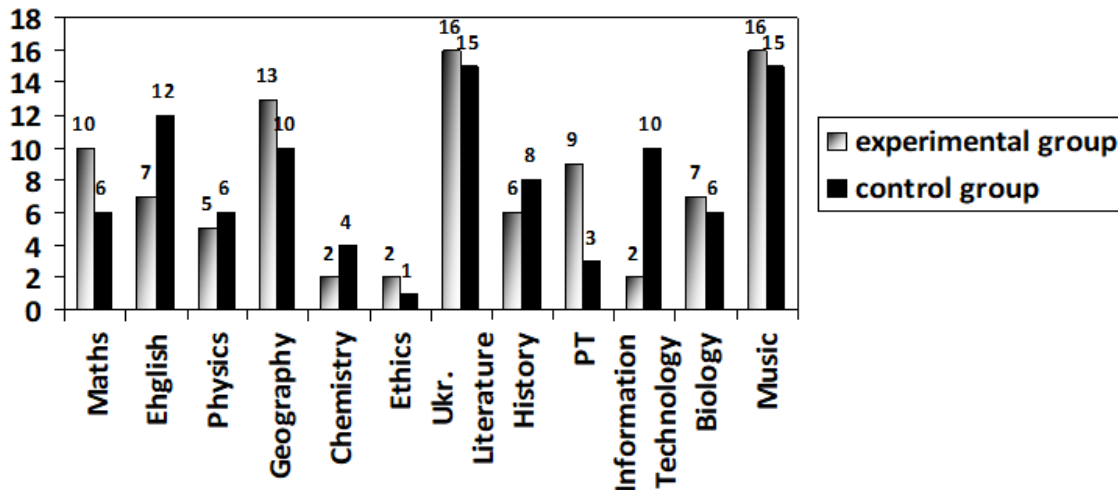
Figure 1. The most favourite subjects for the students (two groups: experimental and control ones)
Source: (Own authorship, 2023).

Thus, the difference between the September and December data is much more significant in the experimental group. Nevertheless, after using mind mapping, students' attitude towards the necessity of the English language as a subject became much more positive (Figure 2).
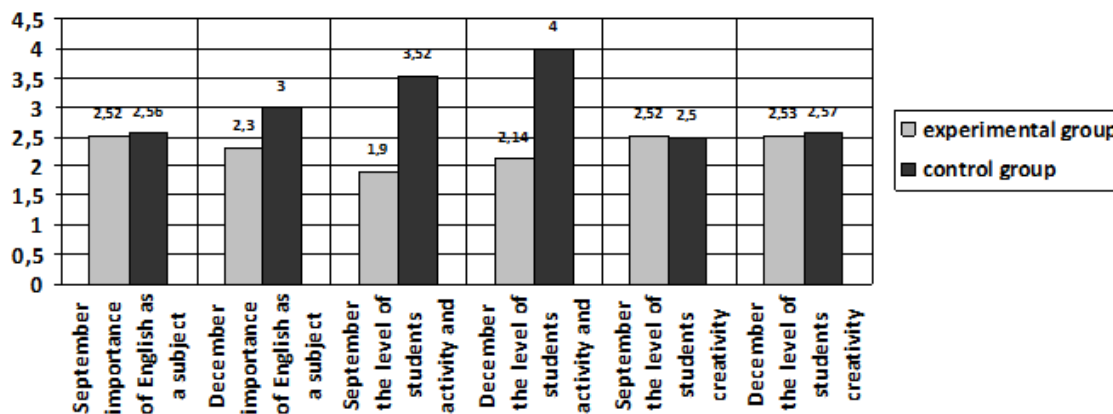
Figure 2. Average factor values in September and December in two groups (experimental and control)
Source: (Own authorship, 2023).

The second factor was focused on students' activity and motivation. If to follow changes in the averages of the experimental and control groups, it could be seen that there is a positive shift in the first and the second groups.

The third factor summarizes the level of students' creativity. There is a minimum decrease in the experimental group. It means that a small number of students considered during post-test than during pre-test on the point that mind mapping has no effect on their creativity. But in the control group the increase compared to the first value could be traced.

M. Gómez and G. King consider that "students have different learning styles and different proficiency levels. Thus, students need a logical sequence of learning in the classroom. In other words, the instruction needs to follow steps to have a sense of coherence and flow" (Gómez & King, 2014). The authors continue the discussion pointing out that the diversity of learning styles is not solely determined by students' intelligence; rather, it hinges on the extent to which the educational environment accommodates and nurtures those specific learning styles, ultimately fostering a comprehensive understanding of the material (Gómez & King, 2014).

We have analyzed students' learning styles (visual, kinaesthetic, auditory, and mixed) in relation to three factors – facilitating factors for

mind mapping, debilitating factors for mind mapping, and the significance of the English language. This comparison aims to unveil the correlations among these items, as illustrated in Table 2.

Table 2.
The connection between factors according to the students' learning styles

Students' style of learning	Number of students	Mind Map facilitating factor	Mind Map debilitating factor	Importance of the English language
Visual	20	3.80	1.72	2.85
Kinaesthetic	2	2.57	1.94	2.70
Auditory	4	2.55	2.77	2.45
Mixed	14	2.50	1.83	2.55
Total	40	2.58	2.07	2.57

Source: (Own authorship, 2023).

Discussion

The key purpose of our research was to reveal and to make a comparison of the mind mapping effects on the students' motivation and creativity between two groups of students with the same curriculum. After four months' period of mind mapping application in the process of learning English as L_2 in the experimental group, the post-data analysis exposed that a significant number of students consider the English language more interesting and useful subject than they used to think before the experiment.

The first hypothesis was proved by the data. It affirms that the use of mind maps has a positive influence on the students' interest in the English language. According to the given research we can also observe that the level of students' activity and motivation increased in both experimental and control groups if to compare September and December results of the experiment (3.52 in the control group / 1.90–2.14 in the experimental group).

Concerning the third hypothesis we can't but admit that at the end of the experimental period the experimental group showed a lower debilitating effect compared to the control one (2.55–2.54 for the experimental group / 2.50–2.57 for the control one). The debilitating effect was not very significant, nevertheless. We see much more evident positive shift in the control group. This can prove the third hypothesis connected with the creativity factor.

Considering the joint analysis of three factors suggested in the research we can confirm that using mind maps positively deals with the following aspects:

- *the attitude of the students towards English seminars.* Interactivity and visualization with mind maps make the educational process more engaging and help students dive more actively into the material. An increase in interest leads to a more positive attitude towards the mentioned seminars;
- *creative thinking.* Mind maps help to stimulate students' creative thinking. The process of creating mind maps requires them to have an analytical and creative approach to solving problems. This develops their creative abilities and helps them turn abstract language concepts into certain interesting illustrations;
- *activity of the student.* Mind maps activate the participation of students in the educational process. As an active learning tool, mind mapping allows students to participate in creating their own learning experiences. This promotes greater personal responsibility for learning and makes classes more interactive.

Furthermore, it is important to delve into the implications of the findings for educational practices, specifically exploring how the integration of mind maps can contribute to the improvement of English learning in a classroom. Several essential points should be mentioned:

- *vocabulary.* Creating mind maps for different categories of words and adding related words and synonyms to each branch helps organize and expand vocabulary;
- *grammar rules and structures.* Mind maps can have several branches with different grammar concepts as well as with sub-branches containing examples and explanations;
- *writing.* Mind maps can show how to structure thoughts before starting to write a text;

- *communication.* Mind maps can represent different aspects of the speech, which will help students systematize and express their ideas clearly;
- *cooperation.* Students can work together to create mind maps. It promotes teamwork and sharing of ideas;
- *exam preparation.* Mind maps can serve as an effective tool for preparing and revising important material.

Conclusions

Thus, our research proved mind mapping progressive enough to motivate students in learning the English language, to make them more active and interested at seminars and to promote their creativity in general. Four months of mind mapping contributed to the importance of the English language learning factor and the factors of students' creativity.

Taking into account the data analysis and the discussion the conclusions can be as follows:

a) mind mapping should be used more frequently at seminars to meet the demands of the students in more creative and interesting lessons;
b) mind mapping usage stimulates students' activity while learning English as L_2;
c) mind mapping makes the process of learning easier and clearer, thus promoting the positive academic results of all the students.

The general outcome of the activity under the thorough examination is the growth of students' accurate self-assessment of their skills and abilities. As a result, they show progress in self-development. Further investigation in this area is welcomed to provide larger and more deep research of statistical significance.

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Formation of ICT competence in future specialists of physical education and sports in the conditions of distance learning

Формування ІКТ-компетентності у майбутніх фахівців фізичної культури та спорту в умовах дистанційного навчання

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**Tetyana Koycheva[5]**
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Abstract

The article clarifies the peculiarities of the professional training of future specialists in physical culture and sports in institutions of higher education in the conditions of distance learning; the specifics of professional training of future specialists are considered; the types of distance learning, which differ in communication strategy and means of information transmission, are revealed; the features of remote and electronic learning methods for quality training of future specialists have been proven. The purpose of the article is to find out the basics of the formation of ICT competence among future specialists in physical culture and sports in the conditions of distance learning. The methodological basis of the article is a systematic combination of system-forming interrelated factors (goals, forms, and methods of pedagogical influence, principles, subjects, and conditions of the educational process, means of

Анотація

У статті з'ясовано особливості професійної підготовки майбутніх фахівців з фізичної культури і спорту у закладах вищої освіти в умовах дистанційного навчання; розглянуто специфіку професійної підготовки майбутніх фахівців; розкрито типи дистанційного навчання, що різняться комунікативною стратегією та засобами передачі інформації; доведено особливості методів дистанційного й електронного навчання для якісної підготовки майбутніх фахівців. Метою статті є з'ясувати основи формування ікт-компетентності у майбутніх фахівців з фізичної культури і спорту в умовах дистанційного навчання. Методологічною основою статті є системне поєднання системо-твірних взаємопов'язаних факторів (мети, форм і методів педагогічного впливу, принципів, суб'єктів та умов освітнього процесу, засобів навчання, змісту освіти). Обґрунтовано педагогічні умови

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education, and content of education). The pedagogical conditions for the formation of ICT competence among future specialists in physical culture and sports for the effective and rational application of distance learning technologies are substantiated.

Keywords: professional training, future specialists in physical culture and sports, higher education institutions, distance learning, types of distance learning.

Introduction

In connection with the dominance of the Internet in the world, and the constant growth of its communication and information capabilities, distance education is developing at a rapid pace. The use of distance education in the educational process of a higher school requires a qualitative analysis of the priorities of factors, a qualitative modernization of innovative technologies, the development of knowledge acquisition methods, consideration of other mechanisms that effectively affect the acquisition of knowledge by students and the work of teachers in a distance format (Tsybulko & Hloba, 2021).

The formation of the information society involves the preparation of citizens for life in the conditions of the growth of information processes and the globalization of the information space, which increases the requirements for the quality of educational training of modern specialists in the field of the use of information and communication technologies (ICT) in professional activities – the formation of their information competence (Ladyka et al., 2015).

The idea of continuous education finds its practical embodiment in all spheres of education and the professional education of physical culture and sports specialists. In the conditions of the creation of the European space, at the current stage of higher physical education, the main development for the quality of an individual's life is the improvement of the quality of training of competitive specialists in physical culture and sports with a high level of professionalism, professional knowledge, and competitiveness. Open distance education is one of the effective forms of high-quality higher education aimed at meeting the educational needs of young people, and the development of online courses is facilitated by the availability of the Internet (Chukhlantseva, 2017).

формування ікт-компетентності у майбутніх фахівців з фізичної культури і спорту для ефективного й раціонального застосування технологій дистанційного навчання.

Ключові слова: професійна підготовка, майбутні фахівці з фізичної культури і спорту, заклади вищої освіти, дистанційне навчання, типи дистанційного навчання.

All this poses fundamentally new tasks for the teaching staff and presents increased requirements for material, technical, and methodical support of the educational process, forms, and methods of training future specialists in physical culture and sports. Therefore, at the current stage, special attention should be paid to the quality organization of the educational process in institutions of higher education, in particular, to the implementation of distance learning in the training of future specialists in physical culture and sports.

Literature Review

According to the leading experts in the field of informatization of education, today the capabilities of information technologies significantly outstrip the practice of their effective use in the educational process. If there is already some experience in certain disciplines (economics, physical-mathematical, technical, and informatics), the results of applying the achievements of modern ICT in humanitarian specialties, including physical culture and sports, look significantly more modest or are absent at all. This is because teachers and students in the specified subject areas do not know the tools and methods of informatics well enough and do not imagine its rapidly growing possibilities.

I. Samokhvalova, & S. Kharchenko (2022) summarized scientific research in the field of physical culture and sports, determining the peculiarities of motor activity, physical capacity, the necessary level of physical health of future specialists in physical culture and sports, and proved the influence of the direction of future professional activity on the development of motor skills of students; showed the importance of developing the endurance strength of education seekers.

I. Kryventsova (2020) devoted her research to the search for effective ways and methods of

engaging students in distance education to physical exercises; outlined the forms and topics of distance learning in physical culture and sports, assessed the activity of education seekers during distance and face-to-face learning; determined the place, role, and distance learning opportunities in physical education and sports for students and teachers.

N. Terentieva (2019) analyzed the current state of distance education in the process of professional training of specialists in Physical Culture and Sports and Secondary Education (Physical Culture); for professional training of future specialists presented the negative and positive aspects of the implementation of distance education, taking into account the specifics of the region and the characteristics of the student contingent.

S. Lazorenko (2021), a solution to the problem of forming an information and digital culture for future specialists in physical education and sports was proposed in the conditions of distance and mixed learning; in the conditions of distance and mixed learning, the practical issues and theoretical foundations of the formation of the information and digital culture of the future specialist are substantiated.

L. Tsybulko, & H. Hloba (2021) highlights the features of distance learning and shows the features of the organization of the educational process of future physical culture and sports specialists in the conditions of quarantine and certain restrictions regarding the full-fledged educational process in higher education institutions; emphasis is placed on mobility, flexibility of education, adequacy of analysis and adaptation to new situations, and use of existing skills, abilities, and knowledge with modern information technologies.

O. Dubovoi, V. Babych, V. Dubovoi, V. Zaitsev, S. Haliuza, P. Hordienko, & Ya. Malkova (2021), based on a systematic approach, devoted their research to the professional training of physical culture and sports specialists in the conditions of distance learning. It is noted that the professional training of specialists in institutions of higher education in the conditions of distance learning is an extremely urgent problem.

N. Byshevets, N. Honcharova, & M. Rodionenko (2020) found out the peculiarities of training students in physical culture and sports and the conditions of distance education; emphasizing the importance of increasing the applied and scientific potential of higher education, which

ensures professional orientation; in the process of forming computer modeling skills, the ways of improving didactic electronic support, future specialists are outlined.

At the same time, the analysis of research in modern pedagogical science shows that there are certain theoretical prerequisites for solving the task of developing a methodology for the formation of information competence in distance education: numerous studies have been conducted devoted to the pedagogical aspects of the formation of information competence of specialists; conducted research dedicated to the training of future physical culture specialists in the conditions of informatization of education, information provision of physical culture for students of educational institutions, increasing the level of professional competence based on the use of information tools in distance learning, pedagogical design of professional training of physical culture specialists using information technologies.

At the same time, taking into account the significant number of studies on the problems of forming ICT competence among future specialists in physical culture and sports in the conditions of distance learning, the problem of forming their professional competence in the process of pedagogical practice, which, combining theory and practical activity, provides preparation for future teaching activities in conditions as close as possible to professional ones. In modern conditions, when determining and increasing the level of physical fitness of the population of Ukraine, creating appropriate conditions for the physical development of various groups of the population, and improving their health are recognized as important tasks of the state and society, the structure of informational competence of physical culture specialists, criteria and level of its formation, requires theoretical substantiation and practical verification of ways of forming the professional competence of future teachers of physical culture in the conditions of pedagogical practice.

The purpose of the study: is to find out the basics of the formation of ICT competence among future specialists in physical culture and sports in the conditions of distance learning.

Methodology

To achieve the goal of the research, a set of methods was used:

- general scientific (analysis, generalization, comparison, synthesis) to study the state of training in institutions of higher education of future specialists in physical culture and sports in the conditions of distance learning, experience in the theory and practice of organizing a quality educational process;
- historical-chronological to determine the periods of formation and prerequisites for the training of future specialists in physical culture and sports in the conditions of distance learning;
- empirical (analytical, comparative for pedagogical and historical analysis of literature; search and bibliographic for systematization of printed sources, library catalogs, periodicals);
- historical and comparative to compare the content of the training of future specialists in physical culture and sports in the conditions of distance learning from the point of view of teachers and scientists.
- historical-retrospective to reveal patterns of development of historical events, cause and effect relationships, to highlight trends and characteristic features of training future specialists in physical education and sports in conditions of distance learning;
- methods of mathematical and statistical processing of the obtained experimental data.

We will single out the methodological principles of the study of the training of future specialists in physical culture and sports in institutions of higher education in the conditions of distance learning.

The philosophical level of the research methodology is characterized by an existential (an important factor in the success of the professional training of future specialists in physical culture and sports in higher education institutions in the conditions of distance learning is the creation of conditions to form in the students of education their system of motives and meanings) approach and a dialectical (conditions the need for awareness, identifying, overcoming internal and external contradictions) approach.

The general scientific level of the methodology is manifested in the systemic approach because it involves a systematic combination of system-creating interrelated factors (goals, forms, and methods of pedagogical influence, principles, subjects, and conditions of the educational process, means of education, the content of education);

The concrete-scientific level of the methodology requires the involvement of activity, professional, innovative, personal, reductive, healing, bio-sociocultural, and gender approaches to the training of future specialists in physical culture and sports in higher education institutions in the conditions of distance learning.

The technological level of the methodology is determined by teaching methods in the conditions of distance education during the professional training of future specialists in physical education and sports in institutions of higher education.

In higher education institutions, for various conditions of training specialists in physical culture and sports, the problem of clarifying specific scientific methodology remains open – distance learning, mixed learning, mobile learning, etc.

Results and Discussion

The professional training of future specialists in physical culture and sports in higher education institutions is most often associated with long and repeated absences by students of academic classes, which occur during trips to educational and training meetings, intense educational and training activities, participation, and preparation in competitions. For such education seekers, a special form of educational process is needed, which would not be inferior to the traditional form of education in terms of efficiency. Distance education is one of those forms that, in connection with the spread of the most modern information technologies, for example, multimedia and network hypermedia, received a powerful development impulse. The specificity of training future specialists in physical culture and sports in institutions of higher education makes this issue even more relevant (Choi et al., 2021).

The above-mentioned changes are manifested most concentratedly in the distance education system, which is an organization at a distance of the educational process, when the teacher and students are geographically or physically distant, which is education through the Internet and other computer and communication channels, which can be characterized as modern, at a distance, a form of education using multimedia systems, new information technologies, which makes it possible to eliminate the shortcomings of the traditional correspondence form of education; ensures a close and intensive two-way exchange of information between the teacher and students.

The use of online conversations (chat), and video conferences expands the scope of interactive interaction and creates the effect of presence (Ladyka et al., 2015).

We will reveal two types of distance learning for future specialists in physical culture and sports in institutions of higher education, which differ in communicative strategy and means of information transmission.

The first type includes traditional distance learning.

The second type is electronic distance learning.

When preparing future specialists in physical education and sports in institutions of higher education, the participants of the educational process interact using various means: in the first type of distance learning, pedagogical communication is implemented using the mobile communication system and mail, in the second type – based on Internet communications.

At the same time, the technology of electronic and distance learning is a mandatory component of mixed learning, and operates a system of innovative methods, to implement a targeted set of pedagogical influences.

Peculiarities of distance and electronic learning methods for quality training of future specialists in physical culture and sports are determined, first of all, by the specifics of their implementation in an informational and educational environment and a computer-oriented environment. Such a telecommunications software environment ensures the organization of the educational process and provides high-quality informational support for education seekers with the help of special technological means and methods.

Distance and electronic learning methods include the following: exploratory, informational, receptive, algorithmic, reproductive, and heuristic, correlated with the methods of face-to-face traditional education. Let's emphasize the logical sequence of use: at the stage of processing a certain amount of material by students, it is worth using methods: algorithmic, receptive, informational, and reproductive, during the involvement of students in cognitive independent activity and assimilation of the studied material – heuristic and research (Plakhotnik et al., 2023).

With the penetration of elements of distance learning into the traditional pedagogical practice, their mutual enrichment and integration are observed. Therefore, the combination of computer-oriented methods and traditional teaching methods can be successful in the mixed training of future specialists in physical culture and sports in higher education institutions in the process of professional training (Tsybulko & Hloba, 2021).

Within distance learning, in addition to all existing traditional didactic principles, new innovative principles are implemented (the principle of ensuring the security of information that exists during distance learning; the principle of mobility of learning; the principle of pedagogical expediency of using new information technologies; the principle of compliance with innovative learning technologies) that are possible when using modern information technologies. With this approach, distance courses created based on traditional and innovative principles are aimed at individualizing the education of students of higher education, their creative self-realization, modern quality education, and the formation of a spatial worldview (Stefanenko, 2002).

The professional training of future specialists in physical culture and sports in institutions of higher education in the conditions of distance learning is carried out with the help of various forms of distance learning, in particular:

- Adaptive learning, the educational process is aimed at adapting methods and educational materials to the needs of the student of education;
- E-learning, this form of education is conducted on the Internet with the help of electronic mass media;
- Blended learning – combines face-to-face and online learning, which provides a higher level of independence in the learning process;
- Flipped classroom uses a model of the educational process in which students of higher education are directed to independent work at home, a form of education where the student actively cooperates with a teacher and other students in an interactive educational space): watching video lectures, master classes, etc.;
- MOOCs are open Internet online courses that are freely available to all students of education and include open educational materials for cooperation and interaction between students of education;

- DOCC – such joint open educational courses in which teachers at a higher education institution have the opportunity to create their own educational version of the course have the opportunity to develop additional materials for their students for cooperation in the network;
- SPOC – Internet courses used as blended learning;
- Open source software (OSS) – open educational resources (OER), where any Internet material is available and free;
- Open Educational Resources (OER) – the openness of part of the content of the educational space or data, for their free use by education seekers, for storage and distribution (Lishchynska, 2017).

In higher education institutions, working with information in the "Cloud" is of great importance for high-quality professional and innovative training of future specialists in physical culture and sports in the conditions of distance learning.

Consider the structure of working with information in the "Cloud", which is represented in the form of a pyramid, the base of which is the "infrastructure" as a set of physical devices (hard drives, servers, etc.), above it there is a "platform" that builds a set of services and the top, which outlines software that is affordable and meets the demand of education seekers (Chao, 2012).

For the high-quality application of cloud technologies in the educational process, we will highlight the following innovative models of providing educational services:

- a form of PaaS cloud services – Platform as a Service provides a development environment as a service (the teacher is provided with an integrated interactive platform for deployment, testing, development, and support of distance courses located on the "cloud" infrastructure;
- a type of SaaS cloud service, software as a service uses a multi-subscriber architecture: an unlimited number of students can access a separate application through a browser, which is of greatest interest to educational institutions, as it does not require upfront investments in the server or software licensing. Then the data and related programs are stored in the "cloud", and students need only a web browser for quality work.

Valuable for the professional innovative training of future specialists in physical culture and sports in the conditions of distance learning are the developments of the Google Corporation, which provides various services and applications with free access to the window of any browser with an Internet connection (Google Chrome, Mozilla Firefox, Microsoft Edge, Opera, etc.). The most used in higher education institutions are Google services: Google Translate – translator, Google Maps – set of maps, Gmail – free e-mail, Google Docs – online office, Google Knol – wiki-encyclopedia, YouTube – video hosting, Google Sites – free hosting, which uses wiki technology (Shor, 2011). A special place among the services is occupied by the free package for institutions of higher education, Google Apps Education Edition, which includes all the features of the professional package. Google Apps Education Edition provides cloud-based web applications that provide educators and educators with the tools they need to collaborate and communicate effectively (Koval et al., 2023).

We conducted an experimental study to check the effectiveness of the formation of ICT competence among future specialists in physical culture and sports in the conditions of distance learning. In the process of research, the main stages of the formation of ICT competence of students of higher education institutions are highlighted. We will describe the main stages of forming students' ICT competence within the framework of distance learning.

The first stage is motivational. This stage involves the formation, mainly, of the motivational and value components of students' ICT competence. At this stage, activities were carried out aimed at forming students' attitudes to mastering and understanding knowledge and skills in the field of ICT, and digital technologies; the formation of value orientations among students; to diagnosing the level of formation of the components of ICT competence of future specialists in physical education and sports.

The second stage is updating. This stage involves the actualization of knowledge and skills in the field of informatics and ICT, obtained earlier when studying the disciplines of informatics and ICT in professional activity; the study was aimed at the predominant formation of the general user component of ICT competence. At this stage, activities aimed at forming knowledge, skills, and personal attitudes for working with modern information, communication, and digital technologies were carried out; use of digital

resources, databases, and local and global computer networks; for interaction in IOS; to ensure information security and compliance with medical and sanitary norms and rules. The stage is aimed at the systematic use of existing skills in everyday and professional contexts (context of future professional activity).

The third stage is the main one. The purpose of this stage was the formation of general pedagogical, subject-pedagogical components of ICT competence. During the formation of the general pedagogical component of ICT competence, students were trained to solve professional pedagogical tasks related to the use of ICT tools. The formation of the subject-pedagogical component of ICT competence is aimed at expanding and deepening the formed knowledge, skills, and personal attitudes of students, taking into account the specifics of educationally significant digital technologies.

The fourth stage is summarizing. The main goal of this stage is the expansion, deepening, and generalization of the formed knowledge, skills, and personal attitudes of future specialists in physical culture and sports, taking into account the specifics of professional activity with the use of information and communication and educationally significant digital technologies, diagnosis of the formation of all components of ICT competence in their interconnection.

At all four stages, it was mandatory to use special didactic tools that ensure the purposeful formation of students' ICT competence.

Let's consider in more detail the stages of students' ICT competence formation, which are implemented by the sections of the IT courses.

The goal of the motivational stage is the formation of the mainly motivational and value components of students' ICT competence.

In the class, students need to demonstrate the prepared master classes and involve others studying in this activity for each student to independently practice exercises with office programs and information systems (Nekrasov et al., 2023). Students should be invited to consider the types of teacher activities in which it is necessary to use these technologies and to discuss the advantages of using office technologies and information systems for solving professional tasks by the teacher.

The seminar session (scientific and practical seminar) "Digital Technologies in the Field of Education" provides for the active inclusion of students in the discussion of digital technologies used in the field of education, specifying the goals of using various educationally significant digital technologies in institutions of higher education. It was suggested to the students to carry out an overview of the ICT technical means used at the current stage, to discuss the safety rules when working with these technical means. For such a lesson, students prepared material in a short abstract form with multimedia support (presentation, video presentation, video clip, infographic, etc.) on the stated topic. At the seminar (under distance learning conditions), future specialists in physical culture and sports presented the prepared material and discussed it. Exemplary topics for speeches in this class were: "Digital services in professional activity", "Interactive equipment in a higher education institution", "Cyber security in working with digital technologies", "Mobile technologies in the professional activity of a specialist" and others.

At the laboratory-practical session "Designing a didactic game on ICT equipment for students", students were offered the activity of developing and designing a didactic game on ICT equipment (according to the proposed topics) in various directions (social-communicative development, cognitive development, speech development, artistic aesthetic development, physical development). During the performance of this work, project activities were organized with students.

To perform the project activity, the students had to: choose a project topic from the list of proposed topics, formulate the project problem; determine the purpose of the project by the chosen subject area; and formulate project tasks to achieve the set goal; develop a project plan; determine sources of information for obtaining project materials; prepare basic and additional equipment for project implementation; build a model or diagram of the project result; implement the project and receive project products; prepare a report, justify the design process, explain the obtained results; present the project and defend its results.

In this lesson, students were offered the following ICT equipment with the appropriate software or digital service: IQ Board interactive board (IQ Board Software), SMART SPNL 6025 interactive panel, UTSKids interactive table (ALMA), iMO-LEARN interactive cubes. This interactive equipment is located in the laboratories of the institution of higher education.

After choosing one of the devices, the students performed an interactive didactic task in a game form. This made it possible to find out the basics, criteria, and requirements for the development, maintenance, and use of didactic games on ICT in the educational process.

During the classes, the students were given the following tasks:

1. Prepare the necessary information and communication equipment (Lego Education Wedo constructors, laptops, video content, interactive whiteboard or interactive panel, mobile planetarium, etc.) and toolboxes (office supplies, paper, cardboard, etc.).
2. Develop notes from lectures using robotics.
3. Prepare forms with objective and subjective experts' evaluation criteria for the competitive task.

At the updating stage, the organization of students' activities in lectures, seminars, and laboratory-practical classes, aimed at updating the basic knowledge and skills acquired earlier, was foreseen.

To update and deepen the theoretical material, blended learning technology was used, since the training contains theoretical material that can be studied remotely, thus, more time was allocated to practicing practical skills. Thus, students were offered an online micro-course "Computer as a means of automating information processes" (the micro-course developed by the students was created on the Stepik.org platform, which is an educational platform and designer of online courses), which contains theoretical material, presentations, test tasks. Students independently studied theoretical material, concepts, and information, performed test tasks from the studied material.

Also, at the actualization stage of students' ICT competence formation, e-learning technology was applied, one of the features of which is that students worked independently in an interactive mode with educational materials, such as video classes, multimedia presentations, audio files, etc., and then performed tasks for the studied topics underwent current and control testing.

55 students, 22 teachers, and 15 employers took part in the experiment at its various stages (declarative, exploratory, formative).

In the process of experimental work on the approbation of the system of forming students' ICT competence, various methods were used: questionnaires and testing of students; conversations with teachers, students; expert assessment of the content of classes by students and teachers; studying the products of student activity; experimental teaching; application of adapted methods.

By the objectives of the ascertainment stage of the experiment, students, teachers, and employers were offered questionnaires and tests developed by us, including questions of various types, and a conversation was held. We will describe and analyze the obtained results.

According to the objectives of the first stage of the experiment, it was necessary to find out the opinion of third-year students regarding the role of ICT in their future professional activities.

Students were asked to express their opinions on the statements proposed in the questionnaire and rate them on a 10-point scale.

Conditionally proposed statements can be divided into four categories: Category I – statements about the general importance of ICT competence for a modern specialist; Category II – statements regarding the use of ICT in professional activities; Category III – statements about the use of ICT, which promotes the development of intellectual, creative abilities, visual thinking; creates conditions for modeling life situations, enables the use of educational and developmental computer games; Category IV – statements regarding the use of ICT in working with students who have limited health opportunities.

The analysis of the obtained results showed that when evaluating the statements of the 1st category, the majority of respondents (76%) note the importance of ICT competence for a modern specialist, while only 47% of students highly appreciate the need to use ICT at work. Evaluating statements of the II category, the majority of students (65% and 59%) emphasize the need to use ICT in formal activities and the methodical work of a specialist. Fewer students (47%) emphasize the need to use ICT in higher education institutions. At the same time, evaluating the statements of the III category, 23% of respondents underestimated the possibilities of ICT for modeling life situations that cannot or are difficult to show and see in everyday life. 18% of students do not sufficiently understand the possibilities of using ICT for the development of intellectual and creative abilities, the ability to independently acquire new knowledge. Evaluating statements of category

IV, the majority of respondents (65%) highly evaluate ICT capabilities, while 23% of students set low scores for evaluating this category of statements.

At the ascertaining stage of the experiment, students were tested, which was aimed at determining the residual knowledge of informatics and ICT. It was found that no work was completed for grade 5 (excellent), about 22% of students completed grade 4 (good), most respondents (about 60%) completed grade 3 (satisfactory), for grade 2 (unsatisfactory) approximately 18% of works (Table 1).

Table 1.

The results of testing students to determine the residual knowledge of informatics and ICT

Rating			
«Excellent»	«Fine»	«Satisfactorily»	«Unsatisfactorily»
0%	22%	60%	18%

As a result of the research, it turned out that the majority of students (more than 90%) do not know the rules and stages of building websites. The majority of students do not know enough types of text formatting, and more than 70% incorrectly establish the correspondence between types of formatting and their characteristics. Students do not know how to work with the MS Excel program well enough, they do not have the terminology specific to this program. Students do not sufficiently understand the principles of database operation and do not know the terminology and concepts of databases and DBMS (database management system).

During the classes, it was found that students do not have a good enough command of safety rules, sanitary-epidemiological rules, and regulatory documents when working with ICT technical means in distance learning conditions. For example, students do not comply with the requirement "The distance from the eyes to the monitor screen should be at least 50 cm."

Thus, the results of the students' testing made it possible to reveal the insufficient level of knowledge and skills of students in informatics and ICT, which may be needed when using ICT in their future professional activities.

A conversation was held with teachers of various disciplines and interdisciplinary courses regarding the importance of ICT competence for a future teacher, which made it possible to find out that teachers highly appreciate the importance of ICT competence of a modern specialist and the need to develop ICT competence in the conditions of distance learning.

The analysis of the results of our survey of employers showed that a modern employer needs a specialist in distance learning conditions to have the ability to: 1) organize classes using digital technologies in distance learning conditions; 2) organize various methods using modern digital technologies; 3) analyze the process and results of the organization of various types of activities using technical means of ICT and mobile technologies in the conditions of distance learning; 4) develop and prepare methodical and didactic materials using a PC in the conditions of distance learning.

Thus, the results of the ascertaining stage of the experiment allow us to conclude the need to increase the level of students' ICT competence, taking into account all its structural components: value-motivational, general-purpose, general educational, and subject-specialist.

The exploratory stage of the experiment made it possible to determine another way that allows you to check the quality of training of physical culture and sports specialists in the conditions of distance learning, and the level of development of their professional competencies – this is participation in the WorldSkills championships.

The experts were asked to highlight the methods, forms, means of learning, and technologies: project method, simulation game, design thinking, mobile technologies, distance learning, gamification, multimedia equipment (MM equipment), electronic UMK, and electronic educational resources (EER). Most of the experts- teachers (60%) liked mobile technologies. These technologies turned out to be interesting, as they are a new and relevant direction of modern education.

The next stage was carried out based on a set of diagnostic methods and included an assessment of the dynamics of the formation of components of ICT competence of students in physical culture and sports in the conditions of distance learning.

To diagnose the formation of the motivational and value component of the ICT competence of future

specialists in physical education and sports in the conditions of distance learning, the methods of assessing the educational motivation of students in the field of ICT, assessing the student's value orientations in the field of informatics and ICT were used.

Assessment of students' educational motivation in the field of ICT was carried out at the initial and final stages of the experiment. The results of the analysis of students' answers are presented in Fig. 1.
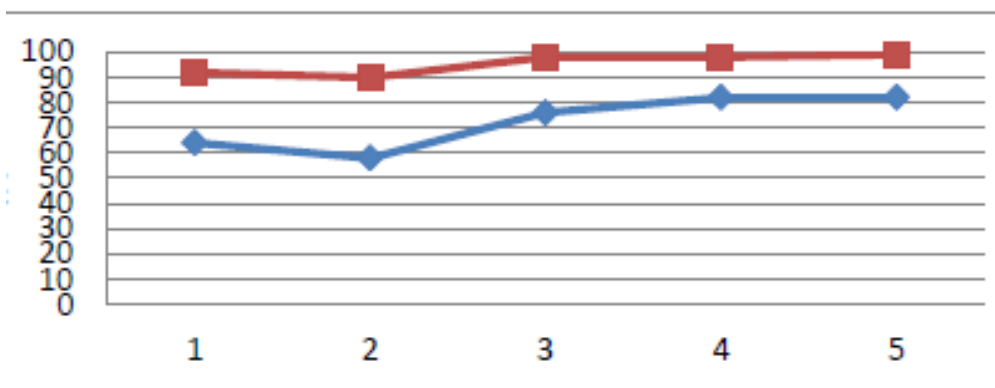
Fig. 1. The results of the analysis of the answers of future specialists in physical culture and sports in the conditions of distance learning.

The analysis of the obtained results showed that, after the end of the educational stage of the experiment, professional motives for the use of IT and digital technologies began to dominate in the majority of students, positive dynamics of changes in prestige motives and broad social motives for the use of IT and digital technologies, creative self-realization using IT and digital technologies in the conditions distance learning. At the same time, one can name the negative dynamics of motives for avoiding the failure of using IT and digital technologies.

An author's questionnaire including 5 statements was used to assess students' value orientations in future professional activities using ICT and digital technologies. Students were asked to express their opinions about these statements and rate them on a 10-point scale. The questionnaire was offered to students before and after the educational experiment.

The above allows us to state that the proposed version of the implementation of the ICT competence formation system of students

sufficiently influenced the positive dynamics of the formation of the motivational and value component of the ICT competence of physical culture and sports specialists in the conditions of distance learning.

Let's consider the methods created to identify the dynamics of the formation of the general education component of students' ICT competence in the conditions of distance learning.

Diagnostics of the formation of the commonly used component of ICT competence was carried out: based on current control during laboratory-practical work and final control based on the students' performance of general control work; using a questionnaire.

In fig. 2 shows the results of the analysis of the questionnaire filled out by students at the beginning of the 3rd year and the end of the 4th year. The histogram reflects the level of formation of theoretical knowledge and practical skills in the use of computer technology.
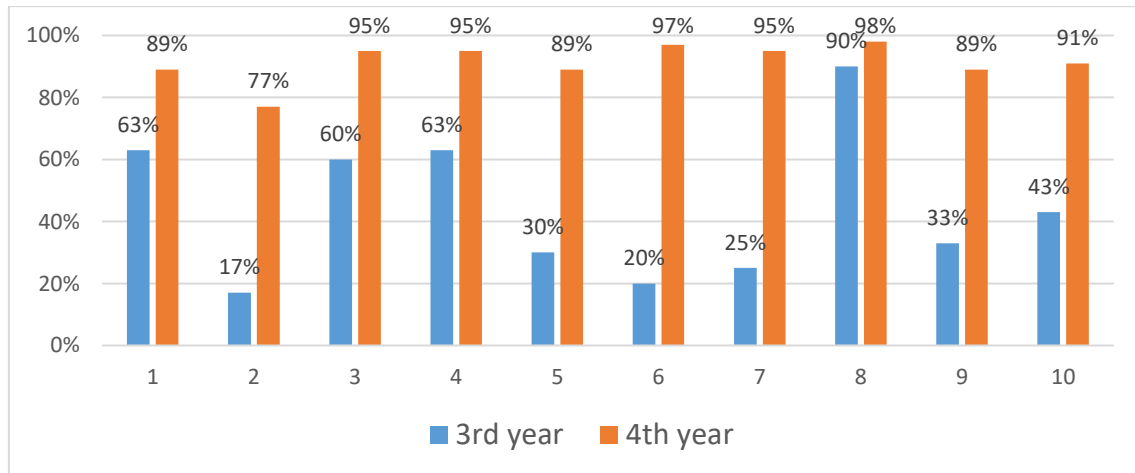
Fig. 2. Diagnostics of the formation of theoretical knowledge and practical skills in the use of computer technology to form students' ICT competence

The analysis of the obtained data showed that the number of students who studied according to the experimental method expressed their agreement with the proposed statements, and their level of ICT competence formation significantly increased at the end of the experiment.

These maps were proposed by students at the beginning of the educational stage of the experiment and the end of the educational stage of the experiment (during the period of pedagogical practice in the 4th year).

The expert assessment card included 10 items that allow checking students' theoretical knowledge and practical skills in the field of ICT use (which is necessary for the formation of ICT competence), which the expert could evaluate on a 4-point scale (0 – knowledge/skills not formed, 1 – low level of knowledge/skill formation, 2 – medium level of knowledge/skill formation, 3 – high level of knowledge/skill formation).

The final value of the level of formation of theoretical knowledge and practical skills in the field of using ICT to form ICT competence in the conditions of distance learning was determined by the sum of the scored points: <15 – low level of formation; 15-20 – average level of formation; >20 – high level of formation. The analysis of the obtained results at the end of the educational stage of the experiment showed that most students have a high level of theoretical knowledge and practical skills in the field of ICT use.

The results of the experiment allow us to conclude the positive dynamics of the levels of formation of ICT competence of future specialists in physical culture and sports in the conditions of distance learning (Dzhym et al., 2023).

Thus, the results of the experimental verification of the implementation of the methodology for the formation of ICT competence of future specialists in physical culture and sports in the conditions of distance learning confirm its effectiveness and prove its impact on the positive change in the levels of the formation of components of ICT competence, confirming the purpose of the study.

It should be noted that during the training of future specialists in physical culture and sports in the conditions of distance learning, special attention is paid to the organization of the educational process, the effectiveness and quality of which depends on the specific competencies of the teacher (Chukhlantseva, 2017).

As a result of the study, the pedagogical conditions necessary for the effective and rational use of distance learning technologies in the training of future specialists in physical culture and sports were identified:

– the duality of the nature of distance learning technologies for education seekers (they are technologies used in the educational process, and at the same time technologies that are the object of study and mastery);
– adaptation of educational material under the condition of increasing the share of independent work during distance learning should be mandatory in the modern educational space, therefore, the content of distance learning should be formed with the help of systematic didactic design;

– the formation of cognitive experience of future physical culture and sports specialists in the process of distance learning, experience of creative activity, mastering the means of activity, in the new conditions of the use of information technologies, personal attitudes;
– the basis for the organization of productive activities of education seekers when organizing distance learning should be in the course of solving educational problems;
– students and teachers possessing the skills of organizing independent study;
– preparation of students and teachers for the formation of innovative specific skills and abilities in the use of distance learning technologies (development of a distance course and support for distance learning) (Mazur, 2022).

Active implementation of the distance form of education for future physical culture and sports specialists is impossible without solving the problem of creating the material and technical basis of higher education institutions; problems of the lack of software and methodological support of the educational space and independent work of education seekers; insufficient informational preparation of professors and teaching staff of higher education institutions; problems of creating an informational environment for physical education (Ladyka, 2015; Sokoliuk, 2013).

Conclusions

Therefore, high-quality and modern training of future physical culture and sports specialists is impossible during the educational process without active use of the potential of electronic resources and platforms. Therefore, it is necessary to popularize and increase learning in a distance electronic format, the introduction of online courses, the improvement of technologies, new programs, and platforms that contribute to the creation of a convenient virtual universal environment for the perception and use of material.

The peculiarities of the professional training of future specialists in physical culture and sports in higher education institutions in the conditions of distance learning have been clarified.

Two types of distance learning of future specialists in physical culture and sports in institutions of higher education, which differ in communicative strategy and means of information transmission, are revealed.

Peculiarities of remote and electronic learning methods for quality training of future specialists have been proven.

Within distance learning, the main new innovative principles and forms are highlighted. In terms of distance learning, the features of working with information in the "Cloud" are described.

Innovative models of providing educational services are characterized by high-quality application of cloud technologies in the educational process.

The need for professional innovative training of future specialists in physical culture and sports in the conditions of distance learning developed by the Google Corporation is substantiated, by the main advantages of the Google Apps Education Edition package in the conditions of distance learning according to the description of the developers are named, the main online services based on cloud computing provided by Google are considered.

Effective pedagogical conditions are listed for the effective and rational application of distance learning technologies in the training of future physical culture and sports specialists.

An experimental study was conducted to check the effectiveness of the formation of ICT competence among future specialists in physical culture and sports in the conditions of distance learning.

We will continue further research to improve the educational space of future specialists in physical education and sports.

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